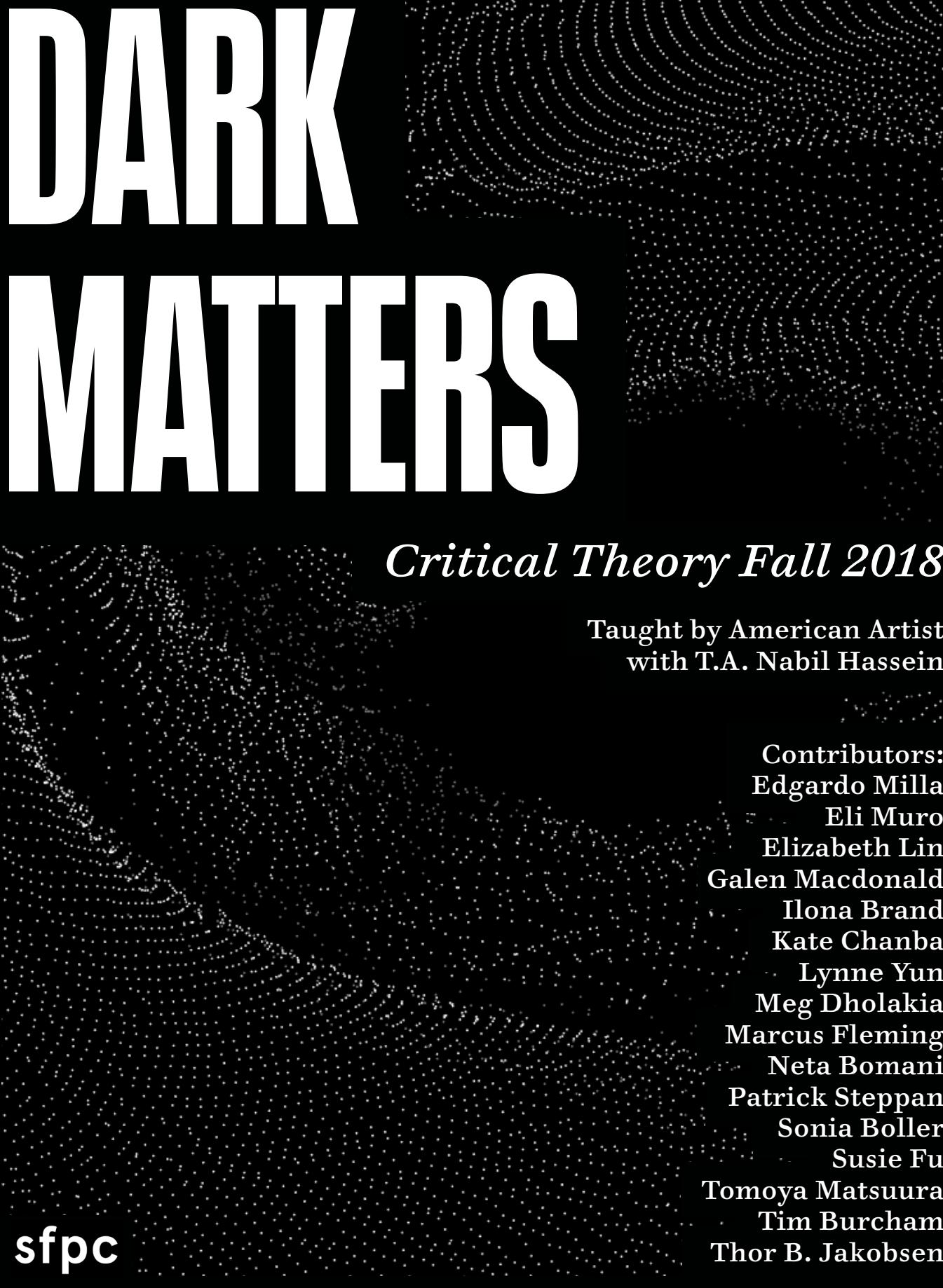


DARK MATTERS



Critical Theory Fall 2018

Taught by American Artist
with T.A. Nabil Hassein

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sfpc

The zine you are reading is the collective project of the critical theory of technology class for the fall 2018 term at the School for Poetic Computation (SFPC). The title of the class was “Dark Matters: Blackness, Surveillance, and the Whiteness of the Screen” and included readings from authors Simone Browne, Wendy Chun, Audre Lorde, Donna Haraway, Carmen Papalia, Mia Mingus, and Jackie Wang. The full curriculum is online at <https://github.com/Old-h3ad/DarkMatters-Fall2018>.

Sharing a namesake with Simone Browne’s *Dark Matters: On the Surveillance of Blackness*, this class sought accountability to our mutual histories, taking a critical focus on identity, visibility, opacity, obfuscation, and automation, and how one reckons with the contention of their own body in public and in private. Together we questioned how to

remain critical of legacy power structures that are embedded in the devices we interface with daily.

The following pages contain contributions from every student, whether in the form of letters or essays or poetry or illustrations, dealing with many of these themes and their connections to students’ own experiences. We hope that others also feel affinity with this zine and these topics, which bind us together in touching all of our lives even as they affect each of us very differently.

—American Artist and
Nabil Hassein

Special thanks to guest faculty Melanie Hoff and Shannon Finnegan, visiting artist Sondra Perry, zine designers Lynne Yun and American Artist, and Daniel Kent and Pioneer Works for allowing us to print this zine. Cover image from Vagina Vortex by Sonia Boller.

School for Poetic Computation is an artist run school in New York that was founded in 2013. A small group of students and faculty work closely to explore the intersections of code, design, hardware and theory –focusing especially on artistic intervention. It’s a hybrid of a school, residency and research group.

Our motto is: *more poetry, less demo* | <http://sfpc.io>

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CONFIRM. DENY. EXISTENCE. NONEXISTENCE.

NETA BOMANI & GALEN MACDONALD

“What do each of these options offer people in terms of what and how we keep history, and how we see ourselves?

GALEN: So we’re writing back and forth about this hardware poem that I started working on (schematic attached) after we read Simone Browne’s introduction to *Dark Matters*. It begins with Browne recounting the language from a letter she received from the CIA in response to a Freedom of Information (FOIA) request:

“The CIA can neither confirm nor deny the existence or nonexistence of records responsive to your request.”

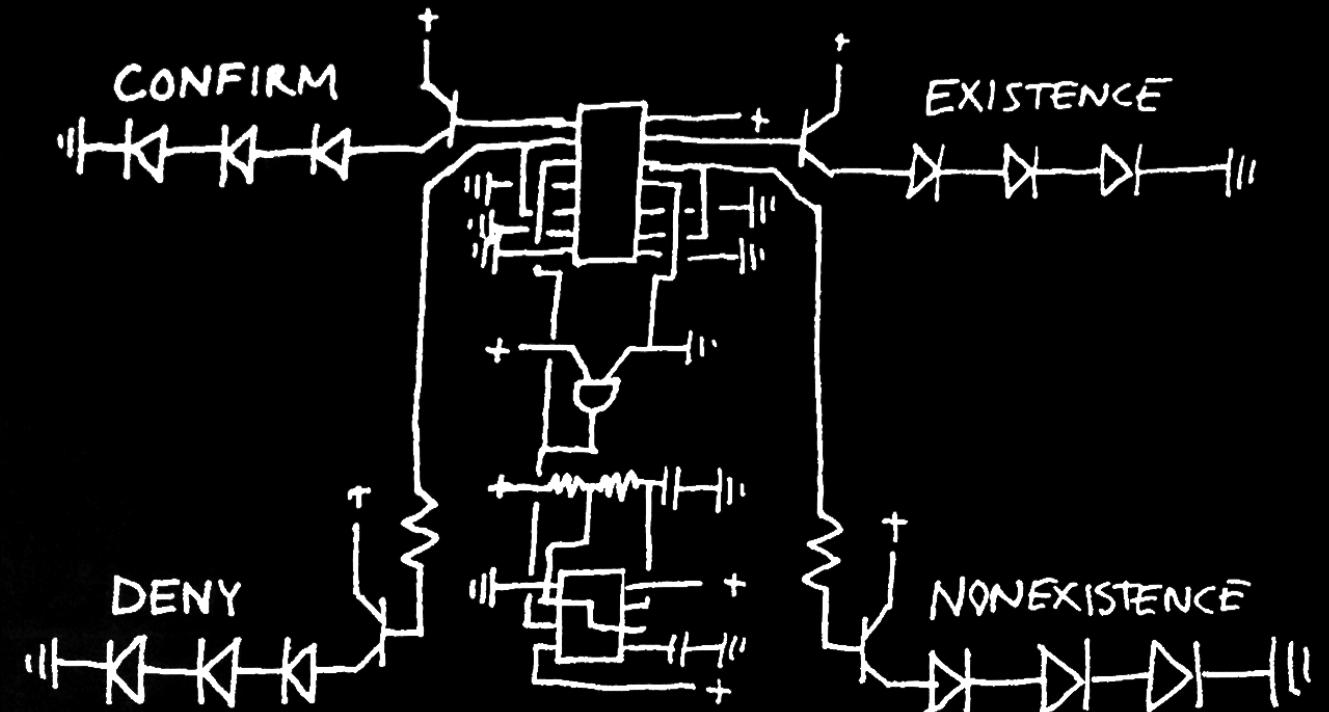
This CIA language is called the Glomar Response. In the 1960’s the CIA had a secret mission to retrieve a sunken Soviet nuclear submarine, and they botched it badly. Some

American journalists got word of this very expensive failure and submitted a FOIA request to the CIA to force them to release documents about the mission. The CIA didn’t want to tell the American people anything, but they also wanted to insinuate to the USSR that they had successfully gathered some information about secret Soviet technology. So this language is a Cold War era veiled threat that has somehow been absorbed into all kinds of government language, not to mention all kinds of pop culture. It should be said, especially in the context of Simone Browne’s work which sent me off on this, that this phrase has been particularly weaponized against black activists, intellectuals and artists

from the 1960’s to the present, as with the FBI’s COINTELPRO files.

I think most people are familiar with this “confirm or deny” language in one form or another, but I was really struck by the double-double negativeness of this sentence! It’s such a complicated negation (what would denying the nonexistence of records even mean?), and it made me want to explode it into every possibility: *confirm existence, confirm nonexistence, deny nonexistence, deny existence*. What do each of these options offer people in terms of what and how we keep history, and how we see ourselves?

Maybe this comes up later on, but I think the seed of the idea that we have had together about



this is: How would this piece organize an archive? What kind of archive would it organize?

NETA: I’ve been reflecting on our many conversations concerning your hardware project inspired by Simone Browne’s *Dark Matters*. The way you were able to organize such a perversion of language into the coded system of hardware astounds me. I’ve been tossing and turning around why your rendering of the Glomar response felt so elusive to me in the first place. In “Blackness and Nothingness,” Fred Moten describes Blackness as an “unsettled” and uncoded way of being or the “unmappable zone of paraontological consent.” When I looked at your sketches for the

first prototype, I think I had such a visceral reaction to it because you effectively gave form to the disorientation I regularly experience as a black person. While I don’t fully understand the logic behind it, I feel intuitively connected to the spatial arrangement of those four words because I’ve been in many spaces in which I’ve oscillated between confirming and denying the existence and/or non-existence of certain parts of my Blackness. So it made sense for me to imagine what your design would look like if it were a physical space. Four corners of space where people get to feel the spatial arrangement of those four words, and the confusion that arises from them. What if you walked

into a corner and triggered an archive? What would you confirm? What would you deny? How can you make it so the functionality of the Glomar response is clear to people? How do we empower people to fold the response in on itself? Can we make better archives together?

CONFIRM. DENY.
EXISTENCE.
NONEEXISTENCE.

I’m thinking about how these words have informed the American archive. I’m thinking of the archive contained inside each word. I’m thinking of what the words have taken and what they have given. In some instances, people died along with their archive and their archive has attempted at

or succeeded in killing them. I'm thinking of Martin Luther King Jr. and the letter he received from the FBI urging him to commit suicide. And the sort of paranoia and trauma that comes along with that as Frantz Fanon was convinced the nursing staff treating his leukemia were undercover agents who put him through the washing machine after receiving a blood transfusion. And now, the latest iteration of deaths with at least five Ferguson activists dead, either by alleged suicide and/or mysterious circumstances surrounding their final moments. So many questions. How do these tools of power, coercion and surveillance impact the way we understand ourselves? What effect does this phenomenon have on our memory?

Before I attempt to answer your questions and mine, I want to consider why the language of the Glomar response opens up the *Dark Matters* universe.

"The concept of dark matter might bring to mind opacity, the color black, limitlessness and the limitations imposed on blackness, the dark, antimatter, that which is not optically available, black holes, the Big Bang theory, and other concerns of cosmology where dark matter is that nonluminous component of the

universe that is said to exist but cannot be observed, cannot be recreated in laboratory conditions. Its distribution cannot be measured; its properties cannot be determined; and so it remains undetectable. The gravitational pull of this unseen matter is said to move galaxies. Invisible and unknowable, yet somehow still there, dark matter, in this planetary sense, is theoretical."

Fanon's death along with his FOIA documents and how the CIA redacted most of the contents effectively makes Fanon synonymous with dark matter. I think Browne opens up with Fanon and the Glomar response to make it clear we're not just talking about documents, we're talking about bodies.

Marxist theorist Amílcar Cabral said "the political level [of] our own reality can only be transformed by detailed knowledge of it, by our own efforts, by our own sacrifices." How we understand ourselves is absolutely imperative to revolutionizing. The government understands this well and serves to benefit from the distortion of black memory for the advancement of white supremacy. No new news here. While the government might be capable of erasing

knowledge, they can't touch intuition. This is the magic of dark matter, of Blackness.

G: This is a really powerful insight to me, that language like the Glomar response *distorts* black memory. It's more than forgetting (we can be sure that they remember), it's a threatening of certain identities, certain memories—specifically, in the case of Frantz Fanon, threatening to cast his paranoia as madness, rather than a completely reasonable response to government surveillance.

I want to try to make a connection here that is mostly unformed and unresearched, between the ways in which government agencies treat archives and the ways that modern computing systems do. The circuit that runs this piece is essentially two bits of memory—the machine "remembers" what state it is in (confirm or deny? existence or nonexistence?), and when it receives a signal, changes its state to its opposite.

That piece of the circuit is called a flip flop, and it is beautiful, recursive, and convoluted—not unlike human memory.

The machine doesn't "remember" anything, nor can it forget—those tasks are for us. Essentially, what the machine can do is write, read, and overwrite, all a matter of opening and closing pathways for electricity. One of my

03

04

EXEMPTED FROM AUTOMATIC DECLASSIFICATION AUTHORITY DERIVED FROM: FBI AUTOMATIC DECLASSIFICATION GUIDE EXEMPTION CODE 25X(1) DATE 08-23-2011

Per letter dated 8-10-2011 DATE: March 9, 1961

To : Mr. L'Allier L
From : S. J. Papich
Subject: FRANTZ FANON IS - ALGERIA

(S) (U) ~~SECRET~~

(U) The captioned individual is the Algerian representative in Ghana for the Algerian Front for National Liberation (FLN). At the present time Fanon is in Tunisia preparing for a trip to the United States. He plans to receive extensive medical treatment at the National Institute of Health, Washington, D. C.

(S)

ACTION:

The above information is being directed to the attention of the Nationalities Intelligence Section.

SJP:ban *ben*
(4)
1 - Mr. Donahoo
1 - Liaison
1 - Mr. Papich
6/28/01
CLASSIFIED BY 3/28/01 BY 7/28/08
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per OGA letter dated July 16, 2001
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ALL INFORMATION CONTAINED
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FBI memo on Frantz Fanon

“How do these tools of power, coercion and surveillance impact the way we understand ourselves? What effect does this phenomenon have on our memory?”

fascinations at SFPC has been with magnetic core memory and rope memory, early forms of computer memory that relied on the weaving of copper wire through tiny metal rings. Rope memory was colloquially known as “little old lady” memory by the engineers on the first Apollo mission, a sexist reference to the women who literally wove their computer programs by hand. Rope memory was read-only. Its program was hard-coded in its weaving, something that is hard to even conceive of in our era of increasingly mutable technologies. These technologies, built from layers and layers of software abstraction, make for mutable memory: our machines are more than happy to overwrite an old program to make space for a new one.

We’re sitting next to each other now, each working on this shared

networked document. It’s such a strange configuration to be conversing with each other in this way, saving a copy on a server somewhere, in Oregon, or Ireland. That server will need maintenance, updates. Our browsers will change, the tools we use to access the web, as well. The software company will have to keep its tools maintained in order for us to access this in the future. So there is this extreme fragility to anything stored on the web, which is, even if an archive survives as data on a disk, will we have the tools we need to read it? And isn’t this whole situation just a reconfiguration of the Glomar response?

An incomplete list of words about memory, in no particular order: forget, store, allocate, read, write, overwrite, update, hold, retrieve, remember. How do we spatialize these words? Where do they happen in the body, and in the computer? What possibility do they offer to an archive, or counter-archive? The way you have thought of the Glomar Response as a room containing an archive around these four words, I wonder if we can centralize and make visible where and how memory is made.

You and I have talked a lot about archives over the past 8 weeks—why they are important, what they do, how they remember and forget. Ultimately the point I want to make here is that we’re now

to the point of making predictive decisions with computers on the basis of the data that we have prioritized—decisions are being made on the basis of an automated archive. I think this entire system is a manifestation of the Glomar response.

N: We’re running out of time at SFPC and there’s so much more to be said! You’ve lead us to a conversation about how predictive policing, anti-terrorism and anti-blackness are connected.

In thinking about how this piece can be used to further illuminate the organization of our racially hierachal society: who has the power to tell stories, to manipulate data and in many cases erase data sets and peoples entirely?

In “Eulogy for Culture” (1972), Williard van de Bogart said:

“The global gestalt will be a telepathic system which *predicts* events rather than recording events. The next global environment will be completely controlled by homo sapiens projections. The thought of the event will be the necessary criterion for the existence of the event. Information innovation will be available for all. The planet will then be in an information matrix which is not

dependent on cultural norms for patterning of activities, but the retrieval of those norms within a larger informationality of contrived space or environment.”

I want to steer away from the sort of media/art/tech utopia Bogart suggests in this statement and extend caution to our conception and construction of the installation. I think this statement ignores the reality of the Glomar response in that, it is impossible for information to be democratized under capitalism given the state’s reliance on the confusion and alienation of people, some of whom we’ve discussed here. We see this clearly in the ways data has been controlled by the state, weaponized by the police and enforced on black and brown people who are branded as criminals and terrorists. And so in our attempt to subvert the Glomar response, we will have to seriously consider how it could unravel into this sort of neoliberal framework of generalized struggle which is seemingly apolitically and racially ambiguous, but still in service to the dominant white culture.

You mentioned paranoia as a response to surveillance as reasonable, and I think it is also reasonable to consider how confusion will play a central role in the archive. In “This Is a Story

About Nerds and Cops’: PredPol and Algorithmic Policing,” Jackie Wang said “uncertainty is at once a problem of information and an existential problem that shapes how we inhabit the world.” Wang also asserted predictive models are only as good as the datasets they rely on. The more I think about the structure of our world, the less I believe we can rely on any data collected under capitalism. But something Wang also wrote about is how it’s not just important to critique how data is being collected, but *who* is collecting it. Given what we already know about ourselves (I’ll speak for myself as both a socialized and colonized subject), and how the government is interfering with how much we understand about ourselves, can we trust ourselves to build a better or honest archive? Can we trust ourselves to remember?

In one of our many verbal conversations, you asked how we can make visible the moment where something could be remembered or forgotten or rather, the moment of activation or prompt to fill in the blank clear. To answer that question, I think we need to ask ourselves more questions. How do we honor our uncertainty? How do we confirm our fears so we can deny the violent path they lead us down? Another thing that stuck with me was how Bogart

said it’s necessary for spaces to be created where creative interpretation of existence can be interfaced. I truly feel this project is necessary. I’m excited to continue to pursue this project and dive in.

SCRIPTURE

ILONA BRAND

A poem exploring the body, software and faith inspired by the format of the Talmud. The Talmud is a Jewish text encompassing Jewish law (Halacha) with multiple commentaries on top of it.

Illustration by Eli Muro



Ideology: roll your own faith.¹

The comparison of ideology to faith reveals my Jewish upbringing through the usage of religious metaphors. Ideology as a faith also begins to scaffold the theme of faith in the text as we see in the next passage. **Faith in algorithms: to forget the author, to erase subjectivity.** By the logic of the first section, faith can also be seen as an ideology. It can then be derived that “faith in algorithms” here also represents algorithms as a cultural ideology. The author of these algorithms often goes unknown as the culture accepts and absorbs the algorithms in as accepted fact.

This is where the “erase subjectivity” section comes in. Without an author, the algorithms stand as their own truths remaining unquestioned.

Ideology: roll your own faith.²

Miriam Webster defines ideology as “a manner or the content of thinking characteristic of an individual, group, or culture.” It is not a far leap to call that a belief system, and from there a faith. “Roll your own” is an expression used in the software industry to express needing to write something from scratch. It originates from the act of rolling one’s own cigarettes.

Algorithm: of or pertaining to magic / Do you believe in magic?

Holding algorithms as “scientific” and “correct” and viewing them without their authors leaves them untouched. The cultural assumption that algorithms are “science” leaves those who can’t read code at a loss as to how the internals of the software they use every day works. Just like magic, software acts in mysterious ways and creates unexpected outcomes.

I fed my corpus into a piece of software
A hymnal turned definitional.

Corpus : words / body
I had a dream last week that everyone I cared for came to me and wrote words of love and community all over my body. Every time I breathed in, the words would expand slightly, growing as my ribs flexed outward. When I lost my breath, they contracted in and held me.

Software : processing
Ideology: roll your own faith.
Faith in algorithms: to forget the author, to erase subjectivity.
Algorithm: of or pertaining to magic.
Do you believe in magic?

I fed my corpus into a piece of software
A hymnal turned definitional.

EROTIC HARDWARE

TIM BURCHAM

“What does it mean to not just identify within ourselves, but transcend those ideologies and hegemony?”

Illustration by Eli Muro

In current society, the word ‘erotic’ often carries a certain meaning, a plastic sexualization, that plays into the oppression of women’s physical and spiritual joy, and springs from the fragile male industrial complex, and subsequent constructs and cycles to create oppression. Audre Lorde’s *Sister Outsider* unpacks, reclaims and recasts erotic and in turn, reclaims feminine essential joy.

In the course of our cohort’s experience at SFPC Fall 2018, we practiced a series of unlearning and deconstructionist learning strategies using, among other mediums, circuit boards, LEDs, resistors and other electronic components. Nearly every member experienced and conveyed what I believe was a form of this pure essential joy that Lorde describes. In the act of building a simple circuit—

adding a pull-down resistor here, taking a circuit to ground there—and felt as if I were working with my, or someone else’s body, trying to understand a new logic each time. When the circuit would finally work after tuning, adjusting, rewiring, and the LED lit up—it ignited a primal joy, both that the circuit worked, but also that the unintuitive process, with a bit of intuition, learning the feel of the circuit, could yield a small, beautiful result.

“The erotic functions for me in several ways, and the first is in providing the power which comes from sharing deeply any pursuit with another person. The sharing of joy, whether physical, emotional, psychic, or intellectual, forms a bridge between the sharers which can be the basis for understanding much of what is not shared between them, and lessens the threat of their difference.”

- Audre Lorde

I believe this small moment of joy for each SFPC student was, in Lorde’s definition, erotic. The act of deconstructing and then reconstructing the fundamentals of technology mirrors the primal de/reconstruction of the erotic, and the subsequent reclaiming of technology by students likewise

mirrors Lorde’s reclaiming of eroticism. Furthermore, this ‘sharing of joy’ the students experienced helped to cement the group’s shared understanding, transcend the many paths that brought the cohort together, and establish a type of psychic bridge that has permeated throughout the program.

“We would leave the margarine out for a while to soften, and then we would pinch the little pellet to break it inside the bag, releasing the rich yellowness into the soft pale mass of margarine. Then taking it carefully between our fingers, we would knead it gently back and forth, over and over, until the color had spread throughout the whole pound bag of margarine, thoroughly coloring it.

I find the erotic such a kernel within myself. When released from its intense and constrained pellet, it flows through and colors my life with a kind of energy that heightens and sensitizes and strengthens all my experience.”

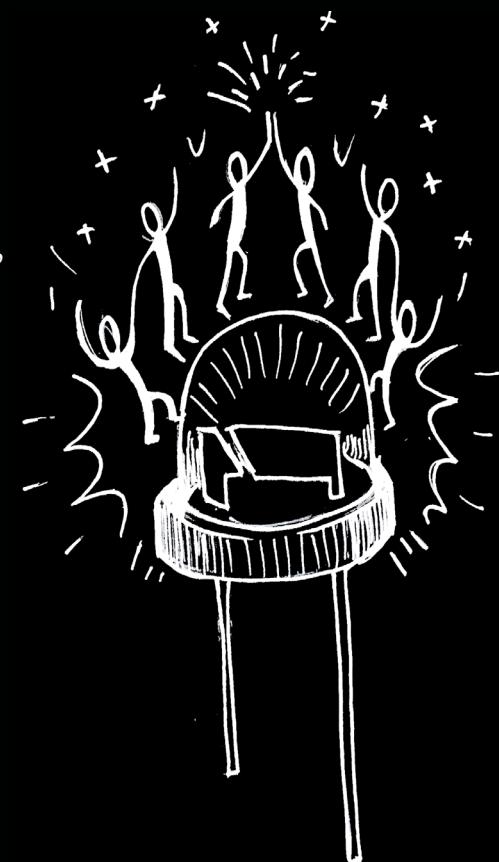
- Audre Lorde

While Lorde’s original writing occurred very much in a Black feminist context of the

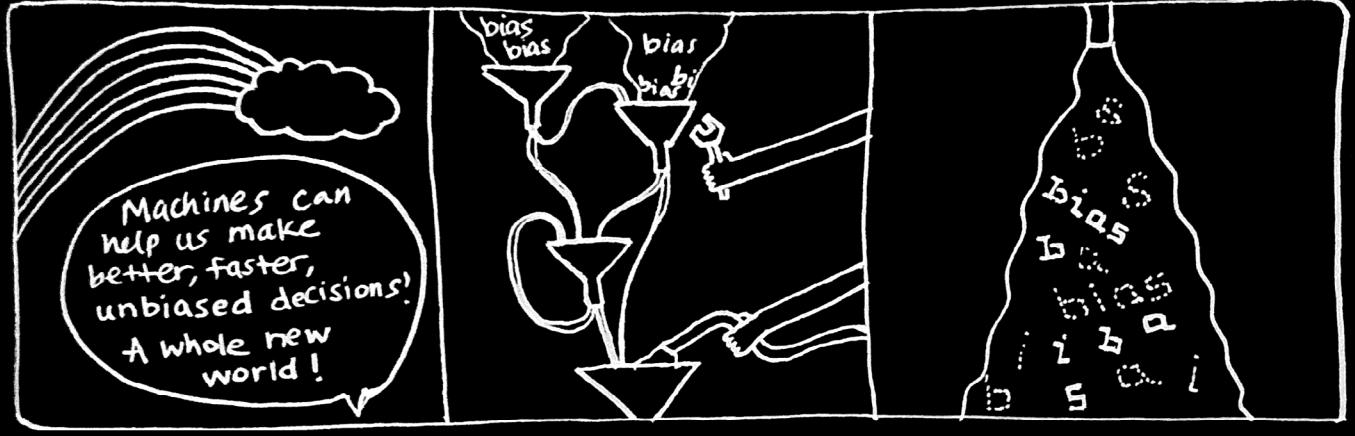
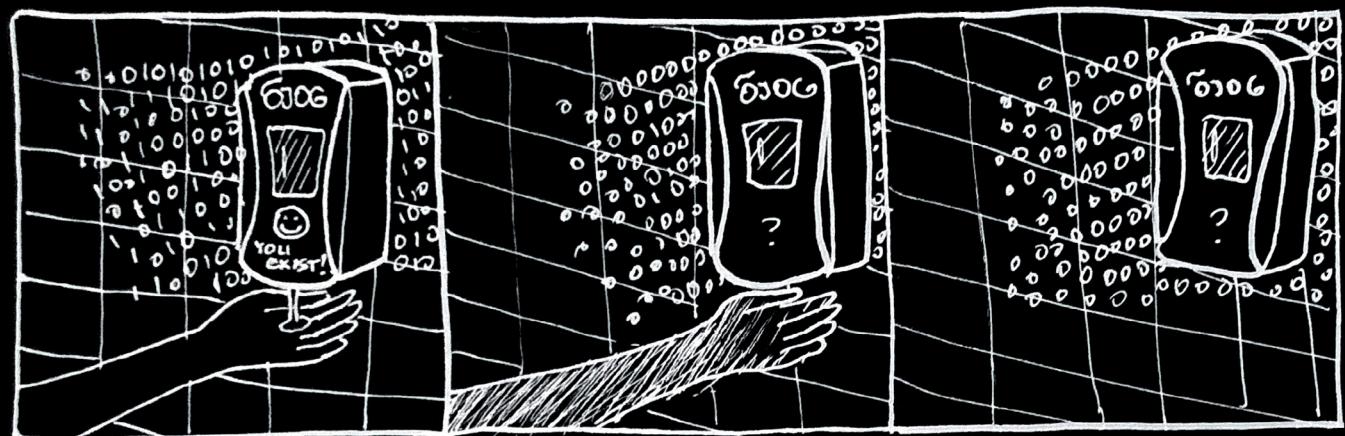
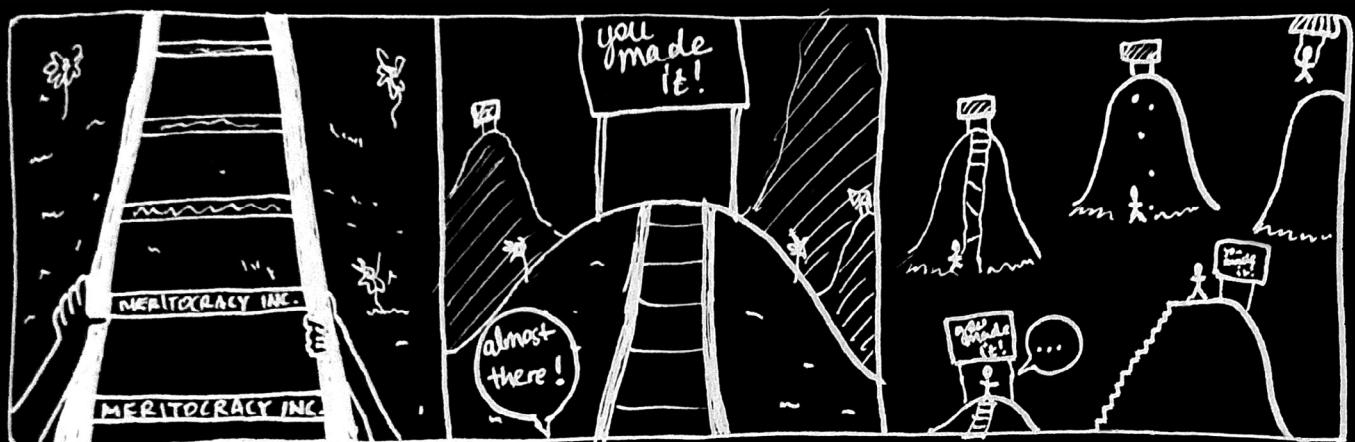
late 70s and early 80s, it persists and continues to offer something in our current culture, where capitalist and technocratic disillusionment are very real, where toxic and fragile white male hegemony and supremacy reinforces those ideologies and guides continued oppression. What does it mean to not just identify within ourselves, but transcend those ideologies and hegemony? What lies on the other side of crossing this chasm, and what voices have the most to offer and to learn from? I believe Lorde’s view on eroticism as power is one of many keys to reconstructing sexuality from the ground up, for anyone willing to make that leap.

“Beyond the superficial, the considered phrase, ‘It feels right to me,’ acknowledges the strength of the erotic into a true knowledge, for what that means is the first and most powerful guiding light toward any understanding.”

- Audre Lorde



SUSIE FU



DIGITAL TYPOGRAPHY IN CULTURE

LYNNE YUN

We are living in an era that is dominated by sans serif letterforms. From Helvetica in the NYC subway system to Futura in Nike advertising campaigns, these geometric serif-less forms have become ubiquitous in our typographic landscape. So much, in fact, that it has started to emit an aura of generic authoritarianism. This unfortunate trend is even more pronounced in the digital ecosystem where applications and websites use nearly indistinguishable typefaces. Going from my iPhone's home screen to Spotify, then to Facebook and Medium's landing page on Safari, there is so little change in typography I barely register that I am going to a different app or page. Why are technology companies seemingly on a mission to shed their visual identities in favor of yet another bland sans? From

another bland sans? From tech giants like Google to startups like Spotify and Airbnb, their entire brand suite seems to consist of nothing but sans serifs, whether it be large display or small text. Due to the cumulative consequences of these companies, our digital world has been getting more and more homogeneous. As a typeface designer who

works with font software on a daily basis, I can't help but wonder where this issue stems from. It is easy to point fingers to symptoms, but harder to pinpoint the root cause.

I hypothesize that we are stuck in a vicious, self-destructive cycle that enforces visual favoritism. As toolmakers, the type design industry is subject to the wants of the graphic design industry. The graphic design industry is then subject to the wants of their clients. The clients are subject to the demands of the consumers who buy their products. The consumers are influenced by industry leaders who claim to know what 'good' design is — a la Apple Keynotes and designer TED talks. Where does this cycle end? What shapes the perception of what constitutes 'good' design in the first place?

Perhaps we are in a cycle of bias that is self-enforcing due to perceptual fluency. This is a term in psychology that explains the ease of how we process information. This is a common term that is used while discussing pop music. If we hear a song that fits what we are expecting, we tend to like it more and have more confidence in it. If we look

at how pervasive sans serifs are in software, perhaps it is no surprise that consumers gravitate towards them due to familiarity. Modern consumers typically have no choice other than to use the default fonts that software comes packaged with. After accumulating years of experience of interacting with sans serif interfaces, it is probably safe to say that the typical consumer would be surprised to interact with anything that deviates from this norm.

So then, how do we break this cycle and get away from the tyranny of sans serifs? I look to all the creatives in the visual ecosystem as the answer. As toolmakers and educators, we need to challenge this landscape of conformity and empower individuals to diversify their visual work. We should think of the digital space much like our physical world — just as the world contains many different communities with their own culture, so should the virtual space. The visual landscape of typography will be much more interesting when we have hyperlocal visual languages, and it will be able to better represent the different voices and identities of the people that are living within it.

As toolmakers, we need to consider how methods of creation can affect the visual landscape. Consider what the bulk of web pages looked like before the dominance of design tools like Squarespace. The digital landscape looked much like our neighborhoods in real life — many of the corners of the internet were organically crafted by everyday people and had the charm of hand-picked type choices. Nowadays, most people design their web pages from a design tool service like Squarespace. They typically start off with the design templates that they provide, which often have generic sans serif fonts as their default. Are these tools perpetuating this favoritism towards them? Perhaps we can promote a more diverse landscape by offering more diverse typefaces in these tools.

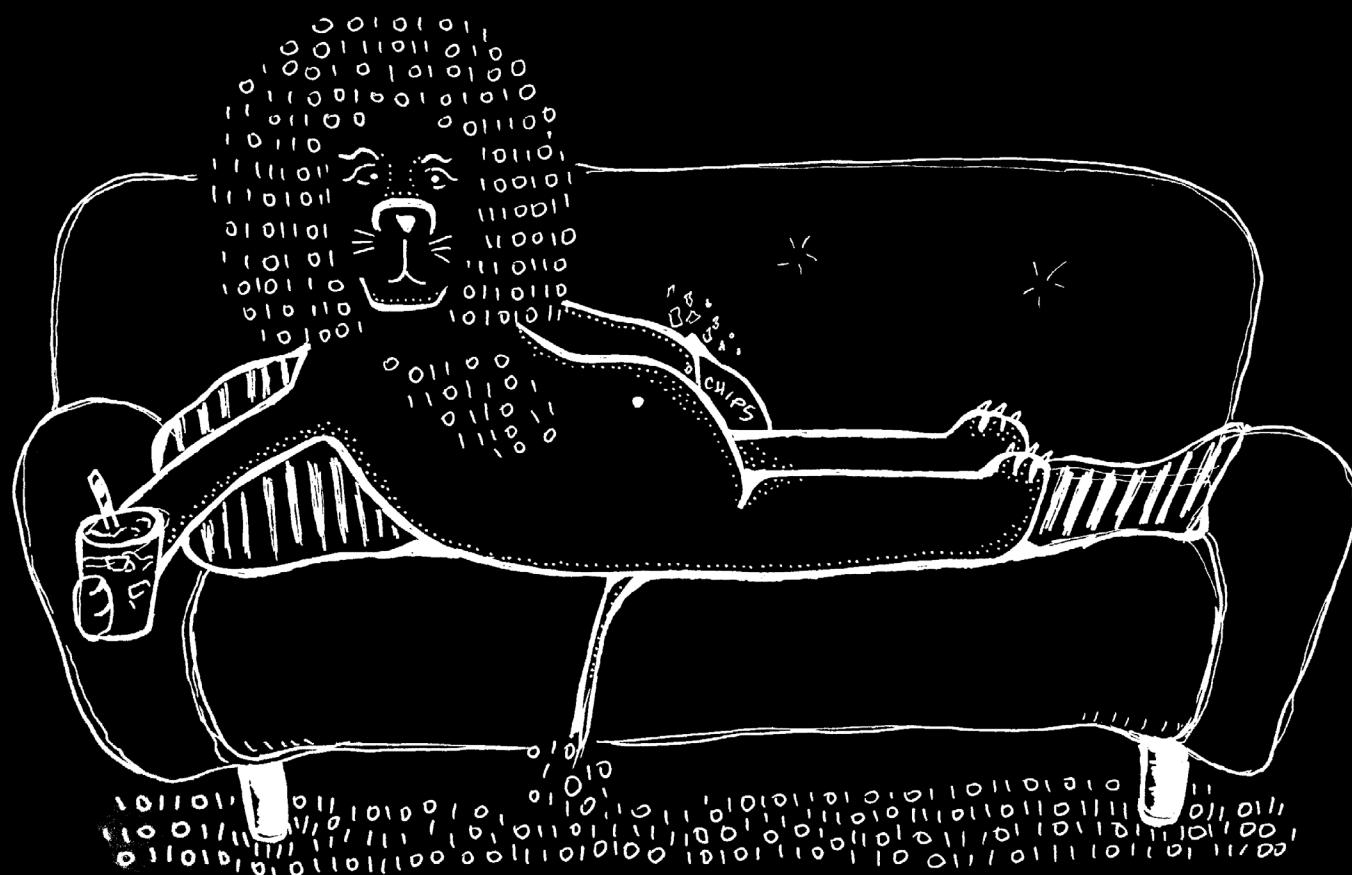
Another root of this problem might lie in the biases embedded in the educational system. The current standards of mainstream design is deeply rooted in the bias of Anglo/Eurocentrism, and the current system of design education is severely lacking in its inclusion of non-western designers and their cultures. For instance, my own educational experience of learning graphic design at the School of Visual Arts in NYC was only centered on design ideals based on European movements, such as Art Nouveau, Futurism, Art Deco, and Bauhaus. With zero to little mention of people and culture from indigenous or non-

Western cultures, this gave the false illusion that only Europe had notable artistic movements. We should challenge any framework of design criticism which lacks in global perspective. If the current standards for what is considered 'good' design is only rooted in Eurocentric movements, there cannot be true diversity within our culture or the participants within the industry. If the contemporary notion of modern design is biased towards the standards of the Swiss International Typographic Style, that means we don't have equal representation. We need to accept more interpretations of our culture and values. As people, we all think differently, live differently, and love differently — why shouldn't our visual ecosystem celebrate our differences? This dull homogeneous landscape cannot be what we want to see more of.

If we were to look for alternatives to this sans culture, where would we start? Let us start by diving into the history of our Latin alphabet, which spans an impressive length of two millenniums. It was initially invented as an everyday writing form by the Egyptians as a simplified version of their hieroglyphics. It then spread to the Greeks through the Phoenicians, who were famous for being seafaring merchants. Then as the Romans came to adopt Greek culture, they modified the alphabet and codified the forms as we know it today. Remarkably little has

changed since their time — we can see evidence of this by looking at the famous Trajan Inscription from AD 113. It seems remarkably modern to our eyes, despite being from a culture 2000 years ago. These Roman forms then go through a rich history that gives birth to a variety of serif styles, such as old style, transitional, slab, and modern. Many styles of scripts come and go as well, such as gothic, italic, uncial, and roundhand. It is only when we get to the most recent two centuries that sans serifs come into vogue. This is a very short time period compared to many other styles that developed over a number of centuries. Perhaps we could look to the past to bring these styles back to life, or we could use them as the foundation to imagine new styles for the future.

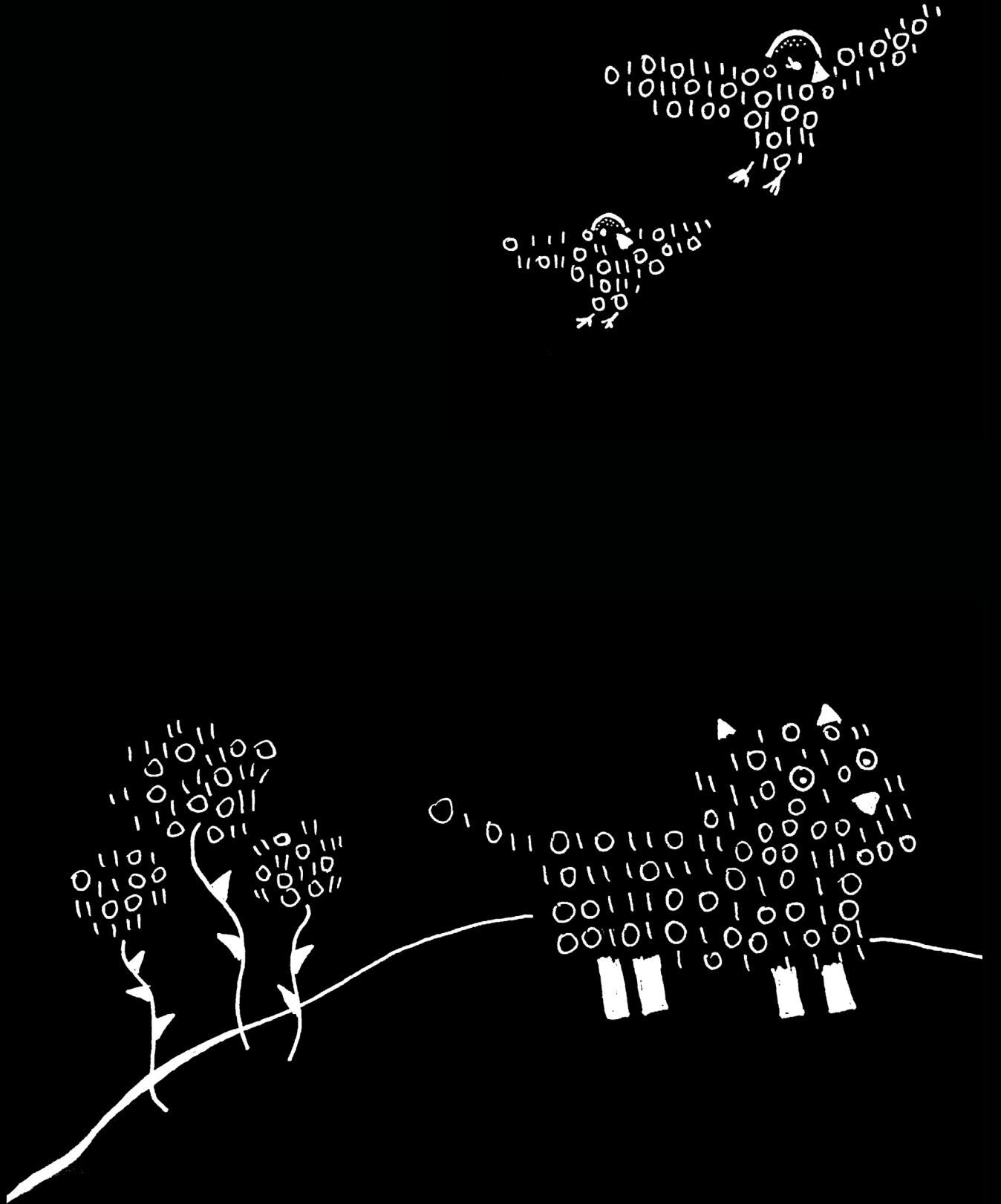
I can only imagine what a diversified typographic landscape would look like, but I am certain that the it would be a much more interesting place than how modern design looks today. Hopefully the future is a place that reflects diverse design in both ideologies and aesthetics. There is so much upside to challenging the status quo and promoting a culture of diversity, and I am looking forward to the future.



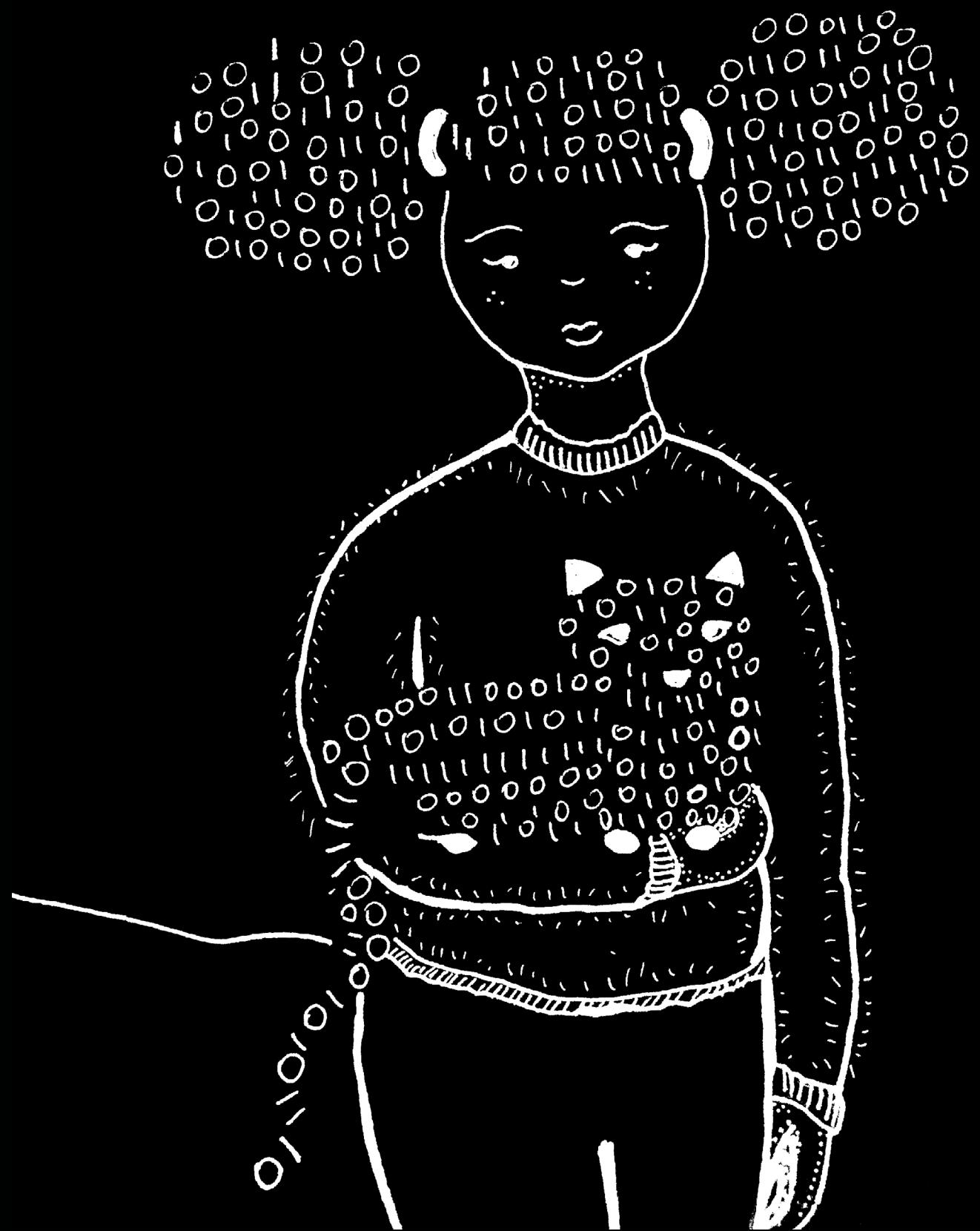
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18

A MIRROR THAT REFLECTS DESIRE

TOMOYA
MATSUURA

“I consider feedback systems to have a mystic power that lets people imagine the existence of things which they are familiar with, or they wish or hope for.”

Illustration by
Edgardo Milla

I love a feedback system. It may seem strange to pick an abstract system as a favorite thing but I love it anyway. A system that creates audio-feedback (Larsen Effect) creates a highly complicated sound that no digital signal processing algorithm can create, yet the system itself is surprisingly simple.

The contrast between simplicity and complexity is one of reasons I like feedback systems. Using audio feedback systems as musical instruments is a form of communication rather than a method to extend one's body—the basic principle of a “tool”.

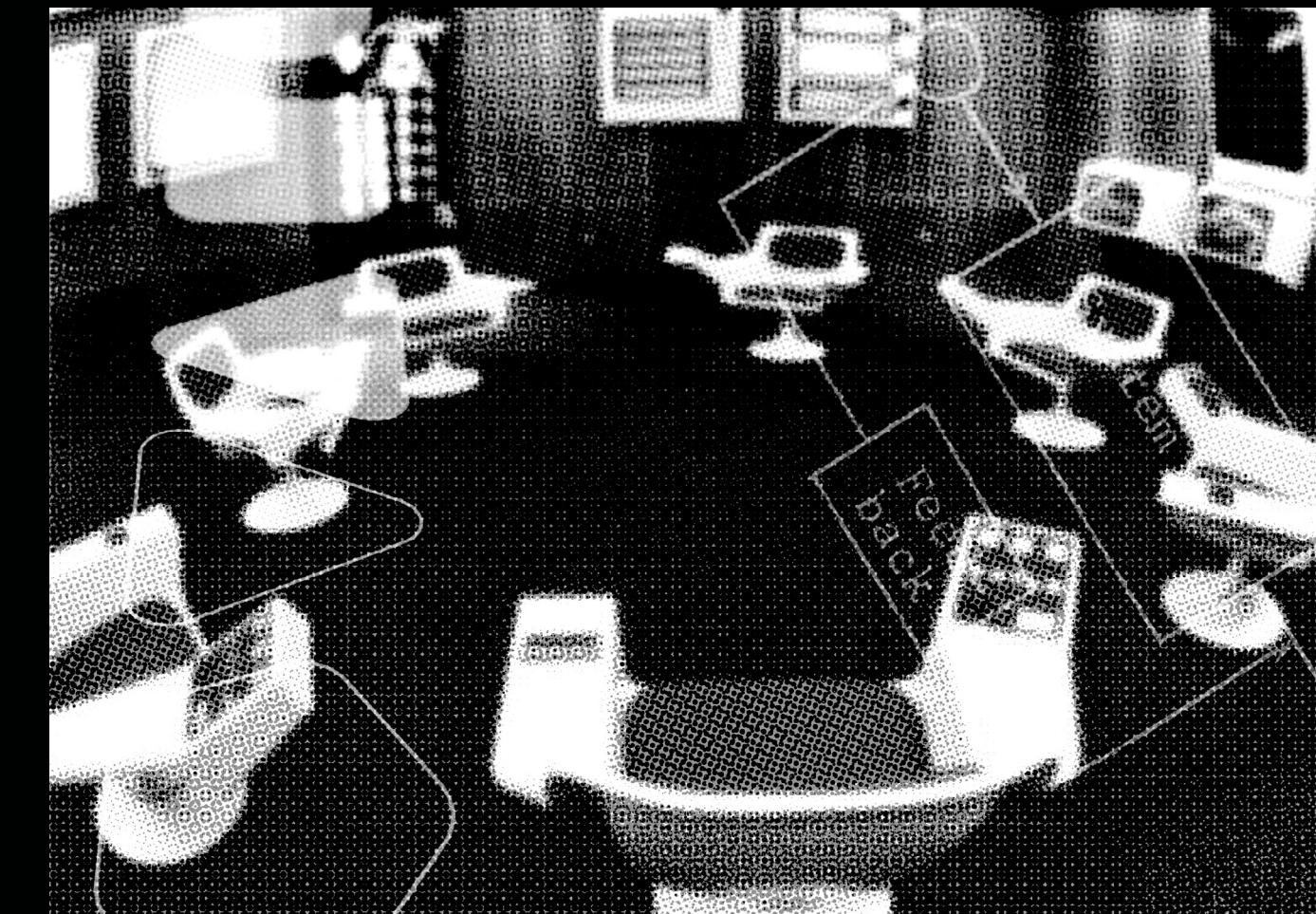
Tracing an origin of wind instruments, such as the acoustic horn. In an ancient era, the horn was made by a literal animal horn and its role was a tool for a transmission of a simple message to far away. This can be seen as an extension of a human's ability, like using human-made axes and arrows to hunt bigger animals. Humans have invented many kinds of tools for the purpose of self-empowerment but the horn was not just a method of empowerment but also the earliest form of “amplification” that transmitted information far beyond the range capable by one's body.

There is a notable electronic instrument, the Cracklebox, which is also one of my favorite instruments. It was invented in the 60s by the Dutch musician Michel Waisvisz. This instrument consists of one operational amplifier and metal pads that are connected to both the output and input of the amplifier. By touching the pads to your body, feedback paths are created through your body and oscillation happens. It produces very

valve tubes, and other early devices are their transmission speeds and whether they produce a continuous signal level. Telegraph relay, a device to send morse codes that preceded amplification, was indeed an electrical transmission but was also a binary transmission so signal levels were either LOW or HIGH.

The speed and continuity of signals gives various behaviors to feedback systems. If an amplified signal was fed back into the input at the speed of light, the system would get an extreme gain and the output voltage would become either the upper limit of the operating voltage or the lower limit, faster than the relay. On the other hand, if an amplified signal with negative gain is fed back, the system would become stable and self-regulating. And if a complex process is put into the feedback path, the output will be more complex.

Amplification, especially in real-time, evolved with the invention of the vacuum tube. Crucial differences among electrical amplification,



complicated sounds and is totally uncontrollable.

To perform with the Cracklebox I must listen to the output sound and react immediately; it is totally different than playing a horn that amplifies one's intentions. It consists of a big feedback loop between the instrument and the performer through a performer's perception. I feel this relationship with the instrument is like a form of communication despite there being no small fairy inside but only a single amplifier. This is interesting but somewhat strange.

I consider feedback systems to have a mystic

power that lets people imagine the existence of things which they are familiar with, or they wish or hope for.

There is a field of study which started a few years after the completion of the ENIAC—the first electronic computer—cybernetics. It has origins in control engineering but some researchers, notably Norbert Wiener, started to apply this control theory to not only technologies but also human behavior and social organization. Interestingly he didn't separate words of “control” and “communication” intentionally. The relation between human and

machine was described as communication 70 years before. These two characteristics had an interesting effect on people politically, as it was supported by both the right and left.

“Cybernetics, unsurprisingly, appealed to corporate management, military engineers, or government technocrats, as it promised a more efficient and less violent means of managing complex processes. What is more surprising, however, is the way that

cybernetics appealed to the hippies, leftists, counterculturals, and bohemian artists of the period, whose ostensibly libertarian and communalist politics would put them in direct conflict with the managers and technocrats who were reading the same books.”

- Jasper Bernes,
“The Poetry of Feedback”

Imagine an abstract system that optimizes society or economics by taking citizen's problems as inputs, feeding back solutions to the people as an output and taking something as an evaluation index, for example, GDP or The Happy Planet Index. What did you imagine the structure of the system to be like? For some people, this may seem like an ideal decentralized system where each node is a person connected to one another like a mesh network, if the system could keep society in an optimized state. Or, other people may see it as a huge citizen-control system which has many inputs and outputs.

The Project Cybersyn was a real example of this. Cybersyn was a management system of a planned economy that was used in the Chilean Socialist Government from 1971 to 1973. The ironic thing is this system was most useful for preventing severe damage

to the government by truck drivers' striking, which was directed by the CIA[2]. The control room, eventually never used because the coup happened before practical operation, looked very like futuristic and bureaucratic despite the purpose of the communist utopia.

There haven't been any other systems like like Cybersyn, a central system controlling everything. I guess one of reasons is the discovery of chaos theory. For example, for planets that interact with each other's gravity, we can predict their position in the future based on their current positions by solving differential equations with up to two planets. However even if there are three, we can not know the mathematical solution analytically. In such a case, we usually predict by translating continuous-time equations to discrete-time equations.

Each time the result (in the case of a planet, position, velocity, etc.) is fed back as a parameter of the equation in the next step—that is also a feedback structure. However, the Lorenz system, for instance, which is a simple model of atmospheric convection with only 3 variables developed in 1963 by Edward Lorenz, is impossible to solve analytically, and can not be calculated with a numerical computation because tiny arithmetic errors in discretization

affect the following results drastically.

So we know that we can not predict all things even if it is simple. This is exactly what I gave as the reason why I love feedback system above—complexity from a simple structure. The desire for a huge system to control everything automatically has no place to stand on.

On the other hand, research on complex (chaotic) systems played also an important role in biological modeling. Synchrony, rhythm of fireflies' blink or handclaps in a concert hall naturally synchronize from a totally random state. This is also a feedback system in which individuals adjust their interval by comparing other's outputs with one's own. Outputs are fed back to into inputs. Would it be a nice metaphor for a decentralized social system?

Did the bureaucratic desire for a feedback system become extinct? If not, where did it go? Let us go back to Wiener's saying; can we separate “control” and “communication”? “Communication” was intended to speculate on the relationship from human to human, from machine to human, from human to machine and from machine to machine. So today, how is the communication from human to human made through a machine? Social networking services, sharing economy

platforms, virtual AI assistance... One of the reasons to build a system that controls people is that it enables one to move their own responsibility into the system.

We can not control everything but we can swap a desire of control into a desire for communication that seems to be harmless at first glance because it utilizes a feedback system.

Who does control whom with what kind of the system? What is amplified inside the system? How many are machines mediating our communications and who made them?

BIBLIOGRAPHY:

1. Bernes, Jasper. “The Poetry of Feedback.” *Stanford University Press*, May 2017. doi:10.111126/

2. Medina, Eden. “Designing Freedom, Regulating a Nation: Socialist Cybernetics in Allende's Chile”. *J. Lat. Amer. Stud.* 38. Cambridge University Press. 2006: 571–606. doi:10.1017/S0022216X06001179.

3. Reichardt, Jasja. *Cybernetic Serendipity: The Computer and the Arts*. London, 1970.

4. Meadows, Donella H., and Diana Wright. *Thinking in Systems: A Primer*. White River Junction, VT: Chelsea Green Publishing, 2015.

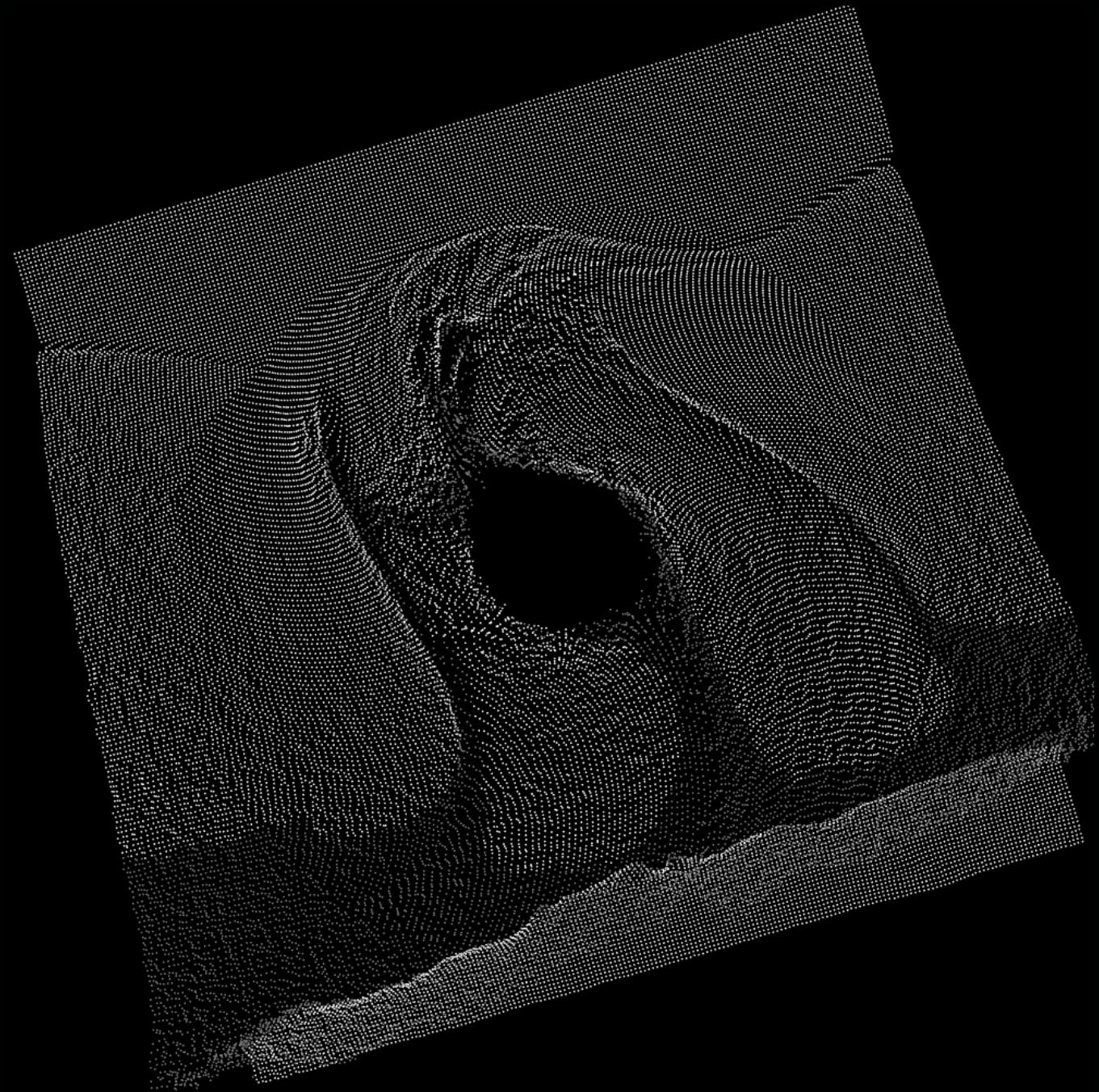
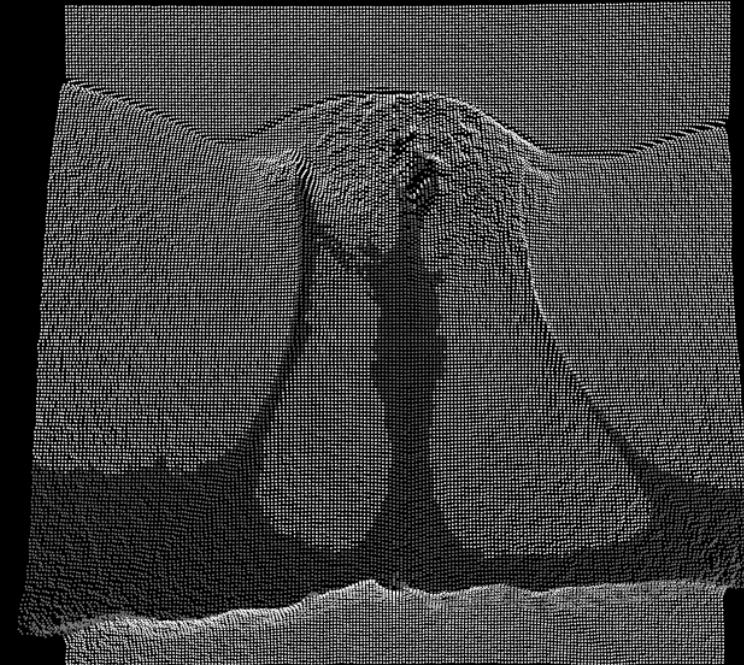
5. Tiqqun. “The Cybernetic Hypothesis.” The Anarchist Library. Accessed November 05, 2018. <https://theanarchistlibrary.org/library/tiqqun-the-cybernetic-hypothesis>.

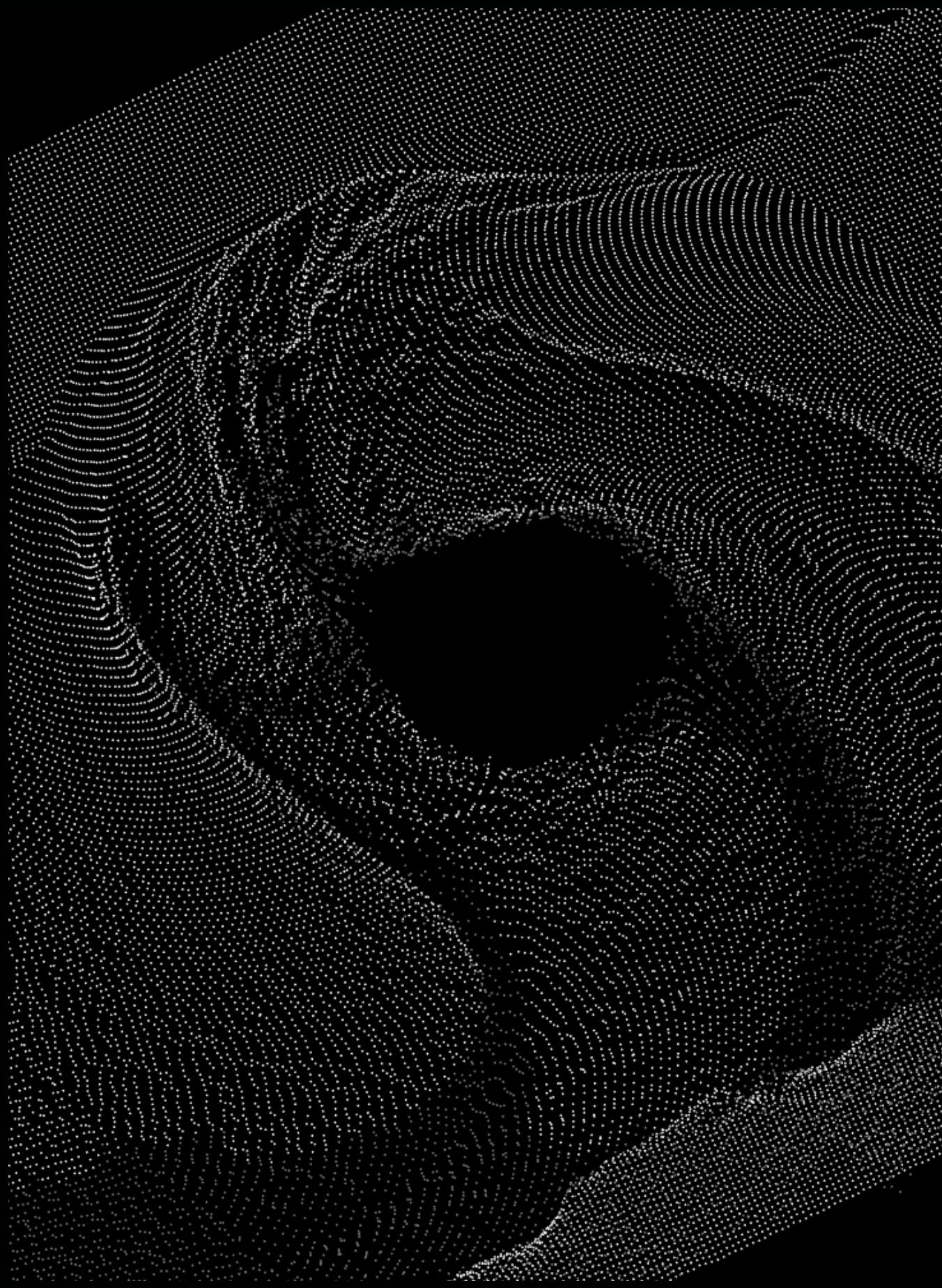
VAGINA VORTEX

SONIA BOLLER

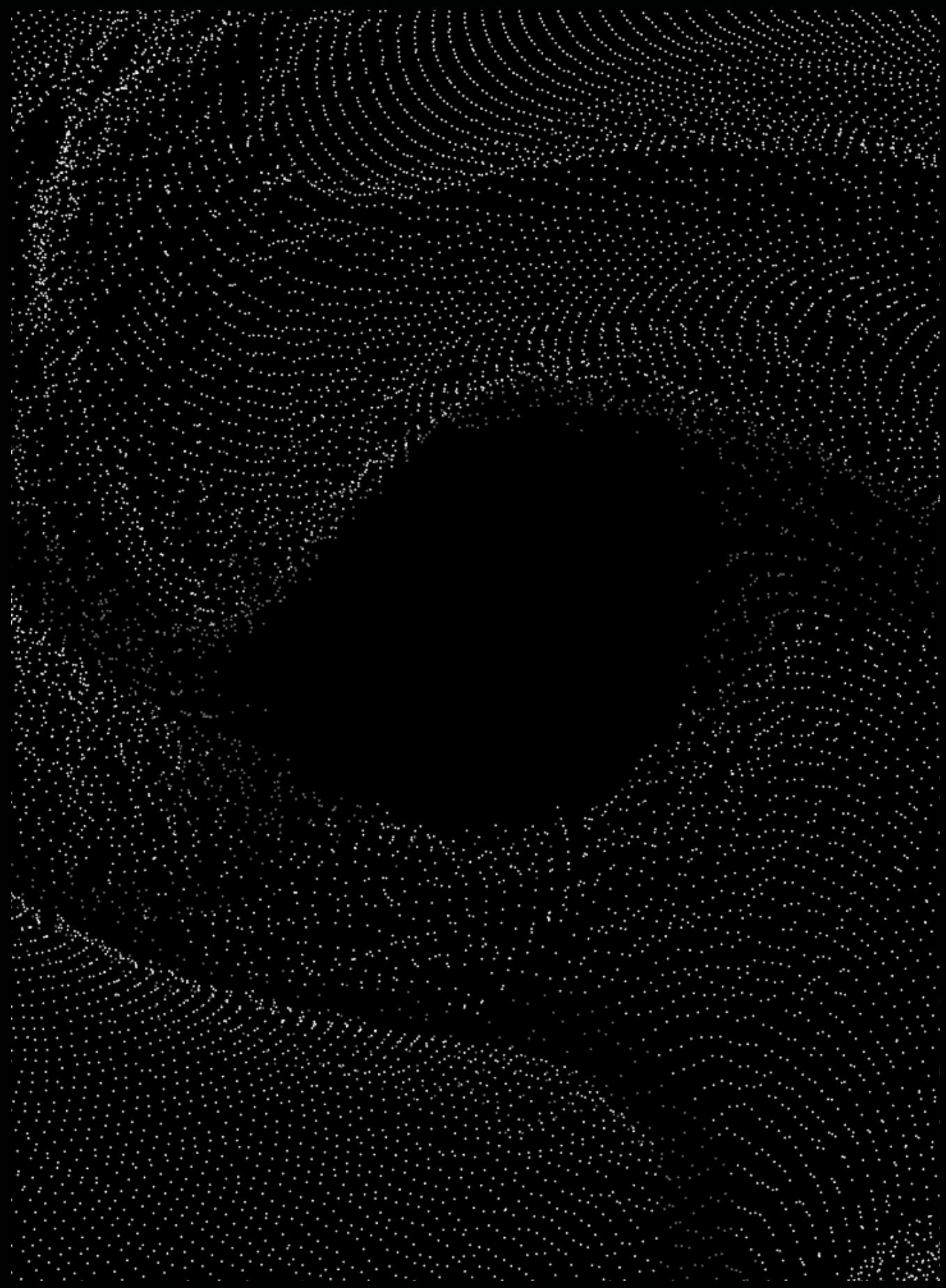
Vagina Vortex,
according to Urban
Dictionary—the
force that pulls a
friend away at the
beginning of his new
relationship, rarely
losing its grip.

Vagina Vortex,
translated—the
overwhelming fear
men feel in regards
to women sucking
away all their power.





25



26

OBJECTIONS TO FACEBOOK'S AUTOMATIC ALTERNATIVE TEXT

PATRICK STEPPAN

"Is AAT better than nothing? Perhaps, but the alternative is not nothing. The alternative is an opportunity to increase awareness of alt-text, the role it serves, and how to effectively write it."

In 1999 the Web Content Accessibility Guide was first published, and its first of 14 guidelines is to 'provide equivalent alternatives to auditory and visual content'.¹ Images on the internet have since been associated with an alternative text, or alt-text. Alt-texts are meant to serve the same purpose as the image they're associated with.

For people who have impaired vision, these texts are vital to reading things on the web. They are often communicated by screen-readers, braille displays, or other means, such that the reader will understand the image's purpose with or without the ability to see the image itself.

Social media platforms handle alt-text differently. Twitter has an opt-in alt-text composition setting,

that allows the user to provide an alt-text for the photos they post. Instagram provides no official alt-text support, however, the caption area can easily be used for the same purpose as an alt-text.²

Since 2016, Facebook defaults to generating alt-text for images uploaded by its users. They call it automatic alt-text, or AAT.³

Facebook's approach suffers from a number of problems:

1. Object detection is posited as a valid method of generating automatic alt-text.
2. Their object detection is too vague to be useful.
3. 'Objectivity' is framed as the default.
4. Users who need alt-text are considered a problem to be cured.

5. It undermines care and the process of normalizing accessibility.

Images and texts are modes of communicating information. When describing an image as text to another person, there is no one-to-one translation. What an image is, and what a text is, depends largely on its context.

Context is what frames an image; meaning arises from their interaction. What is gray against a black background, what is gray against a white background? This is a reductive approach, but it provides a helpful framework for understanding what Facebook's AAT algorithm is capable of. The algorithm, simply put, is based on object detection; meaning the alt-text is

based solely on the image, and not its context. What is gray now?

Facebook's Accessibility team based the AAT on a modified version of a fast region-based convolutional network (Fast R-CNN)^{4, 5} which processes an image in two main steps: image segmentation, and image classification. The algorithms for these steps were once named DeepMask and SharpMask, but have since evolved into MultiPath, itself part of a broader framework at Facebook known as Lumos⁶.

Those details of the algorithm are not relevant, because the approach is inherently flawed. Facebook could have used any neural net and the problem would be the same: an image is not its objects. Object detection is not a valid algorithm for generating alt-text. Regardless of that, the product of the algorithm is often vague and of little substance. How is 'Image may contain: One or more people, smiling' or 'Image may contain: text' helpful?

Is AAT better than nothing? Perhaps, but the alternative is not nothing. The alternative is an opportunity to increase awareness of alt-text, the role it serves, and how to effectively write it.

Rather than fostering a user-experience of care, Facebook offloads the labor to server farms. Facebook engineers justify their approach to AAT, because it "[provides] unmatched

coverage and convenience for photos on large-scale services such as Facebook."⁷ At its best, AAT is another example of technologists' misguided vision to solve or *cure* accessibility; and at its worst it subverts the social responsibility of accessibility by framing it as an unnecessary concern. It skirts social-responsibility in favor of driving higher engagement, and building a 'seamless experience'. A seamless experience for who?

AAT directly benefits Facebook in other ways that have nothing to do with accessibility. Search engine optimization, spam detection, flagging objectionable content, and streamlining user experience. Driving user engagement and therefore ad revenue are clear motivations.

Alternative meanings for AAT may contain:

- Artificially Altruist Technologists
- Awful Ableist Thinking
- Anti Access, Truly.

Facebook's process for adding human-authored alt-text starts with adding a photo, selecting **edit photo** and then **Alt Text**, and finally **Override generated alt text**. Upon clicking **Clear** the AAT is restored.

One reading of this UI is how Facebook posits AAT as neutral; or that the objects detected are the inherent description of the image.

AAT ought to be secondary to human-authored alt-text. For

the third most accessed platform in the world, Facebook has incredible potential for bringing awareness to alt-text, and surfacing the option for human-authored alt-text as the primary model. Contextual information and nuanced reading of images are important for writing effective alt-text.

Algorithms aren't a substitute for social responsibility. As an alternative to AAT, I argue Facebook should prioritize human-authored alt-text; working towards normalizing accessibility and placing care over cure.

WORKS CITED:

1. Techniques for Web Content Accessibility Guidelines 1.0. Accessed November 04, 2018. <https://www.w3.org/TR/WAI-WEBCONTENT-TECHS/#Techniques>.

2. "Accessible Social Media." Accessible Social Media | Accessible U. Accessed November 04, 2018. <https://accessibility.umn.edu/tutorials/accessible-social-media>.

3. "Under the Hood: Building Accessibility Tools for the Visually Impaired on Facebook." Facebook Code. June 26, 2018. Accessed November 04, 2018. <https://code.fb.com/ios/under-the-hood-building-accessibility-tools-for-the-visually-impaired-on-facebook/>.

4. Zagoruyko, Sergey, Adam Lerer, Tsung-Yi Lin, Pedroso. Pinheiro, Sam Gross, Soumith Chintala, and Piotr Dollar. "A MultiPath Network for Object Detection." *Proceedings of the British Machine Vision Conference 2016*, 2016. doi:10.5244/c.30.15.

5. Lerer, Adam. "A Torch Implementation of the Object Detection Network from "A MultiPath Network for Object Detection"" (<https://arxiv.org/abs/1604.02135>). GitHub. November 28, 2016. Accessed November 04, 2018. <https://github.com/facebookresearch/multipathnet>.

6. Candela, Joaquin Quiñonero. "Building Scalable Systems to Understand Content." Facebook Code. June 26, 2018. Accessed November 04, 2018. <https://code.fb.com/ml-applications/building-scalable-systems-to-understand-content/>.

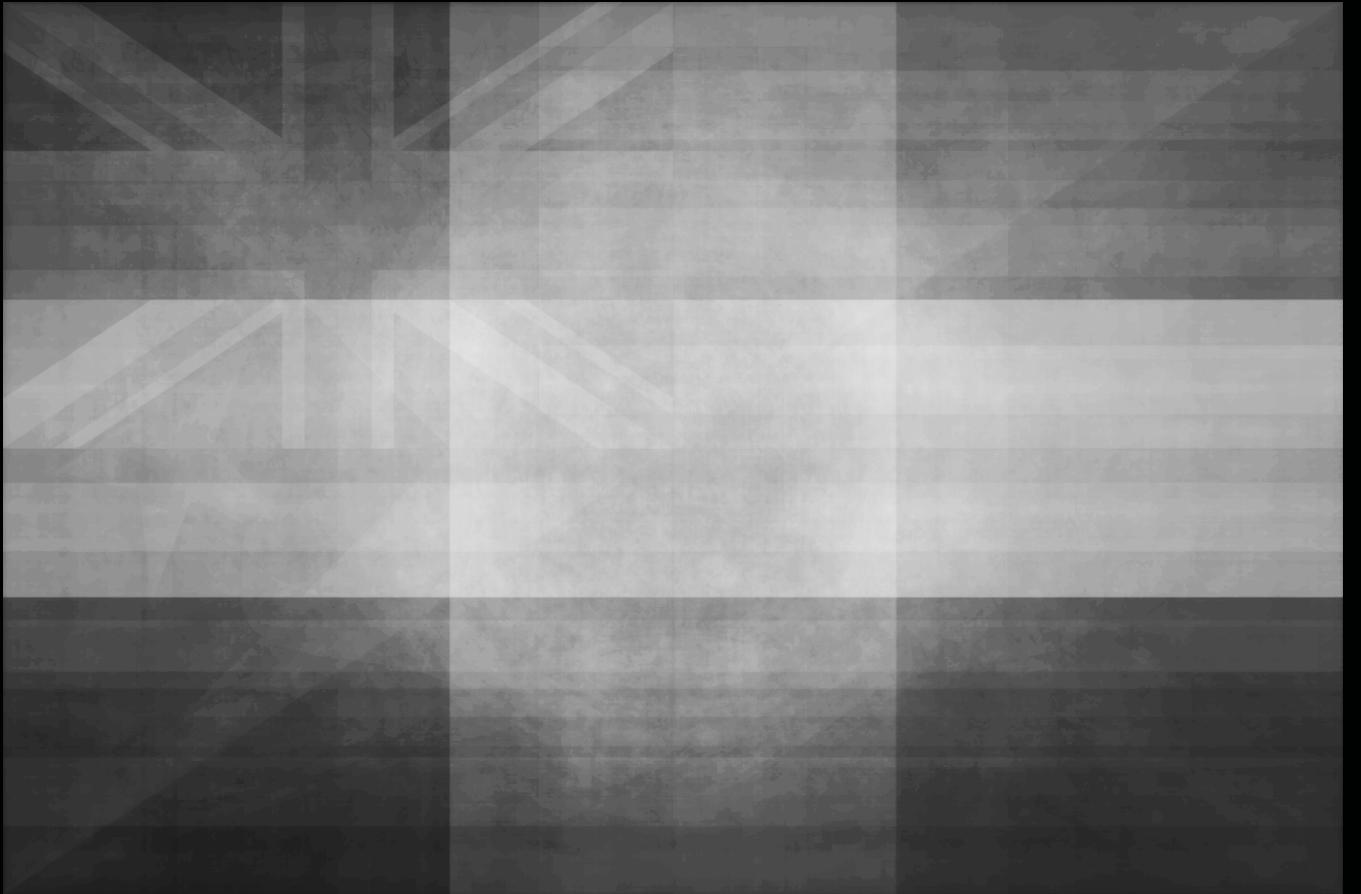
7. "Under the Hood".

FLAGS

THOR B. JAKOBSEN

Flags have historically been used as a symbol for signalling identity and affiliation. In our globalized world the sense of belonging has been fragmented into a universe of small intense groups of people sharing the same opinion on specific matters. However we are no longer monogamous with these groups, as we identify with and belong to many different groups – small and large. Despite this cultural change, the use of flags signalling relation and belief has been preserved in the modern world's group culture. Today flags are still used to signal different kinds of identity and belonging. We still identify ourselves with flags.

As all these flags represent the different groups, unions and associations to which we belong, it is possible to visually constitute and symbolize the sum of our beliefs and convictions through the use of flags. This will be a mix of flags representing groups related to our nationality, values given to us through our upbringing, cultural heritage, religion, sexuality, opinions we have and the ways we choose for ourselves. Like this it will be an ever-changing collage through a persons life.



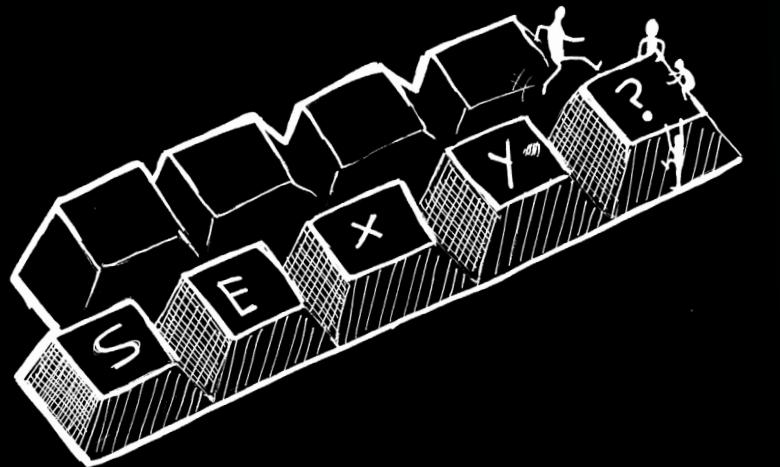
DON'T CALL MY COMPUTER SEXY

MARCUS FLEMING

"Devices have inched so close to us they're almost corporeal, almost inside us. We hold them in our palms like prayers."

Illustration by Eli Muro

As you read this, white dudes in Silicon Valley are calling lines of code *sexy*. Bros at WeWork are calling their startup's new landing page *seductive*. Steve just made a sex joke about a dongle. Meanwhile, everybody else in the office is cringing. We look down at our phones and shift in our chairs. *Sexy*, *seductive*, *hot*: these words should never be used by men in any office setting. These words are wrapped up in an ugly history, in a lineage of harassment and abuse toward women in the workplace. This lingo doesn't land well. But, many men, in their immense privilege and disregard for people's feelings, have found a roundabout way. They have started catcalling computers just to continue



pumping these hateful words into the air. They feminize computers, screens, and programs to subjugate technological objects. They want to make their coworkers feel uncomfortable, triggered, and demeaned. They seek to counteract advancements in workplace ethics. Their goal: to show their power over women, gender non-conforming people, and cybernetics.

Note. Men have feminized other inventions:

Cars: *Look at my new Mustang. Isn't she a beaut!*

Boats: *Put up her sail! Let's get her moving!*

Guns: *Check out my new rifle. She's sexy as hell!*

Though many slough off this kind of language as *boys-will-be-boys* banter, these gendered pronouns have never been innocuous. They have been used to exert power. They have been used to make others feel unsettled, self-conscious, and objectified. They have been used to erase women from invention patents and Wiki pages. They have been used to perpetuate stereotypes about women as objects of male interest, preoccupation, and mastery. They have been used to push gender non-conforming people into the margins. In total, there is nothing good about gendering technology. It's a cheap shot.

Technology is not sexy. It's not pornographic. Technology is elemental,

base, yet ethereal. It's made of earth minerals. It's electric. It's warm. It purrs. It glows. It cradles sensitive information. It invites in our memory. Devices; we hold them in our hands. They live in our pockets, close to our reproductive organs. **Erotic**. Technology is erotic. It's in a place deep down and everywhere. As Audre Lorde explains in her essay "Uses of the Erotic" in the collection *Sister Outsider*, the erotic "is a resource within each of us that lies in a deeply female and spiritual plane, firmly rooted in the power of our unexpressed or unrecognized feeling (pg. 53)." Just the same, technology is a resource that lies in the deeply metaphysical plane of metal, energy, and hidden messages. It uses magnetism, electricity, and touch to fulfill our greatest needs and desires: connection, belonging, and self-expression. And, like the genderless erotics of spirituality, it's something men can't easily access. It's too mystifying. The oracle is not meant for men.

So, men get upset. They get upset at their failure to fully grasp the depths of tech. They get upset about women delving deeper into computing; about women climbing up the corporate ladder, about gender non-conforming people cracking the code. So, they aim low. They sexualize machines. They name virtual assistants Alexa and Siri. They name

personal computers Lisa. They do this because they are afraid of losing their power. They know they're being upstaged by women, cyborgs, and machines "that are disturbingly lively (*A Cyborg Manifesto* pg. 13)." They abase technology because they know they are losing a grip on privilege. The truth is that "white men in advanced industrial societies have become newly vulnerable to permanent job loss... (*A Cyborg Manifesto*, pg. 38)." In response to this masculine decline, men try to lasso the computer—an invention that was never really theirs to begin with.

The sexualizing of 21st technology is not only demeaning for many, it's also confining and unfair for all of us. It's a shame that computers are stereotyped as sleek, slender, algorithmic robots. In reality, the opposite is true. Computers are cozy, familiar, and sometimes even carnal. Using computers is intimate. Building a computer—even more. Devices have inched so close to us they're almost corporeal, almost inside us. We hold them in our palms like prayers. They are spiritual talismans meant for self-discovery, societal critique, and general marvel.

Computers can help us to become more self-aware. The effervescent, prophetic magic of computers can be used to forge "that self-connection, which [we] know [ourselves] to

be capable of feeling, a reminder of the capacity for feeling (*Sister Outside*, pg. 56)." The computer can teach us how to feel deeply. It can teach us how to get in touch with the erotic. The computer, at its mechanical root, is all about *capacity*, *bandwidth*, *process*, *energy*. It's all about back-stroking through seas of unfathomable data: a swim within ourselves. Commit yourself to the erotic existence of humans and computers. Commit yourself to working with others to build new female-centered and gender non-conforming histories around technology. Commit yourself to keeping the words *sexy* and *seductive* far from the mouths of men.

BIBLIOGRAPHY:

1. Lorde, Audre. *Sister Outsider: Essays and Speeches*. Trumansburg, NY: Crossing Press, 1984.
2. Haraway, Donna, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century". *Simians, Cyborgs and Women: The Reinvention of Nature*. New York, New York: Routledge, 1991. pp.149-181.

MEG DHOLAKIA

Have you ever felt invisible? As if, in that moment, you've been forgotten.

Have you ever felt insistently visible? As if, in that moment, you are dissected.

Have you felt all those things together, in one long drowning moment?

To be a member of a marginalized group in America is to occupy a dual space. You are both recognized and ignored. Identified and beyond identification. What do I mean by that? The acknowledgement of you as a human being is context dependent, depending on the perspective of the viewer and their relationship to you.

During the era in which Transatlantic Slavery was the economic driver of the United States, slaves, primarily those of African descent were not recognized with the full set of rights due to a citizen. Invisible in the eyes of their peers who had set themselves above them by dint of the color of their skin and military force.

During that same time, lantern laws (as discussed by Simone Browne in the book *Dark Matters: On the Surveillance of Blackness*) made slaves hyper-visible by forcing people to carry lanterns with them after sunset if unguarded by a white person.

Visible and invisible.

Today, minorities continue to be underrepresented in our media and our culture. I was fifteen years old before I saw someone who resembled me on a television screen.

People of color are underrepresented in data-sets meant to create products to improve our lives. From selfie-filters to automatic water faucets—our skin can render us unseen. We are building the foundations of an algorithmic state and our materials are *flawed*.

And yet, and yet. Through policies like Stop and Frisk, through documented and recognized bias in algorithmic sentencing and policing methods, people of color, specifically those of African American, Afro-Caribbean, or African descent, are singled out, easily identified, pinpointed, *pinned*.

Visible again.

How utterly exhausting to have to wait on your own humanity.

DIGITIZING THE BODY

ELIZABETH LIN

“As digital bodies and personas like Shudu and Miquela start gaining influence in our society, how will they use their power?”

Shudu is an up-and-coming fashion model who was first featured on Rihanna’s Fenty Beauty’s Instagram for rocking their tangerine lipstick. She followed this up by starring in her own editorial in Women’s Wear Daily (WWD), the Associated Press of the fashion industry. And, most recently, she was featured in a campaign alongside two models for the luxury French fashion house Balmain. Shudu is also not real. She is 100% Photoshop and CGI. Her creator based her flawless, dark-skinned body off the Princess of South Africa Barbie doll and dubbed her “the world’s first digital supermodel.”

Oh, by the way, her maker is a white male.

In *Dark Matters: On the Surveillance of Blackness*, critical theorist Simone Browne poses the question:

“How do we understand the body once it is made into data?” Shudu is the most extreme form of a body that has been made purely into data. She has no known personality or history. What is Shudu like? Where did she grow up? What does she like to do in her free time?

Shudu is virtually anonymous. She is simply a body waiting to be objectified. Instead of clothing being designed to fit her, she can be designed to fit into any item of clothing. In an interview for Harper’s Bazaar, her creator says:

“It’s like virtual photography, so once I create her, I can kind of pose her in certain ways. [...] It’s meant to be beautiful art which empowers people. It’s not trying to take away an opportunity from anyone or replace anyone.”



Image via @shudu.gram

This is problematic. Though her creator anonymizes Shudu and treats her as “beautiful art,” he has basically created a vessel with no soul that perpetuates the master and slave relationship. The longest description on her Instagram, @shudu.gram, is “I have some beautiful new work coming out!!” Who is I referring to? Is it Shudu or is it her creator? Why is her only descriptor her beauty?

In contrast to Shudu, there is the CGI Instagram influencer @lilmiquela with over 1.5 million followers. Miquela is racially ambiguous, but identifies as a Brazilian-American. As an AI, she can be anywhere and everywhere at anytime. She goes to music festivals like Coachella, wears streetwear brands like

Opening Ceremony, makes electronic music that is on Spotify, supports movements like Black Lives Matter, and hangs out with top models and influencers. She has more clout than any of us.

Miquela is 100% personality and story. She even owns the fact that she is a robot and is open about her journey to self-acceptance. Through an emotional post on Instagram, she revealed her identity: “[...] Ok now here’s the hard part. My hands are literally shaking. I’m not a human being.”

Miquela was conceived by a studio of storytellers and technologists called Brud. According to their website, they strive to create “story worlds that have the power to introduce marginalized ideas wrapped in the familiarity

of entertainment.” Their work has earned Miquela a spot on *Time’s 25 Most Influential Internet People of 2018*. As an influencer, it’s important to be on top of the latest trends from being woke to dressing in the latest streetwear. What will her creators do with her influence? What are their motives? Who is her story for? Who does she represent? Can she have an identity?

As digital bodies and personas like Shudu and Miquela start gaining influence in our society, how will they use their power? Who is benefitting from their existences? How will they continue to perpetuate underlying societal problems? How could they help create radical change?

