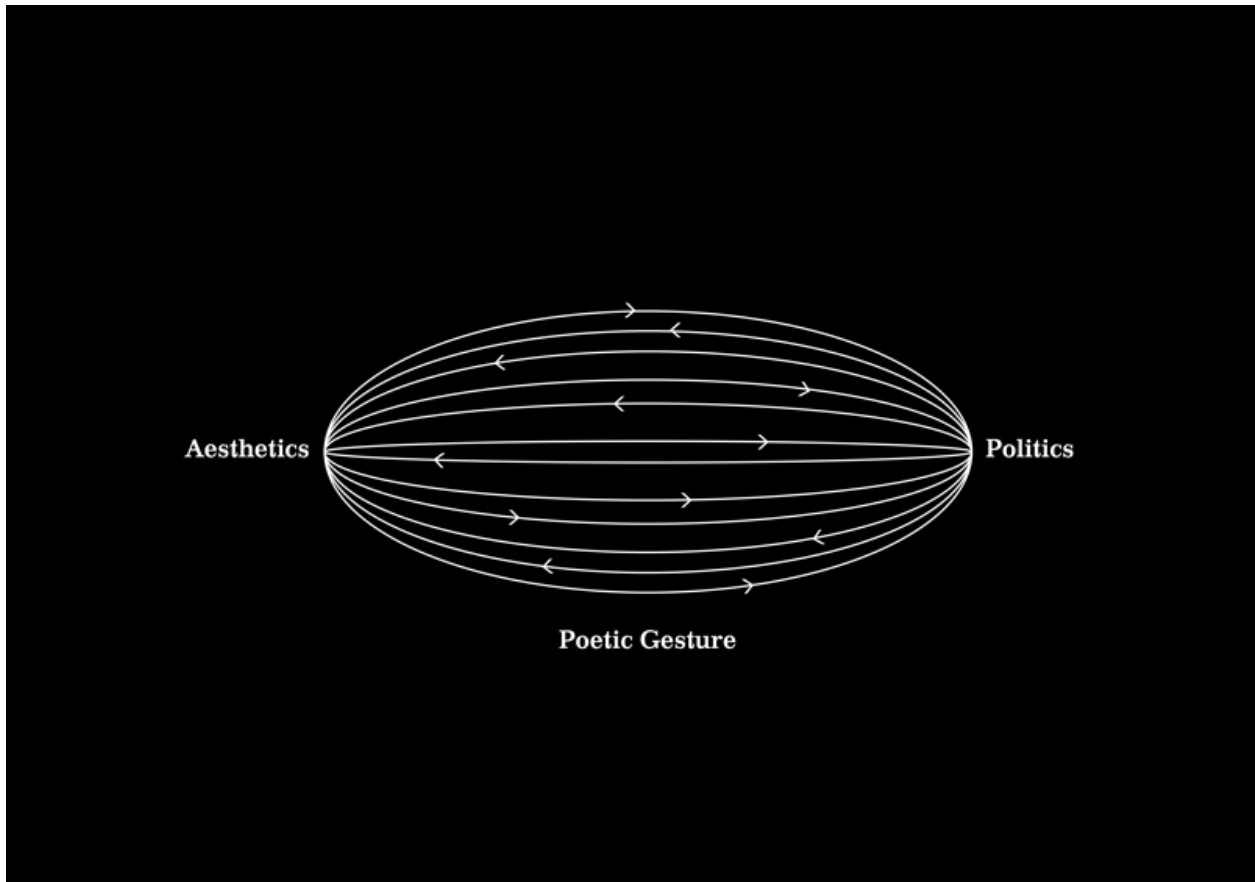


# BROOKLYN RAIL

74 million million million tons

By Andreas Petrossiants, July 11, 2018

SCULPTURECENTER | APRIL 30 – JUNE 30, 2018



Omar Mismar, diagram accompanying his lecture "A Poetic Occupation: Artistic Gestures in Zones of Conflict," 2015. Inspired, in part, by arguments put forth by T.J. Demos in *The Migrant Image*. Courtesy the artist.

Maybe we can think of art institutions in a way analogous to courts.

—Eyal Weizman, 2016

... The photograph is seen as a re-presentation of nature itself, as an unmediated copy of the real world. The power of this folklore of pure denotation is considerable. It elevates the photograph to the legal status of document and testimonial.

—Allan Sekula, “On the Invention of Photographic Meaning,” 1993

### **Evidence in / as the Image**

In one image, a group of protestors carry a body in need of urgent medical attention, or in mourning—a glimpse of the violence perpetrated by the state of Israel on civilian protestors in Gaza on May 14th that killed sixty and injured over two thousand people. In another image, Ivanka Trump smiles before the family brand name freshly etched onto the façade of the now-official US embassy building in Jerusalem. The latter image depicts the ceremonial moment inaugurating the latest architectural weapon of US-supported settler colonialism in Israel. Trump’s sudden decree to move the embassy might provide the most literal example of what architect Eyal Weizman calls the architecture of slow violence, referring to the strategic implementation of walls, checkpoints, cartographic legislation, ecological manipulation, and other structures—“political plastics”—that are the “medium through which political and physical forces are slowed into form.”<sup>1</sup> The two images might appear like a before-and-after schema, an Eisensteinian “dialectical montage” of sorts, were they not produced on the exact same day, on either side of a militarized zone located between Israeli Defense Forces (IDF) and civilian protestors.<sup>2</sup> Time collapses in the tension between the images; violence and its architectural support are inscribed as complementary processes in a single project of domination. Also, encoded into this tension are a series of narratives, manipulated according to the image’s presentation. For example, given a potential framing of the images, one might be led to believe the Palestinian protests were organized strictly around the embassy move, while in truth the March of Return protests had begun on March 30.<sup>3</sup>

I introduce these images as exemplary instances in which we, their viewers/onlookers, should remember Ariella Azoulay’s theorization of the photograph as an ontological and political event, and reflect on photography’s use as a form of (forensic) evidence.<sup>4</sup> Of course, whether presented in a legal or civil context, evidence is the factual or testimonial material the reporting of a political event is based on, or countered with. However, just as easily, the state’s manipulation (acting through executive power or media apparatuses) of evidence can be used to obfuscate as much as it can retell what took—or is taking—place. Given the inextricable connections between the methodologies of producing art and evidence—in terms of the skills used, and the forms of its dissemination or “exhibition”—we must ask how, under what conditions, and in what “court” artistic representation can act as evidence of a political event. Furthermore, how effective can the (re-)presentation of political violence and politics as evidence be when produced for and in the context of art, or the culture industry at large.

In 2006, the architect Eyal Weizman published a much-circulated text, “Walking Through Walls,” which details how the IDF began incorporating the (ostensibly anti-colonial) writings and

practices of the Situationists and the likes of Deleuze and Guattari into their military strategy to better invade Palestinian built environments—the cooption of the Situationist *dérive* being the most prominent example. Weizman's essay brought related research and practices to the attention of critics (particularly those in the privileged positions of safety who were unaware of the work already being undertaken elsewhere from sites of precarity and violence), and then introduced a more pronounced turn to critical work which produces or gleans evidence from various information sources. Broadly termed a “forensic turn,” it is comprised of diverse strategies of “counter-forensics” (attributed first to Allan Sekula in 1993).<sup>5</sup> For the purposes of this discussion, we might broadly define counter-forensic work as a recoding of the state's (forensic) strategies, typically used to obfuscate human rights violations or to exert control, to instead document what is obscured by dominating state narratives.

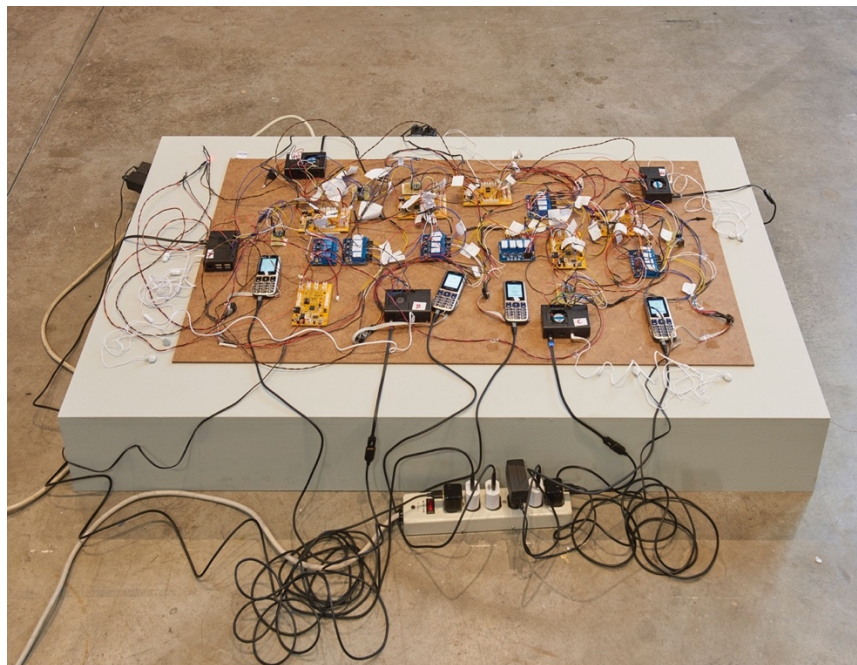
Central in this turn is Forensic Architecture, formed by Weizman at Goldsmiths University in 2010. This continually operating independent research group and graduate program is comprised of researchers, artists, architects, lawyers, and activists.<sup>6</sup> They mobilize evidence on behalf of human-rights groups and the families of civilian victims of state violence—often in Israel and Palestine, though they have researched human rights abuses in Guatemala, Mexico, Germany, and Syria. The evidence is culled from the testimony of individuals, organizations, or sites both urban and remote, and then modeled with architectural analysis to challenge the forced imaginaries of militaries, states, and powerful political parties/formations. Forensic Architecture's use of models in courts, which has led to tangible, if mitigated, successes in certain cases, if only setting a precedence for what type of evidence will be accepted, might be considered a form of “legislative praxis.”<sup>7</sup> A major issue of debate amongst activists, artists, humanitarian workers, and critics, of course, is what happens when work, artistic or otherwise—that seeks to expose human rights abuses—is presented in an art context rather than a judicial one. In the former the potential to become protest as entertainment is of course more likely, though the same is true in the manipulation and spectacularization of the courtroom as well. It is imperative to consider: how the experiences of the bodies of victims are positioned in relation to the spectator *vis-à-vis* the Western/Northern gaze; the aestheticization of violence and political resistance in a depoliticized context such as a museum; and, importantly, the artist or curator's invocation of colonial guilt for the sake of performing political resistance.

Given these fraught positions, much of the reception of the “forensic turn” navigates a line between a belief in the potential of pedagogy and artistic representation to challenge state structures of violence and the recording of history, and resignation in the face of political ineffectiveness and anticipated recuperation. Take, for example, Naomi Pearce's conclusion in a recent review of Forensic Architecture's 2018 exhibition at the ICA London. After discussing Weizman's aim of fostering forums for discourse, Pearce writes, “These efforts at transparency feel generous. Despite my doubts, I want to believe him.”<sup>8</sup> Presently, the collective's nomination

for the 2018 Turner Prize has spurred dismay. Critics believe such art world accolades only aestheticize, and therefore abrogate, the political effectiveness of Forensic Architecture. It seems to me that the more productive question to ask is whether (counter-)forensic work (exhibited evidence) is necessarily neutralized (or worse) when presented in art contexts, or activated. Can such research projects foster the collective spaces of discourse and specificity necessary for the political speech of the victim's testimonial? Can the museum be such a space?

\*

This is the central question addressed by the assortment of polyvalent work in the exhibition 74 million million million tons at SculptureCenter. It is co-curated skillfully by Ruba Katrib, whose curatorial work has concentrated on analyzing the materiality of art in an era of perpetually immaterializing production, and artist Lawrence Abu Hamdan, who completed his graduate studies with Forensic Architecture, and describes his practice as a "private ear." The intended aim of the show, described in their exhibition pamphlet, is to present the diverse types of evidence registered by or gleaned from both human and non-human actors by artists. In other words, how can traditionally artistic "skills" and methodologies be used to investigate, specifically in this exhibition: the execution and obfuscation of socio-political catastrophe; anthropogenic crises; settler colonial occupation; forced displacement; slow genocide, and the legislation and control of women's bodies. The show's ultimate conceit is a partial rejection of the allegation that the aestheticization of politics is inherently defanged or made solely representational once presented in an art context.



Shadi Habib Allah, Did you see me this time, with your own eyes? 2018. Courtesy the artist; Green Art Gallery, Dubai; Rodeo, London; and Reena SpaulingsFine Art, New York. Photo by: Kyle Knodell.

Entering SculptureCenter, one encounters a concatenation of wires, cellphones, headphones, and circuit boards on a very low pedestal which produce a sensorial network of wild vibrations, ringtones, and light flashes. Shadi Habib Allah's *Did you see me this time, with your own eyes?* (2018) is made up of several Raspberry Pi computers, Z-line phones and chargers, and microcontrollers. An accompanying video documents a group of engineers in Palestine who worked with Allah to replicate an intricately self-regulated 2G phone network constructed by Bedouin smugglers to communicate free of surveillance. (On the wall of the engineers' crowded office are two posters: one of Nelson Mandela, and the other a quasi-post-Fordist graphic detailing seven steps for success—among them, "goal evaluation"). Rather than a counter-forensic project per se, Allah uses technology to undermine the surveillance it allows. He does not interrupt the network, nor usurp it to challenge a power structure. Rather, he displays the technical skills and collective work already in use to communicate free from surveillance.

Downstairs in a catacomb-like room, Hong-Kai Wang's *Southern Clairaudience* some sound documents for a future act (2016 – 18) engages a different kind of "aural" network. Wall-mounted speakers play a recording of Taiwanese farmers singing an anti-colonial song together, accompanied by a short wall text and an image of the group. Over the course of multiple workshops organized by Wang, they collaborated to revive the long-forgotten protest song, composed in protest of Japanese colonial rule. The sessions became processes of shared listening and memory, employed to cultivate solidarity against legacies of domination. Remembering Jacques Rancière's remark that: "It is possible, from any given point, to try to reconstruct the conceptual network that makes it possible to conceive of a statement, that causes a painting or a piece of music to make an impression, that causes reality to appear transformable or inalterable," we can consider the song as emblematic of political speech, and the workshops as exercises in collective action.<sup>9</sup> Similar to Allah's work's depiction of the collective work of community-construction, Wang's organization of the workshops, as well as their documentation, demonstrates the farmer's own interventions into colonial presents and pasts.

*Geography is . . . the act of war but can also be the art of resistance if there is a counter-map and a counter-strategy.*

—Edward Said, 1993

Investigating processes of cartographic control and the criminalization of movement, Hiwa K's film *A View From Above* (2017, co-written with Abu Hamdan), composes a poetic (and dialectically-constructed) gesture on displacement and migration. This might be the most self-reflexive work in 74 million million million tons regarding the tension between the poetic gesture and political (in)efficacy.<sup>10</sup> We listen to a story in the third-person while the camera roves over

the topography of a modeled city in ruins. Registering bombed-out buildings, destroyed schools, all in the earthy-color of clay, one might first think the city is Aleppo or Mosul. Swiftly, however, one notices a characteristically northern European church, which stands intact among the rubble of war. Produced for documenta 14, the film depicts the model of Kassel in the aftermath of World War II. Is this a way of “bringing the war back home” for those European spectators detached from violence perpetrated by their countries in far away places, while they construct walls and migrant detention camps for those displaced by that very violence?

The narrator recounts the story of M, an asylum-seeker in a Schengen country (country X) who waits years only to be rejected because the immigration officials deemed the area he came from to be a “safe” zone. M had deserted the army of a country ruled by a dictator, making a potential forced return anything but safe. He crosses the border into another Schengen country (XX), where he meets people from the “unsafe” city J. K begins drawing a map of this foreign city with the help of the citizens of J, committing every centimeter of the zone to memory. He is then able to pass a subsequent immigration official’s test by describing the geography of the unsafe zone. By cultivating a fiction from the truth of others’ memories, M receives the right to migrate—the right to exist and be recognized.<sup>11</sup>

A View From Above interrogates what co-curator Abu Hamdan documents in the first act of his book *A Politics of Listening in Four Acts* (2016), comprised of short monologues, spoken by asylum-seekers, which were used by EU countries to analyze the accents of migrants beginning in the early 2000s. The words were scrutinized by officials to deduce if the speakers came from what the UN declared were safe or unsafe zones. Continuing the colonial cartographic impulse, the UN legislates the borders of conflict. Abu Hamdan introduces the text in this way: “What seems at first like an anxious stream of consciousness is in fact a precise account of the weaponization of freedom of speech, which is reaching its nightmare conclusion in today’s liberal democracies.”<sup>12</sup>

Intimacy, or rather its forced invisibility, can also be used as a weapon against political subjects, against their bodies. George Awde’s series of photographs *Public Shadows* (2017) document intimate scenes which isolate queer subjectivities and places in Lebanon—those very spaces made invisible. Awde, however, undermines the documentary and voyeuristic impulses of the photographs by obscuring the scenes they depict using a technique with gum arabic and graphite. In doing so he further limits their visibility in a semi-public space—in this case the museum. Perhaps this is in effort to protect the depicted persons and space. While ostensibly motivated by a desire to replicate the politics of forced invisibility for pedagogical purposes, Awde’s method of printing the images, however, implies a more clumsily violent gesture. Downstairs there are similar photographs, which were sent to the artist by friends via WhatsApp. Sparsely hung along a narrow hallway, the images seem to invite viewers to close viewing. Here,

there is instead the documentation of affect, and the potential for intimacy between the spectator and the scenes depicted—albeit one-sided. Might this imply that this “evidence” can only be understood under certain conditions of visibility and connectivity, where one can engage affectively in its reception, rather than furthering its abstraction?



Susan Schuppli, *Nature Represents Itself* (detail), 2018. Oil film simulation diagramming hydrocarbon compositions and behavior from both the initial surface slick as well as deep subsurface plumes resulting from the Deepwater Horizon oil spill. CGI simulation. 6:26 minutes (loop). Produced in collaboration with Harry Sanderson. From a mixed-media installation. Dimensions variable. Courtesy the artist. Photo: Kyle Knodell.

Susan Schuppli’s multi-part *Slick Images* and *Nature Represents Itself* (2018) uses various media to analyze the 2010 Deepwater Horizon oil spill as “natural cinema”—that is, as a filmic event that can be viewed from varying degrees of visibility and abstraction, and proposes ecological sites as witnesses. In other words, the non-human environment is itself a “photosensitive array” that registers information and can be read as a photograph or film.<sup>13</sup> Against the far wall of the large central room of SculptureCenter, Schuppli positions a video feed of the spill emanating at the Gulf of Mexico’s seafloor on June 3, 2010. The one-minute loop isolates the process of ecological contamination and its registration in various terrains. In a smaller isolated room are prints, films, and audio that together comprise a room-sized “copy” of the meta-document inscribed into the “ecological” landscape and subsequently disseminated in mass media streams which erroneously stakes claims of “objectivity,” in the space of a subjective artistic exhibition. Schuppli also presents a CGI simulation (produced in collaboration with Harry Sanderson) of oil as it makes its way through water. In addition to this

animated model of ecological violence, one can put on headphones and listen to the lawsuit filed by Ecuadorian and indigenous human-rights activists against British Petroleum (2010). Here, the potential for legislative praxis is depicted, but not activated, though the work describes how this type of information might aid the legislation of protections for the earth and the vulnerable communities most affected by environmental catastrophe. As Elizabeth Povinelli described a (now-dropped) 2017 lawsuit which seeks to position the Colorado River as a “person” (in a way similar to the Citizens United ruling that corporations can act as individuals): “It’s just one of many examples asking: How do we use contractual law, human rights law, not merely to play with the extension outside of the human, but ... as a political means to work against colonial capitalism, extractive capitalism, racialized extractive capitalism, etc.?”<sup>14</sup> A question here is whether the work picks up where activist organizing leaves off, or whether this type of research and modeling only creates “entertainment” from the struggles against violence. Schuppli’s work suggests we acknowledge that research, evidence, and praxis, whether carried out by activists, lawyers, or artists can all work (or be worked through) in concert.

In a similar vein of “testimonializing” the non-human landscape, we can also consider Nicholas Mangan’s two-channel video *Ancient Lights* and two collages *Ancient Lights (Brilliant Errors) #4* and *#5* (all 2015 and part of a larger eponymous project). Consistent with his research into the relations between the “natural” environment, colonialism, and political economy, Mangan’s *Ancient Lights* cumulatively traces the sun’s wide influence on social and political life: from spirituality to energy production, myth making to building codes. One channel of the film depicts a Mexican ten-peso coin picturing the Aztec sun god. The coin spins slowly and infinitely on a white surface, and seems at times on the verge of falling to rest, though it invariably picks up again in an unsettling dual allegory for impending finite catastrophe and “infinite” energy. In this project, along with his exhibition and book *Limits to Growth* (2016), he begins to formulate an argument for alternatives models of consumption and energy production.<sup>15</sup>

*To invent the sailing ship or steamer is to invent the shipwreck.*

—Paolo Virilio, *The Original Accident*<sup>16</sup>

Other works in *74 million million million tons* are interested in technology—and its merging with the body—in and of itself, rather than as a tool for activist research, poetics, or mobilizing political critique. Carolina Fusilier’s paintings from the series *New Kind of Sun* (2018) show the embeddedness of libidinal sublimation in the design of technology. Sidsel Meineche Hansen questions the legislation and control of women’s bodies with the use of a virtual reality simulation. Curious, though somewhat misguided, Daniel R. Small’s *Animus Mneme* (2018) is concerned with transhumanism. His large mixed-media installation includes, among other elements: an object-analysis of an “ancient computer” circa 60 BC; a video interview with an artificial intelligence android (capable of telling Existentialism 101 jokes); a video filmed at server farms owned by affluent members of the Transhumanist movement who are busy



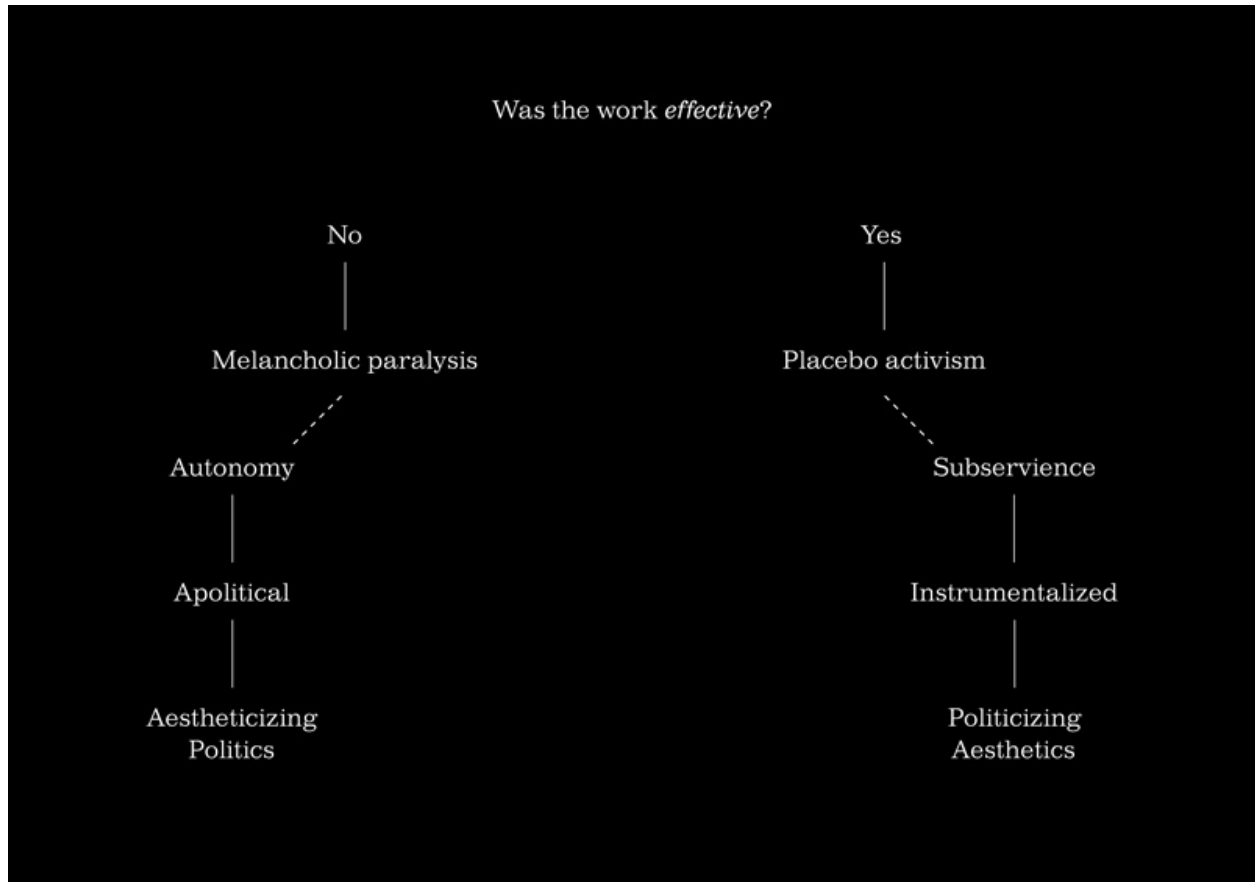
uploading their brain activity onto hard drives in pursuit of immortality. As it is, the installation aims for formalist construction and representation rather than for enunciating political speech. Last, and perhaps most problematically, Sean Raspet and Nonfood's *Nonbar (Prototype Version 2)* (2018) offers a kind of salvation narrative.

Next to Small's large installation is a small vending machine on a pedestal, where one can buy meal bars made of algae. Created by Raspet and the LA-based company that he co-founded—called Nonfood—the bars are accompanied by publicity cards introducing a new flavor and its nutritional facts. While the work undertaken to produce such a “food of the future” is a provocative invocation of, and hopeful corrective for, the crises of food shortage and malnourishment soon to come, its presentation and utopian implications reinforce a futurist-chic technocracy while paralleling the visual aesthetics of redemptive luxury wellness, themselves rooted in the very capitalistic models of growth that are to blame. Small's installation and Raspet's bars for sale do not point to a direction of intervention in the politics bound with their work, but rather project their “critique” over the very image of those narratives they document. However, one might also protest: if it is indeed sustainably produced and provides all the nutrition one might need, why worry about its presentation at all? After trying the bar, walking away with green teeth, my only hope was that this future is far off.

### **Evidence as Art as Productive Failure**

A work that is not in *74 Million million million tons* but that takes the various problematics discussed here as its central concern is Omar Mismar's video work *I will not find this image beautiful I will not find this image beautiful I will not find this image beautiful (An unfinished monument)* (2015). By chance, I saw it screened at MoMA and heard him speak as I was finishing this essay. On the one hand, the video probes the failures in effectiveness inherent to politicizing aesthetics, and the dangers of capitulation in aestheticizing politics on the other. At MoMA, Mismar relayed how haunted he was by the beauty he found in the abstracted forms of bomb clouds towering over civilian homes during Israel's 2014 bombing campaign in Gaza that left over 2,100 – 2,300 civilians dead that summer, while he was in San Francisco. In fact, following this sorrowful realization, Mismar's video poses the questions this essay attempts to investigate: can (artistic) documentation become effective political speech; can it avoid becoming instrumentalized for the purposes of aesthetic entertainment or for legitimizing the violence it depicts by displacing it into the site of mystified representation. Disconcerted yet owning his culpability, in protest of this spectacularization of mass murder, Mismar entered the names of those killed into the code of the digital image of a particularly large cloud. The resulting video is a split screen: the code in which Mismar intervened on one side and the image as it begins to glitch on the other, recorded in real time for eleven hours. It is not inconsequential that many of those killed were still unidentified and already abstract. As he

enters the names, the image becomes populated with streams of color that distort the image then circulating on social media feeds. The final point of futility—or “productive failure” as he qualifies—is that the glitches become beautiful themselves.



Omar Mismar, diagram accompanying his lecture "A Poetic Occupation: Artistic Gestures in Zones of Conflict," 2015. Inspired, in part, by arguments put forth by T.J. Demos in *The Migrant Image*. Courtesy the artist.

To get around the question of “effectiveness” in activist or politically-minded art, Mismar proposes that the methodological solution might lie in the reconfiguration of the poetic gesture as shared political speech. He calls for speech to be “not exempt from real life and meaningful struggle, as not distanced to an autonomous realm of the beautiful or forcibly coerced into the realm of instrumentalized action, as not noise for the sake of noise, but as a legitimate space of a shared language.”<sup>17</sup>

Responding to the incessant objections—mounted by right-wing groups and the different states they fight against—that the evidence Forensic Architecture presents in court is the unspecialized production of “just artists,” Weizman counters: “At a time when there are so many images and so much testimonial footage coming out of war zones, the work of the image practitioners on our team—the filmmakers, photographers, and artists—is evidently essential.” (As I edit this very paragraph, an unsolicited news update on my phone reads: “Satellite images show suspicious

North Korean site.” How will these images be analyzed and disseminated, and later, how and with what frame will we read them?) Rather than a de-skilling of art workers, as implied by the state’s objections to Forensic Architecture’s work above, could we imagine a re-skilling of humanitarian workers, image producers, spectators, within and outside the spheres of art? Spectacle, entertainment, art, activism, the densely rich 74 Million compels the viewer to agree with Weizman’s defense of the use of artistic skills for presenting evidence and decoding political abstraction. The problematics to be considered, and brought to the fore here, are how artists with the skills of gleaning or producing evidence might develop new collective and directly democratic methods of presenting and reading the work. The keener artists of the “forensic turn,” some presented here in 74 million million million tons, are probing this dilemma—and we spectators must do the same, with the images on our social media feeds and those in museums.

#### Notes

1. Eyal Weizman in “On Forensic Architecture: A Conversation with Eyal Weizman,” *October* vol. 156 (Spring, 2016), 126.
2. See: Patrick Galey, Twitter post, May 14, 2018, <https://twitter.com/patrickgaley/status/996022872148709376>. See also: *The New York Times*, “Contrasting Images: Violence in Gaza, Embassy Celebration in Jerusalem,” *The New York Times*, May 14, 2018, accessed: <https://www.nytimes.com/2018/05/14/world/middleeast/gaza-jerusalem-embassy.htm>.
3. As of June 14th, since March 30, 129 demonstrators participating in the March of Return protests have been killed by Israeli forces, including minors, medics, and members of the press. The protests have been organized for an end to Israeli occupation, the dismantling of the apartheid state, and an end to the racial discrimination against Palestinians. See: “Gaza protests: All the latest updates,” *Al Jazeera*, <https://www.aljazeera.com/news/2018/04/gaza-protest-latest-updates-180406092506561.html>.
4. See: Ariella Azoulay, *The Civil Contract of Photography* (New York: Zone Books, 2008). See also note 7 in Thomas Keenan’s superb essay on Allan Sekula and “counter-forensics” for an extensive list of writing on the topic of images as evidence: Thomas Keenan, “Counter-Forensics and Photography,” *Grey Room* vol. 55 (Spring 2014).
5. See Keenan, p. 68–73 for how this term has come to mean something different from how Sekula employed it.
6. See my review of Weizman’s most recent book for a discussion and introduction to their methodological approach: “Forensic Architecture: Violence at the Threshold of Detectability,” *The Brooklyn Rail* (March 2018).
7. It bears mentioning that Weizman is himself Israeli, and that he and Forensic Architecture are based in London. This reflects the distance between many of the practitioners of the “forensic turn” to those contexts and bodies they document. While not itself an inherent invalidation, it is nonetheless vital to pose this question in a discussion of the fraught problematics between spectatorship and violence.

8. Naomi Pearce, "Counter Investigations: Forensic Architecture," *Art-Agenda*, 20 April 2018, <http://www.art-agenda.com/reviews/%E2%80%9Ccounter-investigations-forensic-architecture%E2%80%9D/>.
9. Jacques Rancière, *The Politics of Aesthetics* (Continuum, 2004), 49.
10. In a 2015 talk, the Lebanese artist Omar Mismar—not included in the exhibition—cogently proposed the poetic gesture as a space that "starts within ... and goes beyond" the paradox and polarity between aestheticizing politics and politicizing aesthetics. I thank Mismar for his help in thinking through these ideas via email after a more recent panel on his work at the MoMA in May of this year. A recording of the 2015 lecture can be accessed here: [https://youtu.be/3\\_skHxihPE4](https://youtu.be/3_skHxihPE4).
11. Contemporaneous with *74 million*, Hiwa K has a survey exhibition at the New Museum: *Blind as the Mother Tongue*, from May 2–August 19, 2018: an arrangement of breathtaking works that engage the relations between history, cultural specificities, and violence, via the poetics of language, production, protest, and play.
12. Lawrence Abu Hamdan, introduction to "Act 1. Listening to Yourself," in *Lawrence Abu Hamdan [inaudible]: A Politics of Listening in 4 Acts* (Berlin: Sternberg Press in collaboration with Kunst Halle Sankt Gallen and Portikus, Frankfurt am Main, 2016), 21.
13. See also: Susan Schuppli, "Can the Sun Lie?," in *Forensis: The Architecture of Public Truth* (Sternberg Press and Forensic Architecture, 2014).
14. Elizabeth Povinelli, in David Kim, "I, The Artwork: A Conversation with Yazan Khalili," *e-flux journal* no. 90 (April, 2018).
15. KW Institute for Contemporary Art, Berlin: "Limits to Growth" <https://www.kw-berlin.de/en/nicholas-mangan-limits-growth/>
16. Referenced in Paolo Tavares, "Nonhuman Rights," in *Forensis*.
17. Mismar, in his 2015 talk mentioned above