

# Art in the Anthropocene

Encounters Among Aesthetics, Politics,  
Environments and Epistemologies

*Edited by Heather Davis and Etienne Turpin*

O

OPEN HUMANITIES PRESS

London

2015

# On the Building, Crashing, and Thinking of Technologies & Selfhood

Peter Galison in conversation with Etienne Turpin

7 Ibid., 583.

8 Ibid.

9 We are thinking here mostly of Bruno Latour, "An Attempt at a 'Compositionist Manifesto,'" *New Literary History* 41 (2010): 471–490. According to Latour, "It is really a mundane question of having the right tools for the right job. With a hammer (or a sledge hammer) in hand you can do a lot of things: break down walls, destroy idols, ridicule prejudices, but you cannot repair, take care, assemble, reassemble, stitch together," 475.

10 According to Robert Brandom, "I think of us as essentially normative beings, that what sets us apart from the other animals is our capacity to commit ourselves, our worrying about whether we are entitled to those commitments, whether it's a cognitive commitment as to how things are or a practical commitment as to how things shall be. [...] It is as if we are beings who engage in practices of giving and asking for reasons. And [...] these two dimensions—the normative dimension and the rational dimension—what set us apart from beings that can feel but can't think." From transcription of an interview with Robert Brandom (Interviewer: G. Seddone, Leipzig, 30 June 2009), edited by Aaron Luke Shoichet, [www.filosofia.it/images/download/multimedia/Brandom%20Interview\\_transcription.pdf](http://www.filosofia.it/images/download/multimedia/Brandom%20Interview_transcription.pdf).

11 "There can be no such thing as an extraterritorial or transcendent critique of reason since critique is a normative term whose ultimate warrant derives from reason itself," Brassier, "That Which is Not: Philosophy as Entwinement of Truth and Negativity," *Journal of Speculative Philosophy* 1 (2013): 185. [stasisjournal.net/images/brassier1\\_eng.pdf](http://stasisjournal.net/images/brassier1_eng.pdf).

12 On the distinction between representational and referential reasonings; see Robert Brandom, *Articulating Reasons: An Introduction to Inferentialism* (Cambridge, MA: Harvard University Press, 2001), especially Chapter 1, "Representationalism and Inferentialism," 45–47, [bibliotecamathom.files.wordpress.com/2012/09/articulating-reasons.pdf](http://bibliotecamathom.files.wordpress.com/2012/09/articulating-reasons.pdf).

13 Our approach to the philosophy of Charles Sanders Peirce is highly indebted to Fernando Zalamea's brilliant take on the Peircean continuity; see Fernando Zalamea, *Peirce's Philosophy of Continuity: A Conceptual and Mathematical Approach* (Dordrecht: Springer, 2012).

14 Charles Sanders Peirce, "Lectures on Pragmatism," in *Collected Papers of Charles Sanders Peirce* Vol. 5, "Pragmatism and Pragmaticism," edited by Hartshorne, Weiss & Burkhardt (The Centennial Edition, 1955), 103; new reprint of Harvard University Press original edition, 1931–1958, 103.

15 Donald Judd, "Specific Objects," *Arts Yearbook* 8 (1965): 94; reprinted in Thomas Keenan, *Donald Judd: Early Works 1955–1968* (New York: D.A.P., 2002).

16 Ibid.

17 Ibid.

18 Lorenzo Magnani, *Abductive Cognition: The Epistemological and Eco-Cognitive Dimensions of Hypothetical Reasoning* (Berlin and Heidelberg: Springer, 2010), 8.

19 "A person thinking, feeling and perceiving, which occurs all at once, is whole," Donald Judd, quoted by Richard Shiff, "Donald Judd Fast Thinking," in *Donald Judd: Late Works 1968–1994* (New York: PaceWildenstein, 2000), 5.

20 Richard Shiff, "Donald Judd, Safe From Birds," in *Donald Judd*, exhibition catalogue, ed. Nicholas Serota (London: Tate Publishing, 2004), 28–61.

21 Jean Cavailles, "Méthode axiomatique et formalisme," in *Oeuvres complètes de philosophie des sciences* (Paris: Hermann, 1994), 178.

22 See, for example, Jan Zalasiewicz, *The Earth After Us: What Legacy Will Humans Leave in the Rocks?* (Oxford: Oxford University Press, 2009).

23 The "human event stratum" is a term used by Jan Zalasiewicz; see Zalasiewicz, *The Earth After Us: What Legacy Will Humans Leave in the Rocks?*

As the discourse of the Anthropocene solicits increasing reflection from a variety of disciplines and through a multitude of practices, the relationship between philosophy, technology, and science also beckons further scrutiny; such attention cannot recoil from the imperiling realities of human civilization, but must instead attend to the various obligations produced within the techno-scientific milieu as they modulate the expansion and expression of globalized human societies. Peter Galison has carefully attended to the entangled historical and philosophical stakes in the culture of scientific experimentation by diligently investigating the formation of scientific minorities, interlanguages, theory, and materiality as they produce our contemporary world. Investigating the complex interdependencies and interactions among experimentation, instrumentation, and conceptual abstraction, Galison's work has profoundly enriched our understanding of scientific inquiry, objectivity, and the role of design and aesthetics within the articulation of scientific knowledge. His previous monographs on experimentation, *How Experiments End* and *Image and Logic*, will be completed by a much-anticipated third volume, *Building Crashing Thinking*. Following a workshop at Harvard University's Graduate School of Design, I had the opportunity to interview Peter about the role of the accident in science, technology, and the discourse of the Anthropocene; what follows is an edited transcript of our conversation.

**Etienne Turpin** I would like to begin by asking about the accident as a framework of knowledge. In your lecture for *The Geologic Turn* symposium, you described the research for your forthcoming book, *Building Crashing Thinking*, as engaging the accident as a framework in relation to technologies of the self.<sup>1</sup> I am curious how language contingency as an organizing component within the production of both knowledge and selfhood.

**Peter Galison** Maybe I should first step back and just say a little about the traditional idea of a technological self and the sense in which I want to use this. There's a tradition going back to Nietzsche and Heidegger that treats the self as a fixed, transhistorical, or transcendental category, but rather as something that changes over time. For Heidegger, the self is very schematic; there are these things that correspond to the self in antiquity, the self in the early modern period,

and so on. And Foucault follows a similar trajectory, although he is interested in giving the self a more materialized historicity by saying that certain practices represent a certain cultivation of the self, such as the way that religious practices are embodied in spiritual exercises that cultivate the self in a particular way. So for example, Foucault is interested in the keeping of a diary as a memo-technical that establishes the continuity of the self in certain ways and produces a self as a result of these practices. But the technology he considers isn't very technological in the everyday sense that we mean it, and the technology, in some ways, comes first. For Foucault, technological actions cultivate the self; the self doesn't act on the technologies. I am interested in opening up this framework by looking at the relationship between the self and technologies as a reciprocal one. I want to know first, what kinds of technologies are opened up by a regime of self. And then, once a certain form of technology is in action, almost ubiquitously, how does it train us to act or be a certain way?

I have written, for example, about the Rorschach test, which illustrates both sides of this back-and-forth action.<sup>2</sup> The idea of finding patterns or representations of objects—animals, people, plants—in what used to be called “random images” clouds, of embers, of cracks in the wall, was for centuries (in a neoclassical picture) a way of encouraging the faculty of imagination. The self was organized into the different faculties, like memory, common sense, imagination, but this specific faculty of imagination was a thing that could be encouraged. So, when Leonardo da Vinci writes about how important it is to stare at cracks in the wall and imagine figures, he was trying to offer training for the imagination. Now, when Rorschach comes along, he is not interested in imagination at all, or at least the imaginative is a very secondary interest. He is interested, by contrast, in this procedure as a test of perception. I want to know what has changed. How did it come to pass that the primary thing—namely, the faculty of imagination—has its place taken by the other thing, namely, the characteristic forms of perception? What has changed is the introduction of the unconscious; a very different concept or theory of the self has entered into a long history, which culminates in Charcot and Freud and others in the mid- to late-nineteenth century.

So, a new form of self becomes the precondition for the establishment of this technology, this cardboard technology. But it is a technology: there are rules that govern its administration, scoring, interpretation, etc.; it is a real technology. But, when it becomes widespread, the Rorschach test becomes a kind of master metaphor for our time. It teaches us how to think about the self. It teaches us, even people who have no primary interest in Freud or the topography of the mind, that we are magic lanterns projecting inner unconscious anxieties onto the outside world and seeing patterns there. And so, eventually, President Barack Obama can stand up and say: “I am a Rorschach,” and expect 340 million Americans to understand, really speaking, what he means.

ET Obama referred to himself as a Rorschach test?

PG Yes, he's said it many times. If you look up Rorschach on Google you will get hundreds of returns. Andy Warhol makes it into giant paintings. It is the subject of fiction and graphic novels. It has become something much broader than a test. It becomes a technology infused with a cultural vector that teaches us to think of ourselves—about our “self”—in a certain way. So that's an example of this reciprocal action: what starts out as a precondition for the emergence of this technology—there's an actual technology with cardboard plates and rigorous methods of reproduction, of scoring and interpreting—becomes very widespread and starts teaching us how to be, in a way.

The book that I'm finishing, *Building Crashing Thinking*, looks at a series of technologies in this reciprocal back and forth between a self *a priori* (what has to be presupposed about the self for certain technologies) and a technological *a priori* (about how the technology acts on the self). So, there is a constant back and forth. Neither is taken to be the *ursprung* of the process. It bootstraps its way forward, or in some direction—I'm not sure it's always forward...

ET For anyone with a background in European philosophy, it's an especially provocative title for a book. Seeing the “dwelling” of Martin Heidegger's essay *Building Dwelling Thinking* replaced with “crashing.” I am inclined to believe you are proposing a radical reorganization of the place and propriety of human thought with regards to technology.<sup>3</sup>

PG I have a very complex relationship to Heidegger. On the one side, I think of Heidegger as a transformative figure in helping to establish the idea of the historicity of self, and that this is quite essential in understanding the background against which Foucault (another reference for me) is writing. Heidegger is very concerned with technology, but in a very different way than I am. There are ways in which he dismisses a large part of the kinds of technology crucial in the formation of the contemporary self, of who we are, as not “things” at all. So when he talks about *das Ding* it's in contrast to, say, nuclear weapons, or an airport hangar. For him, those technologies spell the end of the thing, and the end of thinking, because they are an unframing, or the lapsarian moment in our relationship with things as such.

ET It's all quite fatalist for Heidegger on this point; technology is reducible to the measure of dwelling as such. This is precisely why Heidegger makes technology in essence by contending that “the essence of technology is nothing technological.”<sup>4</sup>

PG Right, so I'm interested in airplane crashes and nuclear weapons. I'm interested in all the things Heidegger despises. These are, for me, fundamental technologies that we exist in relation to, but, in the Husserlian tradition, out of which Heidegger comes, once you get to Galileo, it's all just downhill. In their tradition, modern sciences are just the working out of the imposition of number on the world. As you might say, I don't think that at all. In fact, I've devoted my life to understanding the science unfolds and, in particular, to asking the kinds of questions that were

posed by philosophy. But, instead of just damning the post-1610 moment, or the post-Cartesian, post-Galilean, post-whatever moment, as being merely enframing or instrumentalizing, I want to see how things actually unfold as they do.

**ET** This is clearly something of a departure from your previous books as here you're taking on a much broader philosophical tradition. While you have, in the past, been extremely precise in moving from concrete practices to the abstractions implicated by and explicated through these practices—as well as the contingencies entangled in such movements—it seems that now you have a broader agenda with respect to philosophy and science.

**PG** For a long time, as you say, I have been interested in contingency without debunking; that is to say, not a hermeneutics of suspicion, but not one of celebration either. It is not some great triumphalist march, nor does it mean that just because there's contingency in the construction of science and the reciprocal action against who we are, we can say "Gotcha! Science is valueless and we can dismiss it." In my work—from *How Experiments End* and *Image and Logic*, to my Einstein book and my work on objectivity—there is tremendous contingency. In the book I co-authored with Loraine Daston, *Objectivity*, we argue that objectivity is not co-terminous with science as such; objectivity is an epistemic virtue that enters in the first third of the nineteenth century. It's not the same thing as truth, pedagogical utility, or quantification; it's a specific virtue in the epistemic sphere, and we can see how it formed and what its relationship was to image-making and other technologies. And, as the concept is developed, what happens is that objectivity and subjectivity in a way enter together. For me, to say that objectivity and subjectivity form at the same time is like saying up and down or left and right enter together. Of course, you can't one day establish the convention of leftness without rightness, and so the self-abnegation that is a change in the scientific self is actually, in a certain sense, the same moment as the creation of scientific objectivity. As soon as you start to say that the *Hierzeit* of the line is me and the *Endzeit* is the thing, you're creating both an objective world and a subjective one. This is something I have been interested in, perhaps in a more restrictive way, since the beginning. In *How Experiments End* and *Image and Logic*, I was interested in what counts as an experiment and who counts as an experimenter. So they enter together.

**ET** I agree. And, although the philosophical implications of your earlier works are quite substantial, you've tended to emphasize the precision of the case in question over the speculative implications of such cases. It seems as though there's more consideration given to the speculative and philosophical implications in your current research. I'm curious about why that is.

**PG** I think that it's true. In this work, I want to put front and centre changing ideas and changing scales of selfhood. So, it starts with this idea of personality, of what perception is, and the magic lantern and iceberg conceptions of self. But by the end of the book, there's a chapter on wastelands and wilderness, where it's exactly

the detritus of nuclear weapons (from producing and exploding them) that creates a new kind of space, a forbidden zone of the quasi-infinite future that puts us in a different relationship to land: we can only make short visits. It first seems like an odd or paradoxical relationship to the way we have described "wilderness," for example, in the Wilderness Act, according to which wilderness was the land of such purity that we would only be visitors there. I'm making a film called *Containment* about this sort of thing. When you go to visit the towns around Fukushima, you'll find them marked as "zones of limited habitation." The experience of these places, phenomenologically, is that you can't live there. You can't stay. You're a visitor. So this relationship, which I think of as—perhaps harshly—a kind of touristic relation to a space, joins the relationship of humans to places that are either too pure or too defiled. I've started to think of this land as "waste wilderness." The Savannah River site is 314 square miles, a contaminated zone where they made about a third of the material used for the 80,000 or so nuclear weapons made in the United States. And it's considered by the biological laboratory there to be the most biodiverse area east of the Mississippi, maybe in the entire United States. So this land, which we have a touristic relationship to, is in some ways both wasteland and wilderness at the same time. And our relationship is no longer a kind of supplicant theology. Thoreau says, "out of the swamp comes the redeemer." For us, it's more like nuclear tourism; there's a museum in Chernobyl now. It's a new kind of relationship between the human self and the land. The classic form of this relationship is something else. There was the Abrahamic, in which the land was given to us by God and we controlled and disposed of it, and in the Christian tradition it was our obligation to use it up before the Apocalypse. Or you have the Romantic view: we humans are the servants of the land; we are its eyes; we are its expression. What I am talking about is neither of those; we have become tourists in waste wilderness, and this land becomes the exemplar of the most natural and unnatural land, simultaneously. It's different.

**ET** Michel Serres asks a similar question in *Maïfaisance*, when he questions if we, as humans, are owners or renters of the land we inhabit.<sup>5</sup> There is, we might say, an ontological corrective at play in these discussions of tenancy.

**PG** Well, you can come to this in different ways. The Wilderness Act came to this visitor relationship on other grounds, namely, as a reaction against the National Park. This might be expressed as something like: "Wilderness is not just for our entertainment or for the peace of mind of the busy urban dweller; it's something else." Anyway, I think we register this in different ways. In the book, I am looking at technologies—although I'm not saying this is the only way to read this material—of the 1920s, the technologies of WWII, cybernetics, then up to the present with surveillance, mining, and data, among other technologies.

**ET** I'm curious about your method of selection, since there are so many ways to develop this argument of the co-constitutive relation between technologies and selfhood. How do you go about selecting your exemplary cases?

**PG** At some very deep level, I'm amused, entertained, and seduced by the relationship of very abstract and very concrete things when they enter together. Everything I do is about that. Not every concrete thing is attached to abstract thoughts, and not all abstractions correspond to materiality, but when they do coincide it's not always some kind of Platonic ascension. What interests me is not that we start with an iron triangle and then draw it with a pencil, and draw it with a finer and finer line until it becomes a Platonic idea in our minds. Or the reverse, where you start with a Platonic entity in your mind and then you apply it to modern physics and bring it down to the factory floor. To me, this is deeply related to an almost philosophical joke. If you look at Freud's theory of jokes, the sudden debasement of very abstract or grand things into material ones is the predicate for a lot of our humour. I find it very funny that, for instance, when Einstein talks about trains and clocks that he might actually be talking about... trains and clocks, and that his central abstraction and the most important move in physics of the last 150 years actually might have had to do with, you know, *stuff*—with clocks and wires going from Berne to one of its aristocratic suburbs. Or, Poincaré talking about telegraphers sending signals to measure longitude. This is not a "brain in a vat" or "philosophy in the suburbs." In fact, this was worldly work. Poincaré was in charge of the Bureau of Longitude along with friends, some of whom were dying on the mosquito-infested shores, dragging cables off of boats and up into wooden shacks and looking at little beams of light bouncing off of mirrors. So, Poincaré and Einstein were talking about something very material, very consequential, and using it to reform the most basic, transformative part of physics: saying that simultaneity and time were not the eternal verities that Newton thought they were, although these were the foundations of physics from the 1680s to 1905.

**ET** And, as you've explained, these concreteness have serious political consequences, not least of which is the attempt by anarchists to bomb Greenwich in order to destroy the homogeneous imposition of Greenwich Mean Time.<sup>6</sup>

**PG** These things that begin in this sudden juxtaposition of materiality and abstraction can work their way into something that becomes a matter of concern for us in a deep, general way. In *Building Crashing Thinking*, I'm interested in, first, this juxtaposition, and then, choosing technologies that enter into our very concept of who we are. Not every technology does that. The interior mechanism on the forward landing gear of a transport plane isn't something that particularly shapes the self, although it is important in moving goods and people around the world. I have chosen things like the Rorschach test; or, this piece I did, "Aufbau/Bauhaus," about the relationship between architecture, cybernetics, and the "new man" through this idea that [Norbert] Wiener had that the self was actually nothing other than the working out of these electromechanical systems; all the way up through airplane accidents, nuclear wastelands, surveillance, and archiving and mining technologies.<sup>7</sup> These are things that do get at us; I'm interested in how they come about, become ubiquitous, and then train us up, collectively.

**ET** The Anthropocene itself seems like an especially compelling case of an extremely abstract idea—of the overall aggregate of human impact on the earth system—and extremely concrete realities, such as CO<sub>2</sub>, in the atmosphere. The scale and consequence of this abstraction is currently under debate by philosophers as well, so that the work of the International Commission on Stratigraphy, on the stratigraphic importance of human impact, has migrated into the humanities as a means to ask very abstract questions about human activity, impact, and the meaning of human endeavours. Of course, if this is a joke on human hubris, it is worth remembering that not all jokes end well! Returning to the abstract-concrete tension, I'm curious if this plays out in the various media you work with as well?

**PG** Certainly, my interests in film and materiality are very connected. Film has been a way for me to make visible things that are thought to be invisible, which lines up with taking abstractions and connecting them to the material conditions in which they play out. My film *Secrecy* with Robb Moss takes on a subject you couldn't possibly talk about.<sup>8</sup> Obviously! Not only is there nothing to see, but how do you make a movie about it? How do you make a film about secrecy? That's part of what entranced me about the subject and why I began working on it. The first piece I did on it was for *Critical Inquiry* ten years ago, called "Removing Knowledge."<sup>9</sup> In a way, typical of the kinds of things that interest me, the mandate of the larger *Critical Inquiry* program was the transmission of knowledge. In order to explore what the transmission of knowledge looks like, I thought, let's look at how it's stopped. If you flip a question upside down you can often see its dynamics; if you want to know how a car works, you can learn a lot by looking at what stops it from working. I wanted to see the theory of how they believed they could stop the transmission of knowledge. What was the imputed theory telling them—that if they remove a topic or a name or place or a theory that they could stop knowledge from moving? I became interested in the materiality of how secrecy worked. And that became part of the work I did, for instance, on the redacted spaces in Freud's thought.<sup>10</sup> Freud's ideas of psychic censorship and the newspaper go back and forth as he theorizes the state and war using psychoanalysis; but, psychoanalysis is also reformed in light of the censorship of the war. It is exactly this kind of back and forth.

So, film for me has been a way to explore ways of making. The first film I made, *Ultimate Weapon*, was about the moral arguments regarding the use of the hydrogen bomb.<sup>11</sup> Or similarly, with my new film (also with Robb Moss), called *Containment*, the first thing I want to show you is what nuclear waste is like: here is where it's stored, this is how much it weighs, this is a picture of it.<sup>12</sup> Even though you can't go near it, this is what it does to the land, this is what it looks like when we come in contact with the stuff, this is what it looks like when your house has nuclear waste in it, and so on... There's a way in which understanding and historicity and materiality become part of advocacy. In a way, we can't come to a position on things that we can't yet imagine. So bringing things into the realm of the visible, or rather the *sensible* (surely senses other than sight play a part in our discourse), is very



connected to the things I'm interested in. For example, how you actually go about determining the cause of a 747 falling out of the sky?

**ET** Do you mean that, as this type of large technological accident becomes ubiquitous, it reframes our sense of the event because it changes or challenges the modern episteme?

**PG** I'll give you another example. I think that what began as the specialized project of investigating train accidents (and later plane accidents) has become, in recent decades, the exemplar of public understanding of the techno-scientific sphere. We want to ask why the Deep Water Horizon blew up off the coast of Louisiana or why the space shuttle Challenger crashed. What happens in a presidential assassination investigation? We model all of these investigations on the best public dissection and account of causal processes that we have—those of airplane accidents. When we actually talk about why something happens, the most detailed kinds of inquiries that they get into are typically about airplane accidents. Why did MH370 crash? And, why does it create such a generalized panic if they can't figure out the cause?

**ET** But if the experts cannot reverse engineer the cause of the accident from its debris, for example, then we cannot specify any cause; this would mean, I suppose, that without cause we cannot call the incident an accident.

**PG** In Europe and the United States, roughly speaking, every accident report has to end with a probable cause; and, probable cause has a dual and contradictory meaning. On the one side, it means the kind of proximate thing, for example, the crack in the internal rotor that then separated out and sliced the hydraulic line, which caused the plane to lose control and crash. But, at the same time, it also means all of the necessary causes, all of the things that needed to happen in order for the accident to occur. These meanings pull in opposite directions—the sufficient cause, that is, the local, little thing that caused the accident looks for something proximate. In the ideal case, you get it down to the one-cubic-millimetre fault in the titanium alloy that was processed on such-and-such date in this or that location. Then, on the other side, it's all the things lawyers call the "but for" clauses (all these necessary causes), and those ramify exponentially. So, we have each of these accident reports holding a tremendous contradiction in that, on the one side, it looks for the local proximate entity and, on the other, it looks for *everything*: if the pilot got up on the wrong side of the bed, or what if her mother called her back that day, or, what if the safety regulations had been different, etc. The cause becomes "us" in the most general sense, and this back and forth between maximal and minimal accounts, necessary and sufficient causes, lies at the anxious epistemic core of our account of why things happen. We wrote this into the technology itself; we train people and devote many billions of dollars to these procedures, despite this core contradiction. This feeling of the search for control—this search for control over noise and signal, or cybernetics, or about causal ideology and accidents—becomes a deeper and deeper anxiety as our technologies gain in scale and impact. If we go

from the Rorschach test, and even the Bauhaus, to the weapons systems of WWII, to these all-encompassing infrastructure systems of transportation, surveillance, and secrecy in large terms—as we centralize and organize the flows of energy, information, movement, and so on—then accounting for these large technological systems has a different scale of impact on our lives.

**ET** As the scale of our technological dependency increases, so does the magnitude of human impact; but, as Bruno Latour has noted, our agency to act or change these systems appears to be inversely proportional to their impact. Perhaps the disappearance of MH370, and the subsequent search, is an exemplary moment highlighting the contours of this epistemic horizon?

**PG** Control, explanation, and causal ideology. We could also look at other technologies, like nuclear reactors, but I don't think nuclear plants are more likely to blow up than petrochemical plants. Petrochemical plants blow up all the time. But, the scale of Chernobyl or Fukushima—to make a large part of the country uninhabitable for the indefinite future—that is different. You can get pretty bad with petrochemical spills, but Louisiana isn't being abandoned. When the Fukushima accident happened, it could have been much worse. If one of those fuel pools had caught fire, the Japanese prime minister and his advisors were considering the possibility of evacuating modern Japan. That is a different scale and, in a way, it is kind of a model system when we consider global warming. We find ourselves considering the consequences for major features of the earth, and that is something new. Scientists who have no explicit interest in epistemology will talk about the Anthropocene and say, "Of course I have to study global warming," because the object of inquiry for planetary science has changed. The atmosphere is not the same. Now, if you study electron-neutrino attractions, you can leave humanity aside, but not here: the object of inquiry has changed because we've changed it.

## Notes

1. *The Geologic Turn: Architecture's New Alliance* was a symposium curated by Étienne Turpin at the University of Michigan, January–February 2012; some proceedings were published in *Architecture in the Anthropocene: Encounters Among Design, Deep Time, Science and Philosophy*, ed. Étienne Turpin (Ann Arbor: Open Humanities Press, 2013). I would like to thank Peter for his remarkable keynote presentation during the original symposium, as well as his compelling remarks during our follow-up interview for the present volume.
2. *X-Rays of the Soul: Rorschach & the Projective Test*, Special Exhibitions Gallery, Science Center, Harvard University, 2012; Peter Galison, "Image of Self," in *Things That Talk: Object Lessons from Art and Science*, ed. Lorraine Daston (New York: Zone Books, 2004), 257–298.
3. Martin Heidegger, "Building Dwelling Thinking" in *Basic Writings*, ed. David Farrell Krell (New York: Harper Collins, 1993), 343–364.
4. Martin Heidegger, "The Question Concerning Technology," in *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York and London: Garland, 1977), 3–35.

- 5 Michel Serres, *Malfeasance: Appropriation Through Pollution?* trans. Anne-Marie Feenberg-Dibon (Stanford: Stanford University Press, 2011).
- 6 Peter Galison, *Einstein's Clocks, Poincaré's Maps* (New York: W. W. Norton & Company, 2003).
- 7 Peter Galison, "Aufbau/Bauhaus: Logical Positivism and Architectural Modernism," *Critical Inquiry* 16, no. 4 (Summer 1990): 709–752.
- 8 Peter Galison and Robb Moss, *Secrecy* (Redacted Pictures: 2008), DVD.
- 9 Peter Galison, "Removing Knowledge," *Critical Inquiry* 31 (Autumn 2004): 229–243.
- 10 Peter Galison, "Blacked-out Spaces: Freud, Censorship and the Re-territorialization of Mind," *The British Journal for the History of Science* 45 (2012): 235–266.
- 11 Peter Galison, *The Ultimate Weapon: The H-Bomb Dilemma* (History Channel: 2000), DVD.
- 12 Peter Galison and Robb Moss, *Containment* (forthcoming), DVD.

## We're Tigers

Ho Tzu Nyen



A play of shadows from *Ten Thousand Tigers*, 2014; courtesy of the artist.

Fig. 0

Speech is a spell, and words, once ejected into the air, warp the weave of worlds. This is why, as Robert Wessing tells us, the Javanese do not, after sundown, utter the word *macan* (tiger) for fear of invoking its presence. Instead, they refer to him as *guda*, from the Sanskrit word *gudha*, which means hidden, or secret.

The dispersal of tigers across the Malay world occurred more than a million years ago, long before the emergence of *Homo sapiens*. Their story precedes ours. And they have always been there at the origin of our histories.

What one cannot know, or does not wish to know, one passes in silence. This is why certain tribal groups in Malaya refer to the tiger only by stretching out their right hands in the shape of a claw. The Gayo of Sumatra call him *Mpu uton* (grandfather of the forest) or *Mpu tempat* (grandfather of the place), while the Acehnese refer to him as *datok* (grandfather or ancestor) or *gop* (other person, someone; used also for people from another village or place).<sup>1</sup> Yet these aliases tell us something of the tiger's secret: it is a creature of the forest, it is a being of nature, and it is other to humans—though never completely or radically so. For it is also kin, bound by blood to humans in the distant horizon of an ancestral time. To speak of this zoophilia is not to think of the tiger, but *with* the tiger, where thought can be propelled into a realm anterior to the formation of the human mind.