

THE REVELATION OF SECRETS:
PETER GALISON AND JOHN MAY ON
ARTIFACTS OF SURVEILLANCE

PART I

Editors' note:

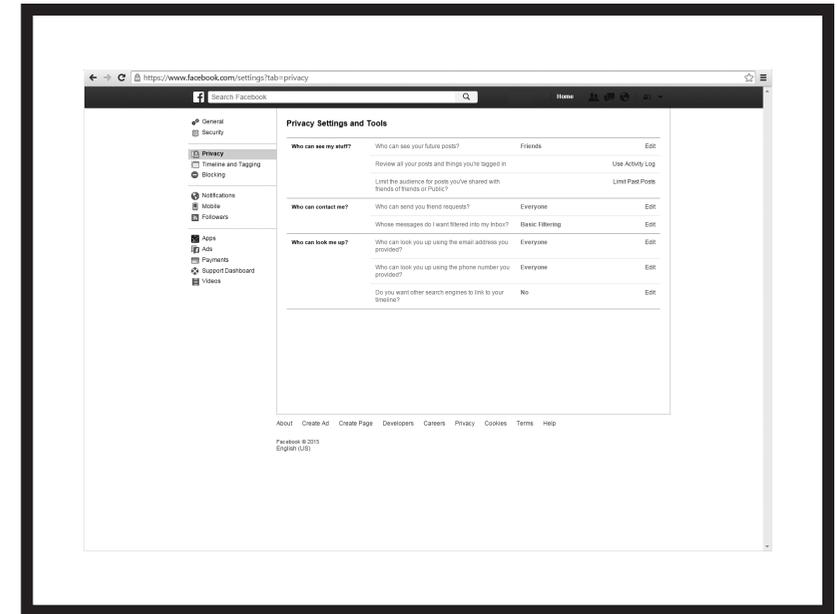
On May 15, 2014, Peter Galison and John May were invited to bring artifacts of “scandal and surveillance” to a 5th floor conference room in MIT’s Stata Center. Galison and May presented their chosen artifacts, which served as a jumping off point, in Part I. The conversation that followed is in Part II.



Nexus/Global Entry identification card

JOHN MAY:

I'll begin with my "Nexus/Global Entry" identification card. When I began traveling regularly from Los Angeles for my visiting position in Toronto, I suddenly found myself standing in customs lines twice a week, for long and often very unpredictable waits, which seemed to vary with the number of border patrol agents the United States had decided to employ on any given evening. I would always, out of the corner of my eye, see the Nexus lane businessmen passing through with ease, waiting only the few seconds required for an automated retinal scan at a kiosk. Being a good student of Foucault I was very wary of, and very aware of, the bio-political implications of lending my retinal biometrics to what I assume is a private contractor that operates the Global Entry and Nexus systems. Of course I quickly relented, and now have the card. So when thinking through privatization, and the concept of privacy more generally, I realized that when I applied for the Nexus card I had participated in a kind of self-privatization.



Facebook Privacy Settings

JM:

The second artifact is really almost comically obvious, but maybe it illustrates my point very clearly, and is therefore useful: the privacy settings on Facebook, which are obviously a hugely contentious subject, and hugely confusing, it would seem, even for adept users. I am not a Facebook user, but I know that one of the most common searches in Google is apparently "How do I change my Facebook privacy settings?"

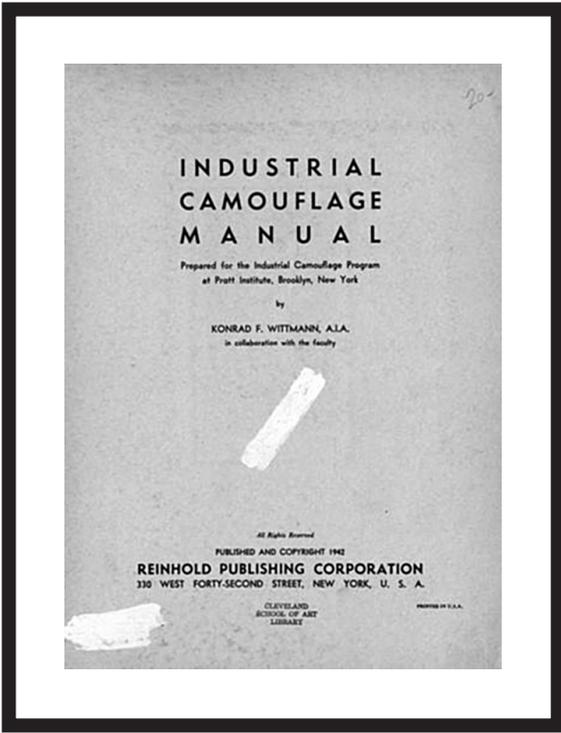
urbanism that is fully monitored and manipulated and open to seemingly simultaneous intervention. So this first set of three artifacts form a kind of a triad around the concepts of privacy, urbanism, and “real time management.”



Nest Thermostat

JM:

Building on these first two, the third artifact is this thermostat—the “Nest Thermostat”—which Google just purchased for over 3 billion dollars. In interviews following that purchase, it was clear that Google’s interest in the Nest was not so much in the thermometry technology of the object itself, which frankly is not terribly sophisticated, and many other companies produce digital thermostats. What they’re interested in is the network, the learning network, of distributive environmental monitoring and management that they see potentially piggybacking on Nest, and the way in which Nest is a kind of opening wedge into a vast but mostly unexplored field of domestic environmental management. Objects like this are obviously very much associated with systems like IBM’s command and control center for Rio de Janeiro, in which a kind of ongoing, “real time” analysis and monitoring of urbanism is being carried out under the auspices of a private contractor for an entire global population. Or another, similar example is Masdar City, by Foster + Partners: the dream of an



Manual of Industrial Camouflage

JM:

My final artifact is the Manual of Industrial Camouflage, which was produced by the department of architecture at Pratt, which during the war actually established a camouflage laboratory and set up for many years a kind of graduate research student laboratory that dealt with ideas about patterning and early pattern recognition, aerial perception and aerial visuality. But what I find more interesting is the fact that this entire technical legacy is now largely obsolete because the nature of *hiding* has changed drastically since that time. So perhaps we can also discuss the question of visibility and invisibility, and the status of vision within this new episteme of secrecy.



Censored article, "Censorship"

PETER GALISON:

A lot of what I do in my work is look closely at concrete instances of things and the very abstract ideas that these objects and processes make possible. The sudden juxtaposition of material objects and abstract concepts interests me much more than the ancient (Platonic) idea that one starts with material things and builds slowly to more and more idealized things until we get to pure abstraction. In other words, I do not want to follow the platonic picture of triangles as lines in the sand and slowly disembody them until they arrive at the idea of a pure triangle.

Nor am I interested in a kind of anti-Platonism: that we start with some idealist notion of abstraction and progress from the purest of mathematical physics and work our way down through applied math and applied physics, and into engineering, and eventually to the shop floor and actual objects. I'm much more intrigued by the combination of abstract and concrete things and the way they inform each other.

For my objects, I began with the provocation of your issue on scandals.

Scandals are often the revelation of secrets. I was interested what secrecy has to do with the scandalous, and this prompted my choice of objects. Let's start with the idea of censorship in Freud, which, by the middle of World War I, he considered to be one of the central concepts of his whole life's work. Freud's first mention of (psychic) censorship began in the early 1890s when he began to think about the blocking of German language printed matter at the Russian border in Tsarist Russia, especially German texts brought into Russia that were defaced with black ink (which the Russians called "caviar") and papier-mâché overlays.²

For Freud, these material excisions became a model for the distortions that occur in our memories and dreams. In the First World War, Vienna had 2,000 censors. They would censor postcards, telegrams, and letters, as well as newspapers. The newspapers would lose fragments or even whole articles, leaving white spaces. Letters and postcards would have black spaces put over them. Freud was terribly affected by this and his whole way of working was in a network that functioned in the postal system. The postal censorship was devastating to him—beyond his work, Freud had two sons at the front, one was wounded and the other almost killed in a barrage. It was really traumatic for him. Papers and letters would disappear. He and his correspondents would fearfully indicate to each other, "I don't know what we've done to offend." During the war, while Freud was giving a series of lectures, he was quite explicit about the relationship between psychic censorship and postal/newspaper censorship. Public and private blocking worked together. They informed each other. Freud's understanding of the psyche shaped his interpretation of what was happening during the war and what these censors were doing. Reciprocally, his understanding of the censors and their actions and our response to their actions shaped his idea of internal *psychic* censorship.

During the war Freud's envelopes would come back stamped, "Censored in Vienna," "Censored in Prussia." If a letter crossed two guarded borders there would be a double censorship. Just then, Freud began to talk about the mind in an increasingly topographic way, but re-territorialized insofar as the territories were not purely spatial, but instead stood for functions of the mind. (Territories of the unconscious, preconscious and conscious, for example.) He would say: bringing a message from the unconscious to the preconscious is like coming to a border with a letter; the censor either lets it through or doesn't let it through. The messenger then faces another censorship boundary from the preconscious to the conscious. So while

censorship troubled Freud a great deal, there was a productive side to the black ink and white spaces. They provoked him to re-think the mind. A correspondent (for example) wrote him, critical of "Frau A" (meaning Austria, but symbolized to evade the real censor); in our dream life we swap out dangerous and upsetting dream thoughts for ones that could pass the psychic censor.

During World War I, there was a dream he had heard about from a colleague which Freud inserted into his 1900 *Interpretation of Dreams*. A patient talked about how she visited a wartime barracks; the patient reported, "Well, what if I were to mumble mumble," when she came to something that was potentially sexually troubling. Freud said those mumbblings, the not quite resolved words, were actually signs of the censor, and the apparent delirium in our dream utterances is in fact the result of excision by the psychic censor. This, Freud argued, was very much like what it was like to read a censored text.

So all this is to say that there were indeed concrete aspects of censorship—the scandal of what's being censored (such as talk of Catherine the Great's lovers). Those were precisely the scandals, that the border guards patiently inked over. The excision was a form of enforcing a certain kind of secrecy against scandal and de-legitimization. Our private scandals—incestuous, murderous desires—met a similar fate at the hands of our internal censors.

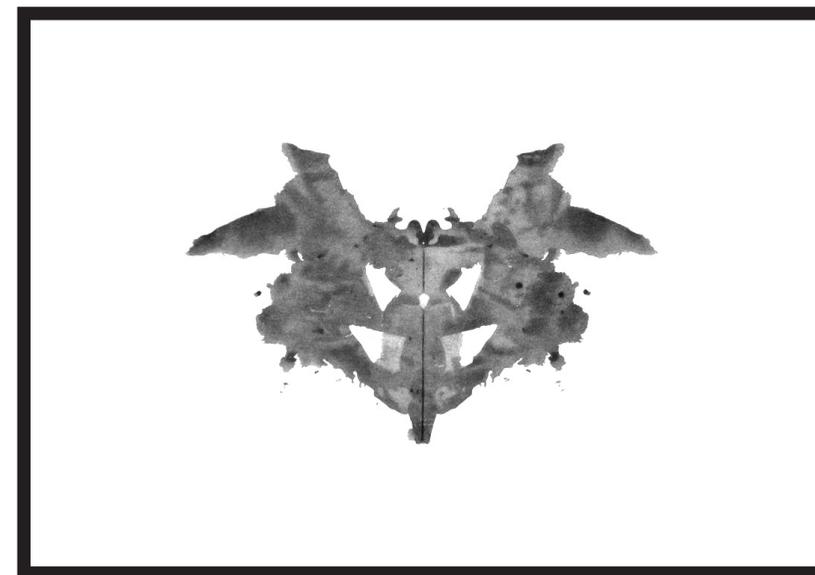
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On censorship, see Peter Galison, "Removing Knowledge," *Critical Inquiry* 31 (2004): 229–243; Peter Galison, "Secrecy in Three Acts," *Social Research* 77 (Fall 2010): 941–974; and Peter Galison, "Blacked-out spaces: Freud, censorship and the re-territorialization of mind," *The British Journal for the History of Science* 45 (June 2012): 235–266.

Here's an example of World War I censorship that Freud would certainly have seen from the *Arbeiter-Zeitung* in Vienna. The article, appropriately enough, is called "Censorship", which appeared on the 20th of October, 1916. In fact, one of Einstein's best friends, Friedrich Adler, was a prominent socialist at this time. His father was head of the Socialist Party and a psychiatrist, and Friedrich Adler was a young physicist, colleague, roommate, classmate of Einstein's. Fritz (as he was called) was an International Socialist who aligned himself with Trotsky and Lenin, and not with the loyal oppositional, national-based socialism, not to be confused with National Socialism. On the 20th of October he was getting increasingly incensed. When this article came out, it was the last straw for Fritz Adler. In fact we know what the forbidden article said, because in the archives of the old socialist headquarters in Vienna I found that the uncensored versions of all the newspapers were still there. So you can see what the excised piece was of this article, and what it says is that no one has been successful getting Count Stürgkh, the Prime Minister of Austria, to actually speak about what is happening, his obsession with censorship. The next day Friedrich Adler, Einstein's friend, shot and killed Stürgkh of Austria. Censorship enraged an already uneasy populace—designed to avoid scandal, censorship was a scandal.

So, the issue of censorship has in fact many instances in history been the felt scandal of that repression, leading to major historical upsets. Which is why, in fact, censorship processes are universally censored. You can't talk about what you can't talk about. In fact in many places, including the United States, the rules of censorship are secret—to reveal them would be to disclose what you cared most about sequestering. So in a history of secrecy, I've been interested in how, when eventually the rules of secrets are declassified, you can begin to understand the dynamics of how these decisions are made. I think of this history as an anti-epistemology, a study that reveals a great deal about what, at a given time and place, we think knowledge is.

The objects of caviar and papier-mâché, of black overlay, of withdrawn texts are for me some of the most important—and scandalous objects of our time.



R o r s c h a c h T e s t

P G :

Another early 20th century object that I find completely riveting is the Rorschach test.³ In a way, the Rorschach test is a different kind of scandal, it is a kind of pointer-object, always designating and surfacing the ever-present scandal of the unconscious. The scandal of secrets that we keep from ourselves. What we don't know about who we are and why we make the decisions that we do. The unconscious is still upsetting to people and Freud still makes people anxious. The idea that we do things that we're not in control of, that we are not cognizant of, that there's an interpretation to what we forget or which names we omit or that we forget we did something. The idea that there are no or few indifferent actions—pace a cigar being sometimes just a cigar. That was a scandal when it was discussed before, during and after Freud.

When the "ink blot test" was introduced in 1921 by Hermann Rorschach, it was very deliberately aimed at finding a way to think about our characteristic modes of perception that would use the unconscious but not

be attached to any particular school of psychological thought. Switzerland has had this problem in every conceivable way; they always want to kind of create a kind of a trading zone between other countries whether it's architectural theory or currency or banking practices. It's been a survival necessity to be able to create something that was safe territory. The idea of what one would call random images, whether they were clouds or embers or cracks in the wall, had been for centuries a way of training or testing the imagination. In the late 19th century it became first a parlor game and then a psychological test. When Alfred Binet and others made it into a quantitative examination of the imagination, they asked: How many things can you associate to an inkblot? In a given period of time, how many things could you recognize and announce? You would say, "Cow! Hat! Chair!," and ring a bell every time you could see something. In this way, by the turn of the 20th century, the inkblot test was a measure of the strength of the faculty of imagination in just the same way you might test how many numbers a subject could memorize or how quickly he or she could grasp the features of a map at a single glance (a skill in the late 19th century wanted for military reasons). There were, for the psychologist Binet, ten faculties that you would test. The mind was thought to be an assembly of faculties under the governance of the will. That was a common picture of the self toward the end of the 19th century.

But Rorschach did something dramatically different. He was interested only secondarily in the imagination. He thought of his now eponymous test as a way of characterizing our perceptions. To make this test, he designed a cardboard box with ten mass-fabricated cardboard images known as inkblots. (I should add that the cards are not, in fact, inkblots they are paintings based on inkblots that he made.) You can still buy them. They are still very widely used. They've been administered many millions of times. They are used in custody cases, in job placement, less often but still in differential diagnosis in psychiatric hospitals. They are used forensically all the time. The Rorschach test has become a sort of master metaphor that we use, to the point where President Obama can get up and say in front of 350,000,000 million Americans, "I am a Rorschach," and expect everyone to understand what he means.

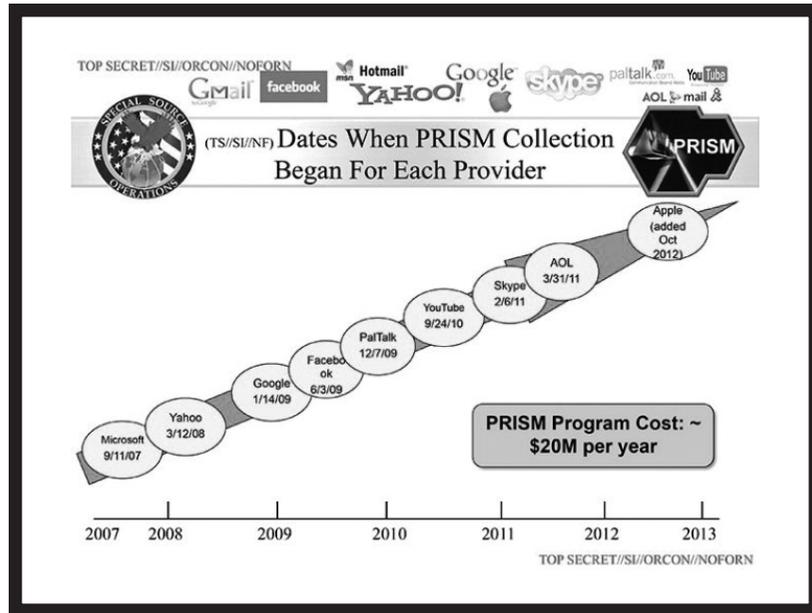
The Rorschach starts out as this arcane piece of psychodynamic instrumentation and ends up as a master metaphor teaching us to think of ourselves in a certain way. That is precisely the kind of thing that interests me. The material objects that are caught up in larger issues; this cardboard box that was predicated on a certain change in the notion of the self: from an assembly of faculties to the "iceberg" self, where our conscious self

is only a bit above the greatly larger part that remains unconscious. The cards want to know, so to speak, if you emphasize color over form or form over color. Do you focus on white spaces? Do you attend to the whole card or do you fix on little details at the edge? Those sorts of things can be revelatory in their statistical assembly—in characterizing a person's "experience-type" as he called it. Who Are You?, the cards ask.

So if censored texts are my first scandalous object, Rorschach's ten cards are my second. Inkblots, at least in Rorschach's hands, have a different kind of scandal associated with them, not the public scandal of Catherine's religiosity or her lovers, not the scandal of what Stürgkh was up to in the censorship system in Vienna, but instead the scandal of outing our interior way of seeing the world.

3

See Peter Galison, "Image of Self" in Lorraine Daston, ed. *Things That Talk: Object Lessons from Art and Science* (New York: Zone Books, 2004): 257–294.



NSA Powerpoint Slide from Snowden revelations

PG:

The third set of objects I take from a more contemporary situation. Here I'm taking one of the NSA PowerPoint slides that were revealed by Mr. Snowden. The current regime of secrecy and the scandal that it has precipitated is limitless, boundary-less. If you think of secrecy as going from the secrecy and surveillance of propositions and utterances in the First World War, or 1890 through the First World War, and systems of thought like radar, especially nuclear matters during the Second World War and the Cold War where you had whole scientific domains that were dangerous and off-limits for speaking about. Then, when you get to the present, in the post 9/11 era, people begin to say, "Well, symbols can be secret." Mt. Rushmore can be an object of national concern, the access points and dynamics of it. The downstream danger posed by a dam breaking is not secret but it's restricted. So it's not in the old classification system, it's in this penumbral area of what I've called parasecrecy.

From the Snowden revelations, we've learned that the NSA (with its Brit-

ish, French, and German allies) has developed a system of worldwide capture where, in the phrase of one of the NSA documents, "there's no place to hide." There is no outside. It's all. There's no out of surveillance, there's no outside of being a target. No "hors surveillance." This particular slide shows the sign-up times for Microsoft, Yahoo, Google, Facebook, YouTube, Skype, AOL, Apple. The scandal that's been associated with that has been a different kind of scandal. It's not just the reaction, which is—at the time we are having this discussion—a major diplomatic breach with Germany and with Europeans more generally. It's realigned the lines of division in Congress. It's one of the few things that isn't Democratic versus Republican, it's actually confused and conflated the usual cross aisle discussions. Suddenly, the companies, the private sector, are enormously embarrassed, and further, set into a potentially economically dangerous territory where their European competitors could say, "You should sign up with us because we are not the trusted affiliates of the NSA." So, this has led to a very visible and potentially explosive split between the private sector and data collection by the national security agencies. Different kinds of scandals that have issued from this and a different kind of secrecy. Poindexter, of Nixonian early fame, had proposed this total information awareness system some years ago. Rumsfeld had actually not liked it and gotten rid of it, but in Poindexter's wildest ambitions he did not have anything like what the NSA actually built up post 9/11.

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PART II



PETER GALISON :

So, those are my three objects. The black ink on paper and its analogs digitally, the idea of the secrets of the self embodied in the Rorschach cards, and these pictorial representations of the unlimited escalation of digital surveillance that has come to be such a set of secrets and scandals in our recent time.

JOHN MAY :

These raise so many issues, but two in particular: In the first place—and this overlaps with some of the artifacts I presented—a chart like this [NSA Powerpoint slide]. As you said, the network that has been built up here is beyond any bureaucrat's wildest imagination fifty years ago, right? So, to what extent is a certain technical arrangement of secrecy right now radically undercutting the ability of our language to even generate a kind of sensible political field within which we can operate?

In my writing, one of my concerns has been: how do we frame for ourselves a sensible political field? Or how do we develop a kind of political compass within contemporary urbanism, in which our concerns will unavoidably be driven by existential questions—about nature and environment and human survival. How do we do even frame a possible politics in a condition in which the technics of information and data seem to be rapidly undercutting and eroding all of the classical categories of politics that were built up over several hundred years—maybe 500 years or more—during the formation of modern democratic reasoning? This has obviously been Latour's general question, but it can be asked more specifically of urbanism and design.

Related to that, the question of Freud's censorship and how it (if I can use a slippery metaphor) “mapped onto” his diagram of the unconscious is really quite amazing. It reminds me of the fact that—as you have shown in your own work—in order to imagine the universe as a kind of mechanism early modern science had to first inhabit in a world in which there were clocks. In both cases we can begin to see the way in which the material,

technical substrate of lived life makes its way into our deepest intuitions. I'm wondering now, in our current condition: how do we think about automation? We're confronted with a technical configuration of censorship in which there is now machine text recognition, and I would assume there are forms of automation and scripting as well—there must be so many documents, I can't imagine we are redacting by hand anymore.

P G :

No. One of the things that you said, in these comments but also in your presentation of one of your objects, the automated city, reminds me of the ongoing attempt by companies to rethink the whole idea of a censor. There's one company in particular that has fastened on the idea of streetlamps: there are about two to three billion streetlamps in the world, as it turns out, and you can convert them to LEDs and in a year recover the cost of the conversion. It's a no-brainer that you would want to do that economically, just for the electricity saved. But in order to do that, you have to get a direct-current converter to convert the alternating current that goes up into the current streetlights. But once you have a DC source in the streetlamp you can attach sensors and link it up into an Internet of lampposts, practically for free.¹

What might these sensors be? I mean a facial or gait recognition camera system, a gunshot recognition sensor, an air quality sensor, something

1

Peter Galison, “We won't be able to recognize ourselves,” *Frankfurter Allgemeine Zeitung*, 4 July 2014, <http://www.faz.net/aktuell/feuilleton/debatten/self-censorship-in-the-digital-age-we-won-t-be-able-to-recognize-ourselves-12885374.html>.

that measures the amount of ozone or hydrocarbons, or whatever you want—the cost in many cases is pennies. They're nothing! You know, a cheap digital movie camera costs not that much to begin with but if you take out the power supply it's really nothing. So, what this company wants to do is to wire up these lamps so that now they'll be...

J M :
Networked.

P G :
They'll be networked, for security. So for example, Newark airport is now wired that way. It used to be you could look for a black, egg-looking thing up there that would be watching you, and before that a bulky camera-looking thing with a red light in the front, but unless you would want to theatrically display your surveillance, that's all in the past. I remember there used to be an app that you could download, that would say how to navigate New York without going under a camera.

J M :
Right, or London.

P G :
Now the idea of avoiding location tracking? By 2014, that's just absurd, quaint, antique! There was a Supreme Court case about forbidding police from sticking on GPS devices onto your car to track it, but that owl had flown. Now the police can just track the car from license plate recognition or cellphone triangulation or even the already-installed GPS system that is in an ever-greater number of cars to navigate or to guard against theft.

J M :
Or, so often now people "privatize" themselves by choosing onboard location systems.

P G :
You can use your cellphone—when you look at the traffic report on your GPS those are tracking people's cell phones. So, the debate over sticking a device on a car, when you now see that in a movie it looks like early medieval technology. I say this because it seems like a very concrete instantiation of your interest in the relationship of national security and natural

security. Once people start, seems like natural security that's just physical security counter-terrorism and

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security. Once people start, they'll put air quality sensors in, and then that seems like natural security, then they'll put in gunshot recognition, well that's just physical security, and then facial recognition and now we're into counter-terrorism and other things, what suspicious movement looks like.

What does idle walking or suspicious walking look like?

Companies have begun to track people in stores; what do they look at? Stores like Target link that physical movement data to your loyalty or credit card when you buy something. Then they have a name, address, bank information, and much else. And then you leave the store and now you're tracked in other ways. In a way, the private sector is far in advance of the government.

J M :

Right, and I think what's interesting about the Snowden affair is that it represents this pivot point between, say, the work that you were trying to uncover in your secrecy documentary, and what will inevitably replace that older paradigm of secret paperwork. It seemed that within the public realm, the outcry regarding the NSA was almost entirely directed at governmental intervention. Yet probably many of the same individuals who were voicing outrage are, in the very same moment, disseminating enormous amounts of private information automatically in the products they buy, in purchases they make, in objects they carry around. In his lectures on security and territory, Foucault talks about the establishment of the modern urban planning mindset. One of the characteristics is the "poly-functionality" of urban elements. So the boulevard, as an urban concept, will not just be well lit. It will not just lead from the exterior of the city to the interior. It will not simply link up market spaces with governmental spaces. It will also—and this is the crucial added dimension—be wide enough to be foreclose the possibility of the barricade.

In this new territory of automated processes, I wonder if the development of a coherent politics wouldn't have to involve considerations of the status of vision and the visible field. One of the questions the camouflaging manual raises is, if industrial camouflaging wanted to render invisible the visible, how now does one become invisible within the invisible?

P G :

So the lamp post case is interesting in part because it relates to something you were talking about with the Nest thermostats, because, as you rightly point out, it's not just that Google suddenly developed an abiding interest in thermometry.

J M :

A three billion dollar interest in thermometry.

P G :

... or just in keeping us warm, as a generous company. But also you would suddenly have data on all sorts of things. You would know about when people are going sleep, not just individual surveillance, but ...

J M :

Populational habits.

P G :

... Populational habits. When do people come home? When do they go to bed? Suddenly you have access to much more than you used to.

J M :

... to what one used to think of as “private life.”

P G :

Yes, and I think that is the other side of the Internet of Things. People sometimes have a rather utopian idea of it: “With a little more computing gear, All Things will be great,” “This is going to enhance our lives.” Maybe. Just because something might be deleterious or have potentially intrusive qualities doesn’t mean it might not also be helpful. We like our discounts in the supermarket, having quick access to websites by storing cookies, suggestions about addresses and purchases—but always these come at a price in privacy.

How do we react to this? I’ve been thinking a lot lately about what the analog of Freud’s self-censorship is. If your picture of surveillance is a kind of *Lives of Others* guy in the attic with earphones on taking notes, then you really haven’t got it. It’s really not a high tech version of that. It’s the idea that everything is part of the permanent record and the ambition is to complete it. Data archiving is or aims to be complete, and at the very least we increasingly imagine that it is complete. Your texts back and forth conveying your most intimate thoughts with family and friends—we spend a lot of our lives exchanging little texts about ... everything! About our concerns our fears ...

J M :

Say, searching for medical conditions ...

P G :

Searching for things. I remember six to eight months ago there was a bomb explosion at LAX. The radio said, “it’s a carbon dioxide bomb.” And I thought, carbon dioxide bomb? I thought of some kind of nitrates, I had no idea what carbon dioxide, which is non-explosive, could do in a bomb. So I started to do what I always do in such cases and type into Google, “Carbon dioxide bomb” and then I thought, “Maybe not.” I’ve read all these cases where typing in “bomb” leads to bad consequences. So I can show you some terms that we know from the Snowden revelations are trigger terms. Terms that will put you under alert.

J M :

Terms that find their way into what’s called “meta-data.”

P G :

They’ll pull out that information and if it correlates with something else, you’ll be investigated further. Maybe automatically, maybe by hand. But that moment of self-censorship. It turns out that a carbon dioxide bomb is not high tech—it’s putting dry ice in a bottle and you know it’ll blow up. But it’s a stupid bomb. Though it can be dangerous if you get hit by shrapnel, compared with “real” explosive bombs, it doesn’t do very much damage. But what interested me was my self-censorship. Thinking, “This will be part of my permanent record that I was looking for bomb information in the wake of a terrorist attack using this kind of bomb.”

But that thought, that momentary hesitation, if that becomes more prevalent—if that becomes part of our daily life—you’re in a physical store and you stop in front of this or that shelf of books. Or you stop in a left-wing or right-wing bookstore, a gay bookstore, or a religious bookstore, but now your cellphone has lodged that address somewhere permanently. Someone twenty years from now can check and say, “Well, you know, you did stop by for twenty minutes in this store. What exactly where you were doing there? On May 15, 2014?”

I’ve been thinking about the analog of utterance self-censorship today. How does that form a kind of archival censorship? The ubiquity of our texts and Skype conversations ... Did you see that GCHQ [Government Communications Headquarters, the British equivalent of NSA] was monitoring Skype for a while and maybe still are? They discovered that some not trivial fraction of video Skypes are intimate, sexual. So governments looking in the bedroom becomes more than metaphorical—GCHQ reportedly snapped images from online video chats from millions of

users. Dutifully, the spooks reported that 3–11% of the images contained “undesirable nudity.”² (One wonders what GCHQ would judge to be desirable nudity, but maybe we don’t want to know.) The NSA, for its part, has an analogue category to Signals Intelligence (SIGINT) and Human Intelligence (HUMINT) that goes by the name of LOVEINT (analysts using the system to snoop on lovers, rivals, and spouses).

J M :

Isn’t the analog something like a proxy server or VPN or IP mask? One of the most popular ones is “HMA Pro VPN,” which stands for “Hide My Ass”—which is a kind of guerilla start-up company that began developing methods of routing internet activity through “anonymous” servers. So this is maybe the corollary to the “utterance self censorship,” what you called “archival self-censorship.” These new masks acknowledge that something or someone is holding on to all this data, archiving it.

P G :

Europeans have a “Right to be Forgotten”—they want to push Google to erase all that search data, all that false, embarrassing, hurtful junk on the web. We’ll see what happens. (Europeans have a lot of things they would like to forget.) So I think there is of course a danger when you try to hide something. You also make yourself more visible. The NSA is interested

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“Optic Nerve: Millions of Yahoo Webcam Images Intercepted by GCHQ,” <http://www.theguardian.com/world/2014/feb/27/gchq-nsa-webcam-images-internet-yahoo>, accessed 20 November 2014.

3

Peter Galison quoted in “The Lives of Images: Peter Galison in Conversation with Trevor Paglen,” *Aperture* 211 (2013): 36–37

4

Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007).

in nothing more than the highly encrypted. If they see something with a highly sophisticated encryption algorithm, it becomes especially interesting. It reminds me of John Dillinger, the Elliot Ness era gangster. Dillinger acid burned off his fingerprints, and he made the FBI’s job a lot easier. They would say, “Oh look, a finger print with acid burns on the fingers! That’s Dillinger!” And I think that there’s a way in which governments have learned to push people. If they take extraordinary measure to hide, the act of hiding itself becomes suspicious activity—many governments automatically flag Tor-encrypted communication. And let’s be clear and unromantic: Tor does conceal some dark sites that market drugs, arms, and human trafficking.

We’re in a world where there’s a kind of swirl and anxiety, and I think one of Freud’s great insights back in World War I was that self-restraint has a kind of radiative effect beyond the specific things you look for. In China, the Chinese government will block off text messages with references to the numbers that are associated with the dates of Tiananmen Square. So if thinking becomes slightly encoded, that becomes a symbol for something and they pull it out. I think that when you’re in a world where information is being grabbed and signaled and alerts are being set up, you create a safety zone around it.

What is that safety zone going to look like in the world of archival, no-place-to-hide, surveillance? What will we do to ourselves, in a way? Forget what the NSA does. Maybe no one will ever be arrested for innocently looking up carbon dioxide bomb. But in the meantime, what will it do to us?

J M :

Pushing back into some of your previous work: You’ve recently suggested that images are now participating directly in interventions, and that we are moving from a technical paradigm of representation to a kind of direct and immediate “presentation”³—and an equivalent shift from something like “history” to the concept of the archive. This seems to mark a severe break with the historical mirror that you had set up in your work with Lorraine Daston, *Objectivity*.⁴ The questions of objectivity that you raise in that book are not merely about the representation of nature but are also about political representation. Returning to Georg Simmel’s work on “The Stranger”—the early metropolitan stranger—he points to a very interesting transformation that takes place in the early metropolis. He says: if you look at pre-metropolitan life, the best judge of community affairs was the “wiseman,” who best knew the intimate secrets of the clan or community.

Fast-forward to early metropolitan life, and suddenly we find the idea of an objective or neutral juridical paradigm, in which the best judge or jury has little or no knowledge of the specific issue or community.⁵

What happens to this notion of political objectivity within the technics of pure real-time presentation? What happens to political representation in a technical paradigm of pure presentation and intervention, of real-time intervention in these kinds of networks? How do we even think through that? Because to my mind this is essentially a question of urbanism.

P G :

We could ask: What happens when Walter Benjamin's flâneur becomes an automatically registered "suspicious loitering"?⁶ This is, in fact, a funded project in Europe under the name "Samurai"—a new kind of pre-crime detector. Objectivity turned upside down and backwards: the representation of justice, from what you were just saying, as blindfolded. To see particularity as a bias is to upend our image of 18th century blind justice, weighing with a scale. What happens when Lady Justice is not only un-blindfolded but is provided with an all-seeing Utah or Cheltenham server farm at her fingertips? Massive archives are not just centrally used for local law enforcement, they can't tap into the NSA repository, but increasingly police are using keyboards more than shoe leather. Information from GPS and phone data to financial transactions and surveillance

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Georg Simmel, "The Stranger," in *Individuality and Social Forms*, ed. by Donald Levine (Chicago: University of Chicago Press, 1971): 145.

6

Nic Fleming, "Smart CCTV Learns to Spot a Problem," *New Scientist*, 9 November 2009, <http://www.sciencedirect.com/science/article/pii/S0262407909632498>, accessed 20 November 2014.

7

Galison, Peter. *Einstein's Clocks and Poincaré's Maps: Empires of Time*. Reprint edition. New York: W. W. Norton & Company, 2004.

footage is all available. So while NSA offers a salient point of reference in our discussions, it is crucial to remember that the fabric of urban life, commercial interactions, policing, and justice are all part of our archived and mined world.

J M :

There is a massive project of trying to format those disparate data sets so they can speak to each other.

P G :

Often when I travel, I talk to the person sitting next to me, I'm curious about what they do. And a lot of the people I meet on the airplanes are people basically leveling and making commensurate databases. That's what they do! It's a big business, making this data commensurate.

J M :

So what would it look like to think about images "objectively" after objectivity? Or is that simply no longer a sensible question?

P G :

I think that your question leads in several really interesting directions. One is about political representation and what the presentational mode is in its political dimension. In the image domain of the sciences, we are often faced with a new relation to scientific images. Not "Does my picture mimic reality?"—the sort of bilayer epistemology with which we are familiar. No longer are images only about this question of matching:—"I have a representation of nature and I want it to fit hand and glove with the underlying natural, stable thing"—a phenomenon-noumenal relationship (in neoKantian language). Einstein thought that way. If nature is symmetric, our equations should be symmetric. Not every scientist thinks that way. Henri Poincaré didn't. He had no truck with a kind of out of representational picture. He thought science was for us to get around the world in the best possible way. So he never worried about how much choice God had at the beginning of the universe—God never occurs in Poincaré's voluminous writings. For Einstein, God did, though not as a Zeus-like anthropomorphic figure intervening in human affairs. But rather as a principle of order that preexisted and will post-exist our species' life. For Einstein, that match between the underlying order and our picture of it was crucial.⁷

J M :

A crucial domain is mathematics, which was simultaneously representational and nonrepresentational; it was conceived of as pure access, pure reflection.

P G :

Often the pictorial was making claims to some kind of mimetic bilayer relationship between the thing presented and the thing represented. Now once you start—once engineering starts to play a much more interwoven role with the natural sciences and you have domains like psychopharmaceuticals, nanoscience, and bioinformatics, you are no longer in a world where the fundamental question is existential. No one cares or thinks that a molecule-size transistor exists in nature. Who cares? It's like saying, "Did the Brooklyn Bridge preexist the Roebblings?" No! That's just a stupid question. The Roebblings, father and son, are interested in a lot of things. Make the bridge resist the tides, withstand the storms, is it sufficiently over-engineered for future use, can you replicate it, can you extend it, can you make a bigger one? There are lots of engineering questions. It's not that they have no questions. They're just not phenomenon-noumenal correspondence. It's not what nano scientists and nano technologists think. They want to make things in bulk, they want to make them reliably, they want to make stronger tennis racquets, they want the smallest possible circuits that can be produced in molar quantities. They want to make things and they want them to work. But they don't care, at all, whether they match a pre-existing object in nature.

J M :

All the classic questions of ontology and epistemology no longer have any purchase on lived life.

P G :

What interests me is that much of science today is not trying to offer a different answer to old questions; instead, the old formulation of ontology begins to fade. It's like saying, "Are there a bunch of rocks on the far side of the moon that spell out the letter M?" No one cares; it simply has no bearing on the things we want to do: a matter of profound ontological indifference. And it's that indifference toward the pre-existing natural that interests me. Not a Kuhnian paradigm shift, instead the view that matching representation to eternally existing pieces of nature is not the

only game in town. Instead, the questions are increasingly ones of engineering: new algorithms, new material and virtual structures. This shift is recent enough that fifteen or twenty years ago many physicists would say of many problems in nanoscience, "That's not physics." Nobody says that anymore. Half the department is doing things that go under different descriptions as "biology," "biophysics," "nanoscience" or related areas—work that might be found in the engineering school, nanoscience center, biology department, or chemistry department. You can think it's good or it's bad, that it's useful, that it's commercial. But the question isn't, "Is it real?"

J M :

And it's not that they've taken one side of that argument or another. They've just ended it.

I think that this sense of a kind of saturating of engineering, where the scientific and engineering have wound around each other to the point where drawing and bright line separation just isn't interesting to people anymore. It's part of what has precipitated this shift in many domains—not every domain—but in many domains towards this presentation mode of image functioning.

Images are useful when you try to make something or present something, the way an architect presents a model. It's a presentation, "You should like my proposal for this neighborhood. Here it is in "the model," or "your building," or "your house." For scientists, the cover of *Science* magazine for example fluctuates between a presentation in almost a venture capital sense—"You should be interested in and fund this kind of work"—and the pictorial traditional epistemic and with an aesthetic component. It's partially why I think there's been such lowering of the boundary walls between artistic production and scientific engineering. When you're making things, you're in a domain where terms like "design" cover both. I recently asked a French colleague: how would you use the term "design" in French? And she said, "design." This multivalent term flies as easily in architecture schools, art schools, as it does in engineering schools. It floats in a world of the built universe that functions in all these areas. The aesthetic does not seem like the enemy of the practical in the way that, in 1880, or 1930, you might have said, well that's "Art," that's not "Science." And design crosses that boundary in a way that obscures the boundary and makes it irrelevant.

One of the most frustrating aspects of the fields of architecture and

urbanism today is the extent to which we cling to that old conception of nature—What Canguilhem called “naturalized nature”⁸—that old stable modern referent that we worked on, or against, for so long. One of the most precious divisions that urbanism and architecture still hold to and still defend to death is the distinction between the natural and the artificial. What we would call “natural” and “built.” We remain obsessed with the imagined division between the built environment—over which we think we have some kind of expertise—and the so-called natural environment, from which we now vaguely borrow piecemeal ideas about nature—sound bytes about nature, really—as a way of propping up and justifying a whole series of urban interventions which are actually populational interventions. We cling in an anachronistic way to a whole series of divisions that all ultimately lead us back into modernity: public/private, organic/processed, etc. Just take the notion of interior and exterior, for example. What is the thermal boundary of an architectural object? It’s a terribly difficult question in an age of anthropogenic climate change. And in that sense my field could learn so much from the work you’ve done. It’s a very strange condition for architecture, because we must suddenly become hyper-aware of the language we use, which is not something architecture schools provide any training for. How can we talk about the objects we make? Most of my work has tried to ask that simple question, and it continues to be a very pressing question for me.⁹

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Georges Canguilhem, “Nature dénaturée et nature naturante,” *Savoir, faire, espérer: les limites de la raison* (Publications des Facultés Universitaires Saint-Louis, Bruxelles, 1976): 71.

9

See John May, “The Logic of the Managerial Surface,” *Praxis* 13 (2013): 116–124

P G :

I’ve been working a lot on nuclear lands, which have put huge pressure on concepts like “wilderness” and “biodiversity” and other categories we thought we understood. These lands are so huge that they have begun to shape our views about our relationship to nature. The most radioactive site in the United States is the Savannah River Nuclear Weapons Complex in South Carolina. With my co-director Robb Moss, we’ve been filming there. It’s enormous, over 300 square miles, almost fifteen times the size of Manhattan. Though it produced about a third of all the plutonium ever made by the United States, it is also the home of the Savannah River Ecological Laboratory founded by Eugene Odum. Odum and his brother Howard wrote the standard textbooks on cybernetically-inflected systems biology, and indeed helped create the discipline of ecology. Because radioactive isotopes could be tracked, you could see the flow of these materials as they moved up the food chain. You could determine who ate whom, from plants and snakes up through radioactive turtles and alligators. In fact, the biologists there often note that because people cannot go there, the area has become the most biodiverse place in the United States. If you look at it in Google Earth, you can see, from space, the boundary of the site by its greenness. So what is this site? What are these sorts of spaces? The biologists say that the radioactivity is protecting the site. Radioactivity is what’s responsible for making the alligators there survive and thrive. Maybe for the wrong reason (they say) but it has. So is that site natural? Is it unnatural? Is it built? Our older vocabulary is inadequate to the day. That interests me a lot. We have this American notion of wilderness, which no one else shares. It does not translate into French or German or Italian—and now, up against this “waste-wilderness” as I’d like to call it, we are banging against the edge of our experience and our concepts.

From the get-go, “wilderness” was a complex idea. It was a revolt against the overly commercialized entertainment of the National Parks. Of course the word itself has ancient, even biblical origins, but it has come to signify something different—a kind of land without us, with all its primeval associations. In one of his justly famous essays, William Cronon, the environmental historian, challenged the very idea of such non-human purity. That article, “The Problem with Wilderness,” challenged the politics of such idealized purity—and urged us to recognize that land is always already interacting with people, and that failing to recognize that leads to bad things for the people who do live there (should they be driven away to “preserve” the land?) and for the land itself.

Or think of Olmsted who ploughed, sculpted and built his way to naturalness in Central Park. Indeed, English gardens in general are a confected nature. It's not as if this is news, much less bad news, but we have sustained a troubling picture of Nature as if it were on a scale from purity on one side to defilement on the other. I've been interested in what it means to take these "contradictory" nuclear lands, and address them as they are, not as destroyed or sanctified, but as both at once.

The Savannah River Site simply does not resemble the blasted devastation of central Hiroshima the day after the blast. Nor is it some kind primeval nature, with the romantic excess such language brings to mind. No, waste-wilderness is something else. It is a new kind of thing. Now we have the experience of a nuclear test site the size of Rhode Island. These lands, when we encounter them in the future, already are and may become at ever-larger scales, our most intense experience of biodiversity. If that becomes not just the view of biologists but our collective understanding of the most natural nature, then we may leave behind talk of "ironic nature parks" and simply confront a new kind of relation to the world. Maybe the very idea of Nature will come to be seen as obsolete, the imagination of a long-ago time.

J M :

One thing that troubles me is that—and I'm aware that this will seem like a somewhat nostalgic picture of previous conditions, but bear with me—it seems that in previous epistemic conditions, perhaps only fleetingly, there existed a parallel philosophical project that questioned and interrogated the subtle resonances between knowledge claims and lived life; not in the specificity of those claims, but below that, in their delicate substratum, in their assumptions and beliefs about reality. (Take, for example, the debates around Positivism in the 19th century.) What troubles me today is that there doesn't seem to be a counterbalance in any particular way, and I think this absence is directly related to the technics of presentation, which seem to foreclose or obscure those kinds of questions. Nevertheless, I wonder if this vacuum provides an opportunity for something like the philosophy of design to become a very rich arena of philosophical investigation? Maybe philosophies of language, philosophies of life, etc.—maybe those images of thought have lost their purchase because their classical questions don't seem to inflect on contemporary conditions like those we've been discussing.

I think it's a very important question for schools of design. If the concept of design can be applied to everything from building to babies, how do

we start to think through what that term really means? How do we cultivate a conceptual framework that is somehow post-natural without tumbling back towards older metaphysical conceptions that clearly cannot wrap themselves around our contemporary conditions? It could be such a rich and expansive project, if only we'd take it up with patience and sincerity.