A Triptych of Indeterminate Objects in the Urban Metabolism: Glass/Dust/Bomb
(After Paul Virilio)
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Abstract
This article uses various conceits from Paul Virilio’s thought to explore the ramifications of “indeterminate objects” to explore their effects on urban formations, media/mediated thought and human positionings within them, in terms of subjects in relation to objects. The three objects are glass, dust and the atomic bomb.

Keywords
object, subject, Paul Virilio, architecture, militarization, speed, nuclear culture, remote sensing

Introduction: Object and/as Medium
In his book Mind and Nature, the biologist-cum-cultural anthropologist-cum-cybernetic philosopher Gregory Bateson has a cheeky chapter he calls “What Every Schoolboy Knows.” In it, he includes a dictum that runs in paraphrase: the division of the
perceived universe into parts and wholes is a useful and perhaps necessary tool for human cognition, but no necessity determines the division. In other words, the divisions of the world – the taxonomies and typologies we generate – prove productive for us, but how phenomena are so divided depends upon us, not the phenomena in and of the world. We identify the difference that makes a difference, which makes all the difference in the world. This goes for all of our fundamental building blocks, of course; time and space, human and animal, processes and things, verbs and nouns, events and objects.

The status of the object has long been a point of debate and concern within Western thought, not least because it has such multiple, profound implications for the subject. With a grammar such as that possessed by English, we have a sense of transitivity that confers upon grammatical subjects the capacity to manipulate, more or less at will, inert or passive objects. From this grammatical configuration, noted in the linear line of time and action found in the transitive formulation Subject Verb Object (SVO) (with S’s V-ing O’s, and O’s silently accepting the various Vs from the S’s), it is an easy step to concepts such as subjectivity, consciousness, thought, agency, will, and a myriad of other foundational elements of both a metaphysics and a physics. The object becomes the object of thought for the subject who enacts a will or an agency on that object, thus marking the subject as a subject conscious of the self acting in the world and on objects.

Or so we are led to believe, and often lead our lives accordingly. Yet, as we know all too well, objects can conspire to act in ways that subtly or blatantly subvert the will, confound consciousness, and make a mockery of thought and agency. The object, for all its apparent solidity and externality, is protean and has always been thus.

The object is without a doubt a changeling of infinite skill and finesse. Marx knew this, of course, as did Freud, Descartes, Hegel, and on up through Baudrillard and Virilio – theorists of the object par excellence for our moment of the virtual, the simulation and Integral Reality. Baudrillard’s sustained and considered engagement with the object since the 1960s raises important questions about the status of the object, as well as the many implications of this contested status. Baudrillard argues for an uncanny excess with regard to the object; like Bataille’s “accursed share”, the excess of the object can never be resolved or redeemed. The object, he says, might be the medium of exchange,
but the exchange remains unconsummated. The object might mediate, but at the same
time, it is, within itself, immediate and immanent in a manner that “shatters” any
mediation (Baudrillard, 2011: 5). In this way, the object mirrors mimesis and
representation, both too little and too much at the same time – imitative and
generative.

In Virilio’s work, the media, always a result of the military and the pursuit of increased
speed, accelerates the old debates about mimesis and representation. In the process it
creates vectors that displace people, appearances, ecologies, images and objects. The
media’s object is always redundantly a mediated object, as is media itself, and yet it is
more than that too: something elusive and capable of becoming an actor all its own,
capable of performing the subject role – in which case it has disposed of us: the
observing and manipulating subject. We might well communicate through objects, but
objects also impede that communication. They seem to have suffered less than the
subject in the demise of the standard subject-object relationship dear to Western
thought. The act operative in “the aesthetics of disappearance,” as Virilio would have
it, results from the sudden and rapid ubiquity of interactivity as well as the collapse of
the distance between all things, which is the work of media generally. In this situation,
the object fares better than the subject now that networks, nodes and screens are
replacing both. The object’s elusive qualities, its endless commutability, have thus far
made it both screen and network in ways the subject can neither imitate nor
accommodate. At the same time, these tele-technologies and various media have
shown us something deeply unsettling for the subject: namely that the belief in subject
agency, when it comes to technology, is but a by-product of the technology and
technicity itself. And the media’s object – as well as the mediated object and the media
as object – as we step further into the 21st century, all become more obscure, more
difficult to discern, as they become more deeply and rapidly scrutinized, virtualized,
repeated, repeatable and symbolic.

Three indeterminate objects – glass, dust, bomb – are arranged here as a triptych to
think through and about the taxonomic certainty of objects, their status and indeed
determinacy. Affective and evocative, the materiality of objects offers useful heuristic
possibilities though teetering on the instability of empirical access and immediacy.
Arranging them as a triptych gives us a visual frame but more pertinently a rhetorical
structure of parataxis: placing items side-by-side and not in a subordinate or sequential relationship. These objects (if objects they are) function like ideograms in Chinese poetry, which served as an inspiration for Eisenstein and Pound, resulting in images of montage for cinema and poetics of imagism respectively. Though not necessarily liminal objects, as Victor Turner might label the phenomena they invoke, or dangerous objects of potential impurity, as Mary Douglas might call them, they are nonetheless unheimlich, unstable and indeterminate. Heidegger distinguishes between objects and things, with the thing attaining a higher status, for the thing constitutes its being (thingness) by enacting its essence (by thinging). Thus, things thing and it is via their thinging that they achieve thing status. Objects, on the other hand, are merely the result of the throwness that is found in the root “-ject” and they appear before us via the prefix “ob-”: manifesting themselves and that is about all. They constitute the necessary relationship that obsessed the Greeks between ounisa (substance) and par-ounisa (presence). They are what is thrown before us, and are before us; not as the Law in Kafka’s famous parable, but rather because they come before us and appear before us.

The simultaneously temporal and spatial properties of the concepts surrounding “before” reveal themselves, as well their own indeterminate status. “Before” provides much spatial and temporal ambiguity if not outright contradiction. “Before” temporally indicates something occurring previous to something else – a predecessor – and is thus spatially behind us as we envision time’s arrow in a linear fashion. However, “before” spatially means in front of something, as in “before the bar” with the law. Thus, the object positions itself prior to us, which means both in front of us and behind us. The “ob-” of the object wobbles in the basic categories of time and space.

But what comes after? What comes after Paul Virilio, as indicated in this article’s subtitle? Because this article functions in modes indicative of Virilio’s thinking (as in “after Virilio”) and temporally after his time corporeally amongst us, it invokes being after Virilio. However, it will not attempt to replicate Virilio’s thought or rhetoric, nor will it answer what will happen to critical theory, especially media theory, after Virilio’s death. All we do know is that whatever emerges within our collective accelerated technological evanescence will disappear too. And disappear faster than ever.
Glass

“Is it possible to accept that glass, this inconsistent material, can form the basis of modern architecture...?”

Le Corbusier “Glass: The Fundamental Material of Modern Architecture”

George Braques’ cubist paintings featured a post-World War I aesthetic of “artistic realism,” according to Virilio, of an exploded reality reassembled on canvas “the way people collect pieces of flesh after the explosion of a human bomb” (2005: 15). Virilio worked in stained glass with Braque shortly after World War II ended. The medium of glass as an artistic, architectural medium drew Virilio to Braque as they reassembled the stained-glass windows of the Chapelle de Varengville, where a German plane destroyed the small wooden chapel in 1942.

Glass, as did concrete, became a key modernist architectural material. Le Corbusier, Gropius and Muthesius famously promoted glass as a building and urbanism material of the present and the future, one that could help heal the wounds of “the first machine age,” as Le Corbusier referred to it, by ushering in a second machine age that would link technology with nature in mutually beneficial ways. In an age of manifestos that ranged from utopian to cranky to positively unhinged, Le Corbusier penned a few of his own, including one on the aesthetic triumph of the airplane, another on urban design to minimize city vulnerability from aerial bombing, and some trumpeting the glories of glass. In this respect, he followed in the influential footsteps of the German writer, critic, novelist and architectural visionary Paul Scheerbart. An influence on Gropius and Walter Benjamin, Scheerbart compiled his more theoretical writings on the potential of this material for design in his 1914 work entitled Glass Architecture and his futuristic novel The Gray Cloth (also published in 1914 and translated into English and published by MIT Press in 2003). Reyner Banham, in a 1959 essay and reclamation project, assessed Scheerbart’s underground influence with regard to modernity, architecture and glass by stating that “he stood closer to the Seagram Building than Mies did in 1914” (1999: 38). His home city of Berlin now attests to his lasting influence.

In the novel, his architect as hero – which I know is a role that real-life architects rarely envision for themselves – becomes world-famous for his glass temples to commerce and progress composed of secular but no-less transcendent versions of stained glass. Scheerbart owes his theories of color to Goethe and in a semi-New Age-y manner
bestows various healing and other beneficial qualities to buildings composed of colored light filtered through the malleable but strong material and medium of glass, which is the transparent medium dreamed of by media made incarnate. However, Scheerbart adds subtle ironic layers to his somewhat H. G. Wellsian visions of the extent to which technological, material and built environment potentialities could determine human behavior for good or ill.

After his death in 1915, Scheerbart’s glass mission was carried forward by his close friend Bernard Taut, whose collaboration with Scheerbart led to the Glass Pavilion of 1914. Scheerbart also became the spiritual and symbolic guide for the Crystal Chain, a rather loose epistolary association of Expressionist-inspired artists, writers and architects looking for ways to salvage progressive ideals, as well as Romantic and Utopian ones, in Post-World War I Germany. And glass became the key material through which they hoped to realize their ambitions and dreams. Scheerbart wrote poetically of glass as the object and medium of liberation in contrast to brick, which was cast as a regressive object of oppression. The opaque, darkened homes of Europe, regardless of class, were sites where twilight dwelled, and the glass walls proposed by this group (as well as by Le Corbusier) offered a way for the light of “modern civilization” to illuminate interiors. The new “glass-world citizen” (Banham, 1999: 35) lived with modified and filtered glass walls, held internationalism and progress sacrosanct, and was fired with the spirit of the coming new age – in spite of rising militarism, overheated industrial production, economic meltdown, colonial frenzy, and worldwide conflagration in the immediate past and looming on the horizon. All of the metaphorical linkages between light, knowledge and progress that underpin Enlightenment discourse circulated through discussions of the potentialities held by glass as material and medium, an object capable of wholesale transformation of individual and collective dwelling space (see Kohlmaire and von Sartory, 1991).

The effects of glass (as a technology whose essence is nothing technological, to paraphrase Heidegger) on 20th century architecture and urban planning was profound. It operated as a metaphor, a discourse and a tool, with each element influencing and affecting the other, much as the digital computer did during the Cold War. Glass was an object to think with and act through as well as a medium to enact these thoughts. And evidence of its influence – utopian, progressive, capitalist, futuristic – inflects all
urbanscapes and new urban metabolism around the globe today, which bespeak Scheerbart’s vision of its potential influence on the built environment, if not on the social, intellectual, moral, political and spiritual attributes of spatially organized humanity.

Glass is an amorphous solid and is used in the sciences as a term for all amorphous solids. The term “amorphous solid” is almost oxymoronical: solid and fluid at one and the same time – as with concrete, its modernist architectural sibling, it starts as fluid and cools to solid but can also return to its originary state with the application of heat. One way of defining amorphous solids is that there is no long-range order of the position of their atoms. By this definition we are all – over the course of time – amorphous solids, but the most standard examples include rubber, plastics and glass. Physics grapples with the nature of the transition between a fluid and a solid and its glassy state or phase. This liminal state remains an indeterminate mystery. Etymologically, the English word “glass” is related to the words “glow” and “lurid” (through “glare”). So now to two tales of glass that have their own peculiar lurid glow resultant from glare. Each dark tale of glass involves human manipulation of natural phenomena in an attempt to construct objects of utopian dimension and effects.

First, at the Vdara Hotel in Las Vegas, reflective windows on the outside of the hotel became a medium that converted sunlight in the Mojave Desert into “a death ray.” The concentrated reflection of sunlight resulted in “a solar convergence problem” that caused poolside loungers to burn very rapidly as a patch of intensely hot light moved slowly across the pool area in relation to the sun’s movement across the sky. The hotel, part of the 8.7-billion-dollar development CityCenter, was designed by the internationally renowned architect Rafael Vinoly and financed by MGM Resorts International and Dubai World (an investment company from the emirate). CityCenter is a self-contained urban environment for the wealthy that includes gaming, residential, business, spa, dining and shopping facilities. But the position of the mirrored windows of the Vdara Hotel generated unwanted PR with articles such as “When Architecture Attacks” and “New Las Vegas Hotel’s Unintentional ‘Death Ray’ is A Design Flaw.” Thus, the modernist glass wall of illuminated emancipation about which Le Corbusier, Scheerbart and others wrote so glowingly becomes a solar-driven weapon out of the
pages of sci-fi pulp fiction, frying swimmers and sun-worshippers in a playground for the rich and famous.

Second, more an aphorism than a tale. It merely explains names and operates proleptically for us: Trinitite, or Alamogordo Glass, and Kharionchik, are the kinds of anthropogenic glass found respectively at the nuclear testing sites in New Mexico and Kazakhstan. The glass blowers of Murano have nothin’ on the boys in the lab coats.

**Dust**

“And I will show you something different from either/Your shadow at morning striding behind you/Or your shadow at evening rising to meet you;/I will show you fear in a handful of dust.”

T.S. Eliot “The Wasteland”

Each generation and site of urban concentration generates its own dust. Ubiquity itself, dust marks time, movement and stasis while evoking mortality. It is Aeolian, wafted on the air and carried in the atmosphere. Composed of animal and human skin and hair, industrial pollutants, fibers, particles from outer space, plant pollen, technological and agricultural residue, dust constitutes a microscopic encyclopedia of the minutia of quotidian existence.

The dust addressed here, though, is a specific kind of dust: one primarily of the imaginary at the moment but inching its way closer to actuality. Generated from and for emergent urban conditions, most specifically warfare, it is called Smart Dust, and relates to ubiquitous computing, “pervasive networks” and “utility fogs” as potentially transmitting endless streams of “real time” or stored data. Developed initially for DARPA, the technological Research and Development arm of the US Defense Department, Smart Dust started with work by Kris Pister and his team at UC Berkeley, who refer to the project as “autonomous sensing and communication in a cubic millimetre” (website). The concept is to distribute very large numbers of wireless micro-sensors/transmitters and scatter them across a fairly contained space. Smart Dust depends on the convergence of three technologies: digital circuitry, laser-driven wireless communications systems, and MicroElectricalMagnetic systems (called MEMS). The sensors spark off one another, detect the terrain and speak to other machines. Smart Dust, as envisioned and advertised, would work with seven different levels of coordinated networks, stretching from the ocean floor to terrestrial domains (including products), to the air and on into space. Hewlitt-Packard plans, according to
its own PR, to provide sensory capacities to extant IT infrastructure, so that it will no longer be inert material and media but active, sensing devices. So that this infrastructure can see, feel, hear and smell, HP will deploy a trillion sensors the size of a grain of sand in the next few years that will operate under the label of “The Central Nervous System of the Earth,” (also cutely anagrammed into CeNSE). HP has also teamed up with Shell “to animate” and make sensate inert infrastructure systems for drilling and petroleum exploration.

The ambitions explicitly outstrip the parameters of our planet and provide an exemplar of the kind of polyscale global computing that we are building and which is building us increasingly in its image. This stuff is clearly not your common household dust. Rather it is high-end, high-tech designer dust for the information wireless city. It could potentially have a range of applications, including monitoring ecosystems, traffic, flows of people, interaction with handheld devices to create interactive smart local environments, site-specific entertainment for mobile technologies, and even health care screenings. It can be built into bricks or woven into fabric or installed in walls, and can manifest as virtual keyboards, property identification, threat detection, interactive environments for the disabled, product quality monitoring and streaming of current information for smart homes or offices. However, Smart Dust caught DARPA’s (the US Defense Advanced Research Projects Agency) imagination as yet another way to expand the battlefield as a site of “vision” and sensorial control; Virilio’s starting point for many of his theoretical writings. This specific extension of the extant and massive defense-related sensing networks can be deployed for battlefield surveillance, treaty monitoring, weapons inspection, movement detection, etc. – sensorial supplements of prosthetic tele-technologies.

These fully-automated, machinic communications systems, programmed to track and monitor the state of circumstances, provide one of the most significant ways in which the militarization of everyday life invisibly operates in urban environments. The software determines the electromagnetic attention of these systems and directs it toward specific conditions to which the systems respond. The politics of programs, the algorithms of urban control, and the machine language that encodes and manifests the desires of specific interests within the urban landscape, remind us of what many critics of technology have argued: that human agency has not been ceded to machines.
but rather simply displaced to the stage of programming and not operation or implementation. Further, the programs operate on scales that outstrip the human by many magnitudes and interact with each other in ways both anticipated and inadvertent. So, what appears to be a machinic, objective system of observation and monitoring – just “a view” of the cityscape – is anything but. It is a view with an interest. A key Virilian point here is the momentum of technological formulations and their noetic influences that have long been part of industrial societies and the military institutions that formed within them, all of which can be found in the desire to collapse the gap of apperception and action coupled with the desirability of auto-action: again, for their speed, accuracy, and apparent human decentered objectivity.

The role the US military has played in the development of these systems past and present is, of course, central. The trajectory to increasingly merge two military spaces as single perceived and enacted space – that of the field of observation and that of operation, one distant and the other proximate – began in earnest during World War I and has never stopped (Virilio, 1989: 7). A key point of departure for the designs operative in urban sensing, tracking and targeting can be found in military plans for fighting in the tropical jungles of Southeast Asia: the response to guerrilla fighters along the Ho Chi Min Trail known as Operation Igloo White. The operation included three separate triangulated areas: the trail itself laden with sensors related to almost every sense (sight, sound, touch, smell), a computer interpretation center in Nankhom Phanom, Thailand, and the airspace above Vietnam and Cambodia. The first was populated by guerrilla fighters and peasants, the second by US military intelligence officers and systems operators who did little except keep the automated system running and interpret data after the fact to influence future programming, and fighter planes in the third. (The command center in the Issan plains is modeled after Hitler’s bunker, the first instantiation of an opto-electronic tele-control site and thus the foundation of all command centers – what we can call dashboards of destiny (Cf. Virilio, 1989: 79).

The closed system of Operation Igloo White followed an automated set of algorithmically generated cause-and-effect responses and actions meant to reduce the gap between perception and action by removing humans from the battlefield sensing loop. Sensor detection led to a signal sent from a sensor in Laos or Cambodia to
computer analysis of sensor input in Issan, which provided radio coordinates sent to airborne fighter planes. F-4 jets locked on to target and auto-guide assumed piloting of the fighter planes to auto-fire at a target point on a map grid that resulted in demolition of that map point. The automated ballistics calculations in this system occurred in the time-span of five minutes, which was jaw-dropping rapidity in the late 1960s. But even then, the military knew already the system required massive acceleration to be useful for any future battlefield moment. The dromoscopy set into motion by machinic vision of sensory data in a closed system of apperception and action simply fed the military’s appetite for faster sensing and enactment from even further distances. That is, it furthered the medial erasure of time-space into the speed-space of the instant.  

Operation Igloo White prefigures all of the ‘intelligent material systems’ that Smart Dust and its more stationary urban counterpart – smart buildings – promise. With buildings and infrastructure outfitted with sensors to detect stress, danger, shifts in normal states, the role of the intelligent built environment changes in numerous ways, including ways that could be mobilized for surveillance and action as on the Ho Chi Minh Trail. Previously, intelligent spaces (or smart dusted areas) and buildings have been only internally intelligent, speaking to themselves while monitoring the internal systems that observed their interior and perimeter. In an effort to further safeguard the operations of the systems essential to the building or infrastructure, intelligent material systems became externally intelligent, conversing with and tracking the environment with external machines that monitor the larger environment in a sustained engagement with the urban, natural and meteorological contexts, as well as being in conversation with other machines residing outside the integrity of the built structure or localized site. The prosthetic extensions that so constitute a range of tele-technologies for corporate, governmental and military operations for humans have now been granted to buildings, highways, water pipes, etc., but with the same goals of maintaining specific proprietary interests of property and wealth, and influencing behavior through the managed control of time, space and populations – along with the added threat of mobilized violence, police or military, to so manage.  

When the dust settles, when this smart dust settles, it will have been fueled by the desire to eliminate the event, to make sure no event occurs – though it will have been
determined by an indeterminate object that senses as a subject, communicates as a subject and does not enact its own will: merely a node in a network shuttling data.

**The Bomb**

“Under glass: glass dishes which changed in color; pieces of transformed beer bottles; a household iron; bundles of wire become solid lumps of iron; a pair of pliers; a ring of skull-bone fused to the inside of a helmet; a pair of eyeglasses taken off the eyes of an eyewitness, without glass which vanished, when a white flash sparked”

Galway Kinnell, “The Fundamental Project of Technology”

The atomic bomb as an object of unparalleled influence and effect – especially on Western thought and culture, but also equally for the world rendered and remade as globe – has been explored provocatively by Peter Sloterdijk in his book *The Critique of Cynical Reason*. In a whimsically useful moment, Sloterdijk calls the bomb the only Buddha that Western thought and reason can understand. By its very presence, it has changed everything: whether it sits silently in its silo or erupts in full fiery conflagration. Whether it does either matters not one whit to it. It is the object that has wrested subjectivity fully from the subject, making of us, a mass with a bull’s eye on our collective foreheads – all huddled humanity – a target. It has mediated our position in the universe and given us an object of collective annihilation hitherto the exclusive domain of nature or the gods. It is the supreme object of mediation and meditation: deeply paradoxical at all levels. The bomb makes us almost omnipotently powerful while simultaneously rendering us weaker and more vulnerable than we have ever been. Built for defense, it makes us completely defenseless. As a weapon, it has been used twice in anger but can now never be used again (hence our Virilian and Baudrillardian state of virtual and simulated war). As a geopolitical tool, it is the trump card we can never play. It is potential incarnate, a potential for which we have built a massive tele-technological opto-electronic environment to ensure its potential is only ever potential and never realized. In its face, all logic, reason and rationality fail, replaced by impoverished and ludicrous cousins who parade under these names. It is the accident of all accidents.

The bomb as medium and object that mediates remains a mysterious set of forces not yet adequately addressed but always obliquely present, perhaps now more than ever.
As Virilio consistently notes empirically and theoretically, the vast majority of the hardware and software that have broadcast and virtualized the object as real-time phenomenon result from Cold War R&D efforts linking university, military, corporate, and entertainment industries – a medial trend initiated with World War I. All IT and all media in the 21st century bear the mark of this complex of concerted Cold War efforts, now (or at least recently) retooled and remobilized in a constant state of Manichean war of good vs. evil.

An early, prescient media object of the Cold War explored in evocative detail reveals some of the ways in which the bomb mediates all objects that appear in its shadow: this is, the cinematic collaboration between Alain Resnais and Marguerite Duras on *Hiroshima Mon Amour*. The bomb as absent object fills the entire film. It is the reason for the film but is never present. The film’s opening sequence lays bare the complete wreckage of subject-object relations that Virilio explores only a few years later in *The Art of the Motor*. In this famous sequence, we hear the French female and the Japanese male who has become her lover discussing what she has supposedly seen in Hiroshima. We do not see either person’s face, only hear their disembodied voices, as in some play by Beckett. She asserts time and again that she has seen everything in Hiroshima: the hospital, the museum – the exhibits, the photos, the reconstructions (“for want of anything else”), “the burned iron, the iron made as vulnerable as flesh” – the survivors, the tourists, Peace Square, the twisted Palace of Industry: everything meant to represent the bomb, its explosion, its destruction, the wounded and charred bodies and objects.

With each assertion of each object she claims to have seen, she is rebutted by her Japanese lover who says she has seen nothing. There is nothing to see, no object to study that will tell her or anyone about the city, the bomb, the explosion. A pair of bodies (perhaps theirs, perhaps not), barely glimpsed at the very start of the film covered in shiny ash (“deposited by the atomic ‘mushroom’”), have similarly been dematerialized, rendered object-less by the bomb that has brought them (as it has all of us) together on completely new terms. These bodies are like the most famous victim of Hiroshima: the famous photograph of the absence of a body, that most famous (non)body that constitutes a white shadow permanently embedded in the stone of a bridge, the person vaporized by the explosion and now forever part of the pores in the
stone: “the blinding Hiroshima flash which literally photographed the shadow cast by beings and things so that every surface immediately became war’s recording surface, its film” (1989: 68). This is the media image, the media object of the 20th century that contains all media objects from then on.

The object that is the body is now more vulnerable than ever, as vulnerable as iron. The city is too. The object that is the city, especially Hiroshima, has itself been transformed wholly from the outside, represented globally, through an atomic lens. It has lost its inside, just as the self has lost its subject status and its interiority. The female protagonist is an actress, present in Hiroshima to make a film. When the man asks what the film is about, she replies, “Peace, of course.” What other kind of film would be made by an international cast and crew in Hiroshima than one about peace? Hiroshima, the city-as-object, has been mediated by cinema both within the diegetic realm and outside of it, collapsing the two, just as it has been mediated by globalization and global representation, just as it has been mediated by the bomb. It is another screen connected to networks with flows of information, and in so becoming reiterates the fate of human relations, urban space and perception in relation to cinematic and military technology charted by Virilio as “the osmosis between industrialized warfare and cinema” (1989: 58).

The bomb is the trickster object without compare, the “evil genie of the object” that Baudrillard discusses in Fatal Strategies. “Anything that was once constituted as an object by a subject,” he writes, “represents for the latter a virtual death threat” (2008: 95). Once the genie is out of the bottle, evil or not, it will not go back in. There is no reversibility of time available here, only repetition – only now and from now on it’s the “real time” of global electronic surveillance. The bomb represents the most fully excessive object yet, one in which we as subjects are fully consumed and consummated. It has no instrumental function, no means to an end, for it is all only end: the end to end all ends. The object of the latter half of the 20th century as constituted by the media may have been the consumer commodity, but was only ever the commodity that the bomb allowed it to be, created it to be: a commodity intractable, inassimilable, fatal. Even then, and more so now, the object is nuclearized, atomically mediated and mediating. It thinks us, removes our subjectivity from us, silences us, and vaporizes us.
The bomb turns cities to dust, and sand and dust to glass, but without utopian or even progressive transparency. The new categories of urban metabolism will have been determined largely by this most determining of indeterminate objects that has helped make the world a strategically-bounded globe and no longer a potentially-explorable world – a globe now completely locked within interconnected levels of computational tracking and enacting. The Future Perfect tense provides us delusions about determining and fixing the future perfectly even with and through indeterminate objects. Perhaps the drive to reification that so underpins Western thought has to do with the drive for determinacy, and yet the polyvalence of indeterminate objects and their ungovernable protean properties might teach us other lessons.

**In Lieu of a Coda**

“When I say things have reached their end, I don’t mean their end in the sense of the end of the world, but rather we can only ever experience the ‘end’ of things. I think Baudrillard says the same thing. We’ve never experienced anything other than the end of things because we’re mortal. That’s the basis of philosophy”


**References**


Smart Dust Project: [https://people.eecs.berkeley.edu/~pister/SmartDust/](https://people.eecs.berkeley.edu/~pister/SmartDust/)


**Notes**

1 Parts of this section have appeared in different form in my article “Smart Dust and Remote Sensing: The Political Subject in Autonomous Systems”, *Cultural Politics* 2015 11(1): 100-110.
2 Paul Virilio and Claude Parent are the architects of the “bunker church” designed for St. Bernadette in Nevers. Of the city, Virilio wrote “Nevers is *Hiroshima Mon Amour*”.


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