



## Future Map Reloaded

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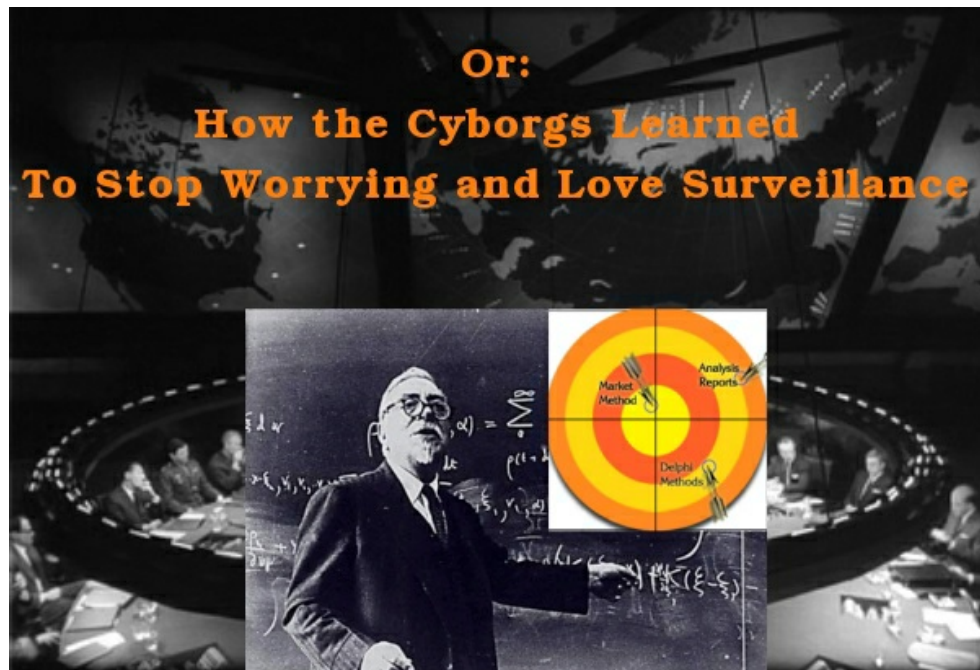
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*Brian Holmes is a Chicago-based art critic, activist and translator known for his writing on the intersections of artistic and political practice. In light of the recent explosion of surveillance discourse in the media, we invited Brian Holmes to revisit an [essay](#) he wrote in 2007 on the intersection of cybernetics, surveillance and neoliberal capitalism, to provide a theoretical framework for discussion.*

### FUTURE MAP RELOADED

By Brian Holmes

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Say “surveillance” and people think “Foucault.” Dull bureaucratic corridors; cold cells; disciplined bodies; an invasive gaze. State power, in short. The bloated US prison system and the staggering growth of mass electronic surveillance since 9/11 gives us every reason to think this way. Yet there is another, even more pervasive form of mass surveillance. Friendly and seductive, not cold and bureaucratic; multiple and proliferating, not centrally controlled; corporate and consumer-oriented, not based on state power. And there is also another Foucault.

A decade ago, when I started the research leading to an [essay](#) presented at the 2007 Ars Electronica conference “Goodbye Privacy,” I had two goals. First, to understand the relation between consumer data-gathering, predictive algorithms and interaction design in commercial spaces, which are

increasingly shaped to preemptively channel and satisfy the nascent desires of customers. And second, to show how this “seductive sort,” with all its positive, incentivizing and generative valences, spills over from civil society to reveal its conceptual and operational links with the coercive power of the capitalist state. The point was definitely not to paint your local exurban mall as some kind of proto-carceral space. Instead, the point was to grasp the modulation of power in liberal societies.

To do this would entail plunging into the forgotten science of cybernetics, whose militarized development in the post-WWII period laid the underpinnings for today’s algorithmic excursions into the realms of big data. It’s kinda heavy stuff, a Dr. Strangelove sort of thing; so for a more light-hearted metaphorical guide, I also drew from the schizo-science fiction of Philip K. Dick. For the theoretical angles, I leaned on an early text by the historian of science Peter Galison, called “The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision.” And finally, I called on the rather late series of exploratory lectures that Foucault presented under the title *Security, Territory, Population*.

Let’s begin with the razor-head queer guy. Here’s a summary of his key ideas:

*It’s astonishing to see how Foucault, in his 1978 lectures at the Collège de France, immediately begins to distance himself from the image of the Panopticon and the concept of a disciplinary society that he had advanced only two years before in *Discipline and Punish*. The 1978 lectures are entitled *Security, Territory, Population*. They deal with what Foucault calls “security devices,” or the regulatory mechanisms whereby the economic activity of a population is both optimized and protected against disruption.*

*The first example is a mid 18th-century redevelopment plan for the city of Nantes, which involves cutting out new streets to serve four overlapping functions: the aeration of unhygienic neighborhoods; the facilitation of trade inside the city; the direct connection of the streets to long-distance transportation networks; and the surveillance of traffic in an urban environment that is no longer walled or subject to curfew. The keyword here is circulation. Instead of developing closed, precisely defined spaces for exclusive uses, as in a disciplinary architecture, the plan creates an open series of multifunctional devices that can expand in various directions according to patterns of future growth that can only be foreseen as probabilities. Further examples include the treatment of the plague by an identification of its transmission vectors, or the mitigation of famine by economic adjustments that discourage the hoarding of grain. In each case, the nature of an existing phenomenon and its effects on a population are carefully analyzed before any measures are taken. The aim of the liberal art of government is not to punish, transform or even save individuals, as in a disciplinary regime, but instead to arrive at the optimal distribution of certain phenomena in society, “to reduce the most unfavorable, deviant normalities in relation to the normal, general curve.”*

*All of this is quite unlike a sovereign upholding an arbitrary and terrifying law (which was the role of the ancient kings, or of Big Brother). But it is equally distinct from an administration imposing disciplinary routines on an individual (which is the effect of panoptic surveillance, whether in prison or on the factory floor). It is now a matter of political economists adjusting the parameters of an open environment so as to stimulate and channel the probable behaviors of a population, and to manage the risks entailed by its free and natural mobility, or indeed, by the expression of its desire. The problem of governments under this liberal paradigm, Foucault explains, “is how they can say yes; it is how to say yes to this desire.”*

*What’s impressive here is the about-face in Foucault’s theory of the panoptic order – a rethinking motivated by the rise of neoliberalism, amid the shift to a post-industrial society. He goes so far as to say he was wrong when he claimed in his work on the prison that the disciplines were the coercive “dark side” of Enlightenment liberties, the fundamental mechanisms of power lying beneath the formal surface of liberal theory. Instead, he now maintains, “freedom is nothing else but the correlative of the deployment of apparatuses of security.” The two, in other words, evolve as a function of each other. Developing that same idea a year later, he declares with a certain irony that the liberal art of government “consumes freedom” – “freedom of the market, freedom to buy and sell, the free exercise*

*of property rights, freedom of discussion, possible freedom of expression” – and therefore, “it must produce it, it must organize it.” It must provide the institutional environment for the exercise of certain freedoms, including the conditions under which one person’s freedom can be prevented from limiting another’s, or indeed, from threatening the entire mechanism of economic exchanges. The liberal art of government, for Foucault, consists in intervening not on the players but on “the rules of the game.”*

Since I wrote this almost a decade ago, the cardinal rules of growth-oriented liberal society have become more clear: produce, borrow, speculate, consume, repay. This is the formula of economic development adopted by the neoliberal art of government and extended to the entire world. Tracked consumer preferences and targeted web advertising are the networked face of a global explosion of shopping malls, gated communities and buy-now-pay-later plans, which are all urged forward by finance and underwritten by far-flung logistics systems for just-in-time delivery to your local superstore. Under this paradigm, a calculus of probability draws the blueprints for an ever-expanding architecture of circulation. The traces of your footsteps through a commercial space, or of your web-navigation through a whirlpool of hyperlinks, is what supplies the raw data for that calculus. After the numbers are crunched, the commercial environments are tweaked and readjusted again, and the most successful ones become benchmarks for replication. All throughout Asia you now have cybernetically adjusted malls, suburbs, entertainment districts and casinos, just like in EuroAmerica. The relentless optimization of capitalist growth potentials is the explanation behind the surge in the production of greenhouse gases that began around the year 2000, accelerating the pace of climate change and thereby defining the horizon of our existence.

To be sure, the question of how world populations can say yes to the corporate stimulation of their desires has been troubled by the 2008 crisis; but it has hardly been laid to rest. What has changed is the new public awareness – particularly since the repression of the Occupy movement, followed by the Snowden revelations – of a corresponding growth in the powers of the no, the powers of surveillance and policing. In Foucault’s understanding of liberal societies, these powers are designed to mitigate risk, which in its most fundamental expression is the risk of any disturbance affecting the circulation process itself. The powers of risk mitigation operate all around the borders of the great global capitalist expansion, even when those borders appear in your city or your neighborhood (or perhaps even in your own erratic, inexplicable and therefore suspicious behaviors). Here, the gravity of a disturbance must be weighed against the cost of preventing it. Maybe it is better to accept and channel a new behavior, and to make money off of it rather than prohibiting it? The profit risk that Napster and Bit Torrent pose to the recording industry can be combated with online surveillance and punitive fines; but it can be more cheaply and durably overcome with the low prices and convenient downloads of iTunes and Google Play. The better solution, for liberal capitalism, is the acceptance and optimization of a natural inclination.

Armed violence, on the other hand, falls into the absolute category of terrorism: it is so risky that it must be identified in advance, simulated or even stimulated before it happens, then interdicted at the cusp of its realization. Under this configuration, the powers of the yes and the no come to resemble each other very closely. To reveal that proximity in a fictional mirror, one can look into Philip K. Dick’s short story “The Minority Report” and its adaptation to the screen by Steven Spielberg:

*Steven Spielberg’s Minority Report tells the tale of the experimental “Pre-Crime Department” of the Washington D.C. police in the year 2054. Spielberg is known for special effects, and some of them go straight to the point. The chase scene captures the ambiguity of contemporary identification and tracking technologies by imagining their logical development in the future. Billboard advertisements spring to life, activated by a retinal scan, to call out the name of the central character John Anderton as he strides anxiously through a corridor to the subway. In a bit of poetic justice, American Express, one of the pioneers of the “panoptic sort” studied by Oscar Gandy, gets the highest visibility in this thirty-second orgy of brand-name seductions. Another quick scan at the subway turnstile epitomizes the convenience of biometric identification. And the matching cut to the police, tracking their prey through the transport system, recalls the price we pay for it. Later on, this imaginary vision comes extremely*

*close to Foucault's notion of enforced optimization, when the inventor of Pre-Crime, police commissioner Lamar Burgess, addresses a crowd of people celebrating the extension of the device to the entire country. He says to them: "Enjoy yourselves! That's an order." And everyone seems delighted to hear even the police commissioner saying yes, saying yes to their desire. Still the most powerful, most haunting image in the film is that of the precognitives themselves: strange, misshapen creatures, pumped full of drugs, bathing in some amniotic solution, with electrodes pressed to their heads to read off their visions of the future.*

*These three creatures are clearly cyborgs. Yet rather than being outfitted with powerful mechanical prosthetics and assisted with augmented cognitive faculties, as in fighter-plane cockpits or in movies like *The Terminator*, here they are merely monitored, probed to their innermost imaginings. It is the sensitivity of their emotional responses to the world that makes it possible for the police to predict the future. Philip K. Dick's short story is worth quoting here:*

*"In the gloomy half-darkness the three idiots sat babbling. Every incoherent utterance, every random syllable, was analyzed, compared and reassembled in the form of visual symbols, transcribed on conventional punchcards, and ejected into various coded slots. All day long the idiots babbled, imprisoned in their special high-backed chairs, held in one rigid position by metal bands, and bundles of wiring, clamps. Their physical needs were taken care of automatically. They had no spiritual needs. Vegetable-like, they muttered and dozed and existed. Their minds were dull, confused, lost in shadows. But not the shadows of today. The three gibbering, fumbling creatures, with their enlarged heads and wasted bodies, were contemplating the future."*

*In the movie, Spielberg has the precogs generate mental images of the future, without any mediation of computer analysis. He makes them self-aware, conscious of their visions and even able to suggest a course of action, as when the precog Agatha tells Anderton that he can change the future. But in that way, Spielberg simplifies a metaphor that was much more brutal and precise in Dick's short story. There the precogs are pure sensibility, without reason or personal identity – something like the "reptilian brains" that contemporary marketers try to map out in their experimental subjects.<sup>28</sup> The precogs, in Dick's story, are uncanny, Golem-like creatures, wavering between men and machines. They stand in for the populations whose affects and mental activities are relentlessly probed and palpitated, so that their aggregate data-image can be mirrored by seductive products and waking dreams.*

The essay I wrote almost a decade ago is entitled *Future Map*. It centers around the "Futures Markets Applied to Prediction" proposed by the retired admiral John Poindexter as part of DARPA's Total Information Awareness program – a Bush-era initiative that was publicly critiqued and defunded in Congress, but nonetheless laid the groundwork for the multifaceted NSA surveillance program. With his government-supported futures market, Poindexter wanted to harness the distributed intelligence of global finance by having investors bet on the probability of future "terrorist" events, by which he meant any kind of geopolitical instability. In this way, he and his DARPA colleagues envisioned a world in which capitalist dreams of violence at a global scale could be used to identify and interdict terrorist actions, all while netting investors a handy profit. Here in this neoliberal fantasy, the two opposition functions of optimization and risk mitigation would be one and the same.

The heart of the matter is there. What I tried to grapple with in *Future Map* is a situation where two antagonistic forces become one and the same. This is the primal scene of cybernetics, first identified by Peter Galison. It occurs during World War II, when the scientist Norbert Wiener is charged with inventing a machine to improve the accuracy of anti-aircraft artillery by automatically predicting the path that will be taken by the enemy. To do this, he attempted to reduce all the elements at play – the gunner and the anti-aircraft gun itself, plus the enemy plane and its evasive pilot – into a single system obeying mathematically calculable laws. In other words, Wiener decided to treat both the gunner and his opponent as info-mechanical creatures, or what we would now call cyborgs. As he wrote: "In both cases, the operators seemed to regulate their conduct by observing the errors committed in a certain

pattern of behavior and by opposing these errors by actions deliberately tending to reduce them.... We call this negative feedback.”

Negative feedback takes past deviations from a goal and extrapolates them into the future as error-correcting information that changes the operational orientation of a machine. In this way, information acts cybernetically, as a “steersman” or “governor” (which are the etymological meanings of the word). Yet in the case at hand, negative feedback is not simply applied to something simple, like the pattern of a robotic hand reaching for a door. Instead it is applied to two info-mechanical beings, each trying to evade the hand that the other lays on the trigger. Two negative feedback loops are brought into self-exacerbating contact. For Peter Galison, this antagonism is an ontological relation, a matter of identity and indeed of being. It defines cyborg existence as what he calls “the ontology of the enemy.”

Galison’s contention is that the primal scene of cybernetics has left its imprint on all self-correcting feedback systems. I think he is right. Looking around the world today, one can see that the attempt to use mass electronic surveillance to identify, predict and destroy terrorism is not leading to any decline in violent insurgency. On the contrary, the insurgency is proliferating and developing new techniques to achieve its aims. This is a dangerous situation, a negative feedback loop in both the technical and the colloquial senses of the phrase. But there is also something rather disturbing going on at the other ends of the Foucaultian spectrum, where consumer behaviors are relentlessly “optimized” by capitalist society. What we see here is not just the ever-more perfect adaptation of offer to demand. Nor is it only about the stimulation of new, partially unpredictable desires, which can then be channeled back into the system of satisfaction. Both those things do happen; but there is a deeper, more intricate spiral at work.

Since the global youth, minority and labor revolt of 1968, everyone who feels recalcitrant to the whole system – everyone who tries to invent some kind of escape, some kind of alternative – is increasingly caught in a relation where the attempt at evading the multiple solicitations of the market becomes the driving force for the invention of new solicitations. Under this configuration, the target or the “mark” is the person who leaves behind the valuable traces of his or her attempt to escape the seductions of a proliferating market, which itself is founded on the evasive behaviors of the marks. That kind of spiral dynamic – the most perverse form of surveillance – is what the cyborgs have really learned to love, I’m afraid. Which means that right at the heart of pacified consumer society, you find the predator-prey relation. The unity of two negative feedback loops. The ontology of the enemy.

How to break a tie that binds more tightly when you stretch it? The only solution seems to be, not dramatic opposition or attempted flight, but a far more slow and deliberate process of constructive refusal that does not have any use for the category or the strategy of the enemy (especially not the enemy that is constantly masquerading as your “friend”). In this sense, pure critique, like pure cryptography, can never be the whole solution to the problem of mass surveillance, because both critique and cryptography tend to engage two opponents in a further dialectical spiral. It is this ontological relation that must be defused. Even while leaving traces you have to be somehow off the mark, outside the friend-enemy circuit. Perhaps this is done through relations of emulation rather than rivalry. To emulate is to take in and singularize the existential pattern of an admired other whose position you will not strive to displace and whose identity you will not attempt to obliterate with your own superior aims. This seemed to be Foucault’s rather enigmatic position around the end of his life, which has not been easy for most people to interpret, let alone put into practice in any useful or recognizable way. I think it means constantly asking ourselves and those around us, why are we living this way? How have people lived otherwise in the past? How could we live otherwise in the future?

The future map of securely gated communities and violent no-go zones is already clear: it’s the geopolitical reality of the present. But there is no existing map to a world without deadly conflicts hanging in the balance of hedonic paradises. Traveling to that distant future means taking an ethical pathway that demands a curious sacrifice, the sacrifice of a candy-flaked bloodlust that defines your very being under capitalism. No one really knows how to do this, but it is still worth trying. As some

utopian activists once said: "All we have to lose is our chainstores."