Automated (Post)Positivism

Since the 1960s, critical and radical perspectives in urban studies have been mobilized in opposition to an easily-defined villain: hegemonic social science, with its tight linkages between quantitative methods, conservative politics, and positivist epistemology. This opposition was catalytic and important during a crucial period, but over time the historical memory has become a dangerous caricature. It obscures the contested and contingent linkages between epistemology, methodology, and politics -- not only in the turbulent 1960s, but also at the birth of positivism itself. Today, repeated performances of this history distract us from a dramatic new realignment of methods, politics, and epistemology. The informational innovations of digital capitalism are reanimating the body of mid-twentieth century positivist social science. But this reanimation is an automated, agile adaptation to the unique standpoint epistemologies of individual transactions and consumer identities. We cannot yet know, therefore, whether this zombie is a positivist specter from the dashed hopes of Enlightenment modernity, or a postpositivist figure who will finally deliver us from Comte by taking us back to the pre-modern stages of theological and metaphysical knowledge.

Thank you for the privilege of being here. It sends chills up and down my spine to be in Chicago, as I think of the Old School of Burgess, Park, and Zorbaugh, and the New School of Janet Smith, Phil Ashton, Virginia Parks, Bill Sites, and so many other brilliant, passionate urbanists. This is my kind of town.

Today I'd like to talk about methodology, epistemology, and politics. I'd also like to confess about some of my remedial reading: I'm almost two centuries late with this assignment. But

before I get into theoretical details, let me begin with a small random sample of sharp empiricist challenges.

Every minute of every hour of every day, millions of no-reply emails are sent by machines. A company called Immersive Labs is using facial recognition technology to tailor digital billboard advertising to the characteristics of people passing by. Scene Tap is a smartphone app hooked up to cameras that scan the crowds in Chicago's bars to post statistics like average age and

female-to-male ratios so that bar-hoppers can plan the optimal route for a pub crawl. eBay is working on a mobile app that automatically identifies clothing and probs in each scene of the television show you're watching so you can respond to product placement in one-click real time. Klout, a popular social networking site, calculates a score for you based on how influential you are on Foursquare, LinkedIn, Twitter, Facebook, and all the rest. Until some recent bad press coverage over a mother's 13-year-old son, Klout would automatically create a profile for you even if you never used the site, because the algorithm pays attention not just to *you*, but to *who knows you*, or who friends you on Facebook.

Facebook itself has more than a tenth of the world's population, and is in the midst of a chaotic war with Twitter, Google, and the entire world matrix of Westphalian nation-states over who has the legal authority to regulate the authenticity of human identities used on the social web. The value of personal data on the billion human beings on the social web is the next frontier in the articulation of modes of production. The total population of the United States is now greater if we count wireless devices instead of human beings. Labor theory of value and fictitious capital, meet the Twitterverse.

I cannot offer to make sense of all of these trends. I can barely keep up with my stream of the digital flood, and my profile on Facebook is decidedly old-school.

What I'm offering is more modest: a warning that some of our old ways of thinking about method, politics, and knowledge are holding us back from understanding this brave new world dot com. Specifically, we are trapped by an intellectual heritage that shapes how we think about a philosophy that is supposedly dead but inescapable.
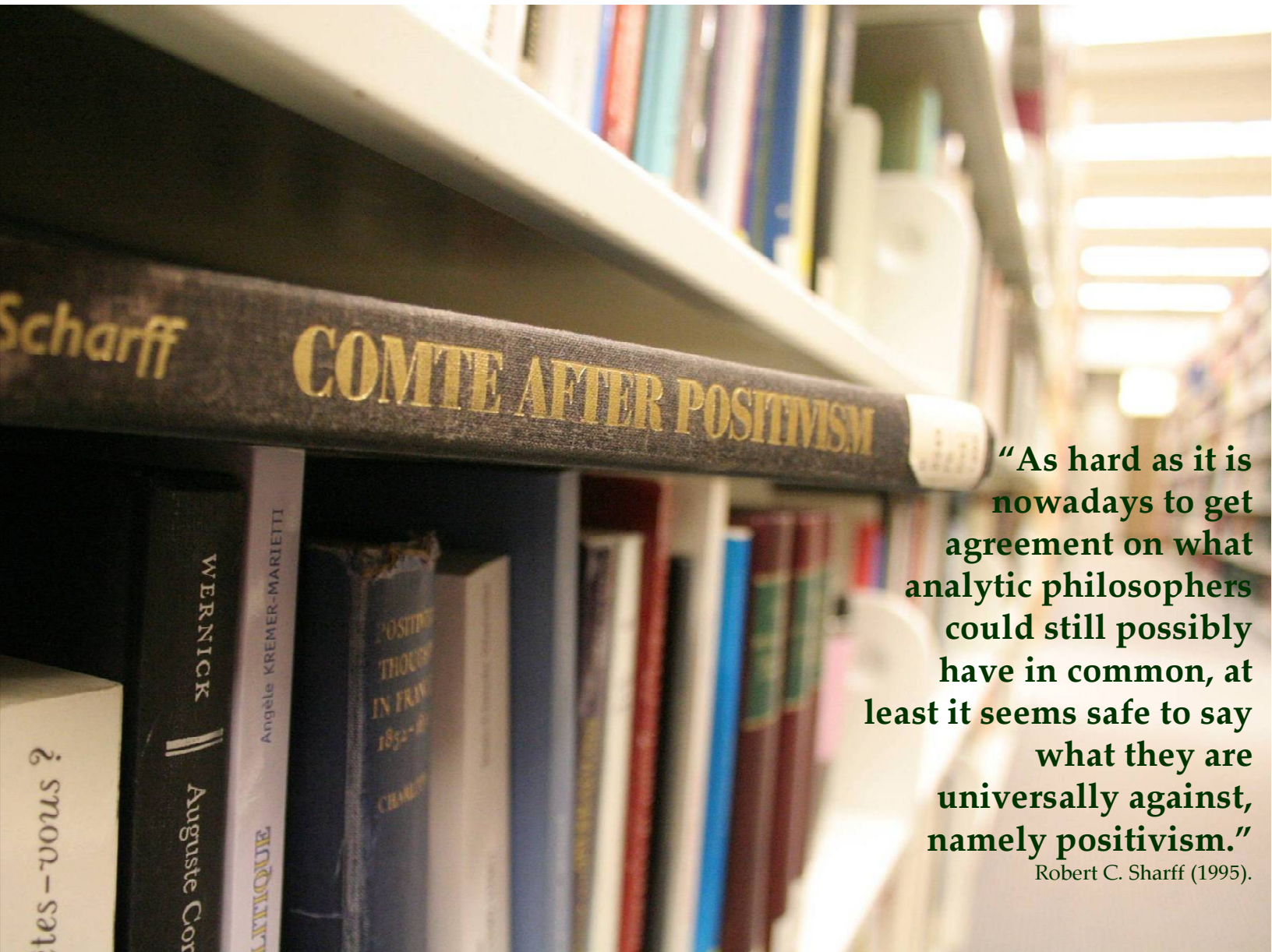
"As hard as it is nowadays to get agreement on what analytic philosophers could still possibly have in common, at least it seems safe to say what they are universally against, namely positivism."
Robert C. Sharff (1995).

The philosopher Robert Scharff draws a clear, simple map of our postpositivist world: "As hard as it is nowadays to get agreement on what analytic philosophers could still possibly have in

common," he writes, "at least it seems safe to say that there is something they are universally against, namely positivism." But if positivism is dead, then why isn't our postpositivist world the emancipatory alternative that every generation of radicals has worked to achieve? Why does Dennis Judd lament that those of us writing about cities have become "end-time prophets," always shouting that "everything is always going to hell"? As postpositivism has achieved what Leitner and Sheppard label a "new position of intellectual strength," the inequalities and injustices of that old positivist world just seem to be getting worse. Maybe what we're fighting is a ghost.

"…a positivist haunting…" It refuses to die, "despite repeated attempts by social theorists and researchers to drive a stake through the heart of the vampire."

Steinmetz (2005)

In a powerful and valuable collection, George Steinmetz documents a "positivist 'haunting'"
across the humanities and social sciences, and with his contributors, Steinmetz works to mobilize
a challenge to "positivism's paradoxical power as a zombie-like refusal to stay buried."

I suggest that the legacy of positivism in critical urbanism has been misunderstood ever since the
watershed era of the 1960s. I have often misunderstood this legacy myself, and I can only offer
the perspective of someone who saw the 1960s from below the waist. But I <u>have</u> witnessed and

lived the aftermath. Many of today's anxieties are the inheritance of a distinctive conjuncture of political epistemology that coalesced for a brief but influential period. The 1960s was dominated by a rapid, enthusiastic embrace of positivism in urban studies at precisely the moment when positivism was most closely intertwined with the deployment of nation-state power, when it was discredited and discarded by philosophers themselves, and when events made clear that it was unsuited for a ready interpretation of the unpredictable revolutionary insurrections that broke out in the streets of hundreds of cities across the world. At first, a new generation of young scholars found inspiration in Marxism to challenge the new orthodoxy of positivist urbanism.

Ever since, each new generation of radical urbanists has defined their project in part through opposition, constituting a diverse plurality of binary otherings. Each has built a new emancipatory movement to challenge the dominant regime of positivist urbanism that is said to have endured for at least half a century. This ongoing history has become performative.


It perpetuates an incomplete and disempowering caricature of an historically contingent alignment of philosophy, methodology, politics, and practice. The organized nexus remembered

about the orthodoxy of the 1960s -- positivist epistemology, organized calculative

methodologies, conservative state-centric politics -- was unstable from the start. It was never

essential nor immutable. Indeed, positivism itself was internally unstable and contradictory from

the very beginning.

Let me tell this story in two parts: first we'll look back to the nineteenth century to the origins of

positivism itself. Then we'll consider how that history can help us understand what's happening

today.
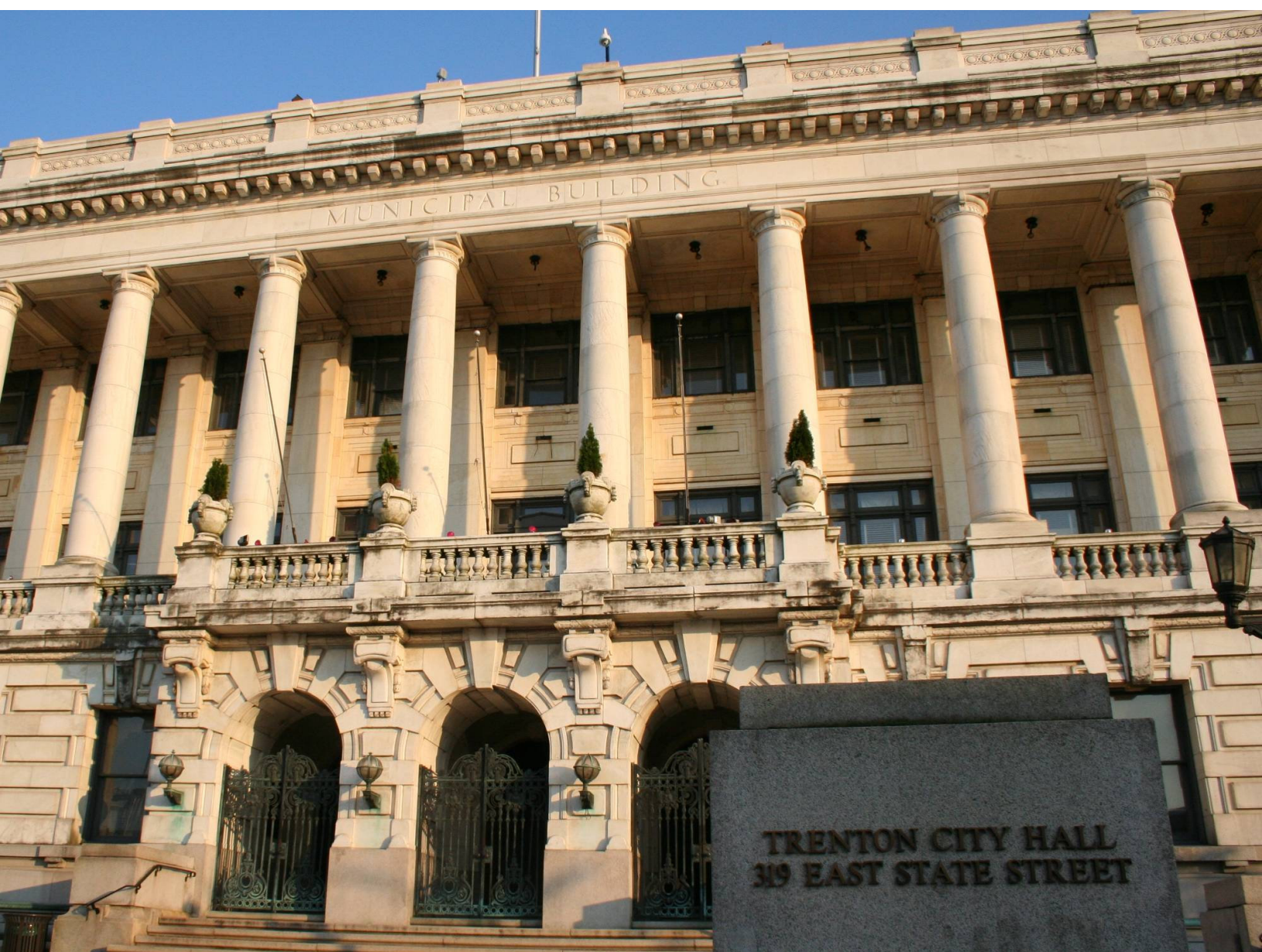
Back to Comte

Our view of the city and science today is shaped by a contentious, intergenerational memory of Enlightenment modernity. Among progressive and radical urbanists, this memory is neatly summarized in what I call Positivist City Hall -- the hegemonic infrastructure that was most clearly visible in the United States in the middle of the twentieth century. Here's how it's described by Patsy Healey and her colleagues, in turn citing James Holston and Guy Baeten in a study of the mismatch between conventional theory and the challenge of multicultural urban change:

"Such transformations challenge the modernist principles at the heart of urban planning that tend to favour acting in a definable singular 'public interest,' with rational 'coherence' and urban public order imposed on the city 'from above' through the expert powers of the usually White, middle-class, middle-aged and heterosexual men who, invariably, were the planning 'experts.' Such traditions of modern city planning tended to favour

rationality, comprehensiveness, planning hierarchy, positivist science with its propensity for quantitative modeling and analysis, belief in state-directed futures and in the existence of a single 'public interest' that can be identified by planners and is gender and race neutral.

(Vigar et al., 2005, quoting Baeten, 2011).

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I suggest that this quote is a fairly representative sample of how radical urbanists see the legacy of positivism in the city. And I suggest that far too many planners and policy elites do conform to this portrayal. Let me be absolutely clear: this positivist establishment is dangerous and evil indeed.

The machine politics of Positivist City Hall operate through an enforced patronage system of modernism, rationality, expertise, race, class, age, gender, sexuality, hierarchy, epistemology, methodology, state authority, and (false assertions of) neutrality and objectivity. The machine is built on a powerful triumvirate of *epistemological* pretentions of objectivity, rationality,

universality, and incontrovertible certainty, *methodological* worship of mathematical logic and quantitative sophistication, and *political* acquiescence for the conservative power geometries that gave us a century of war and imperialism. All of us should unite to destroy this machine, even if we may not agree on exactly what should replace it.

But here's the problem: we rarely encounter Positivist City Hall with all of these features, and even when we do, it looks almost progressive when set against the anti-urban hegemony of today's Global Right.

Steinmetz is eloquent and powerful when he connects mid-twentieth-century positivism with the high-modernist Fordism of America's military-industrial complex.

If positivism was tainted by its enrollment in American Fordism and the military-industrial complex, there was never any guarantee that a post-industrial, post-Fordist, post-positivist era would deliver us from the evils of militarism, inequality, racism, and all the other manifestations of social injustice. The Right has been all too quick to raid the Left's arsenal of theoretical and tactical weapons.
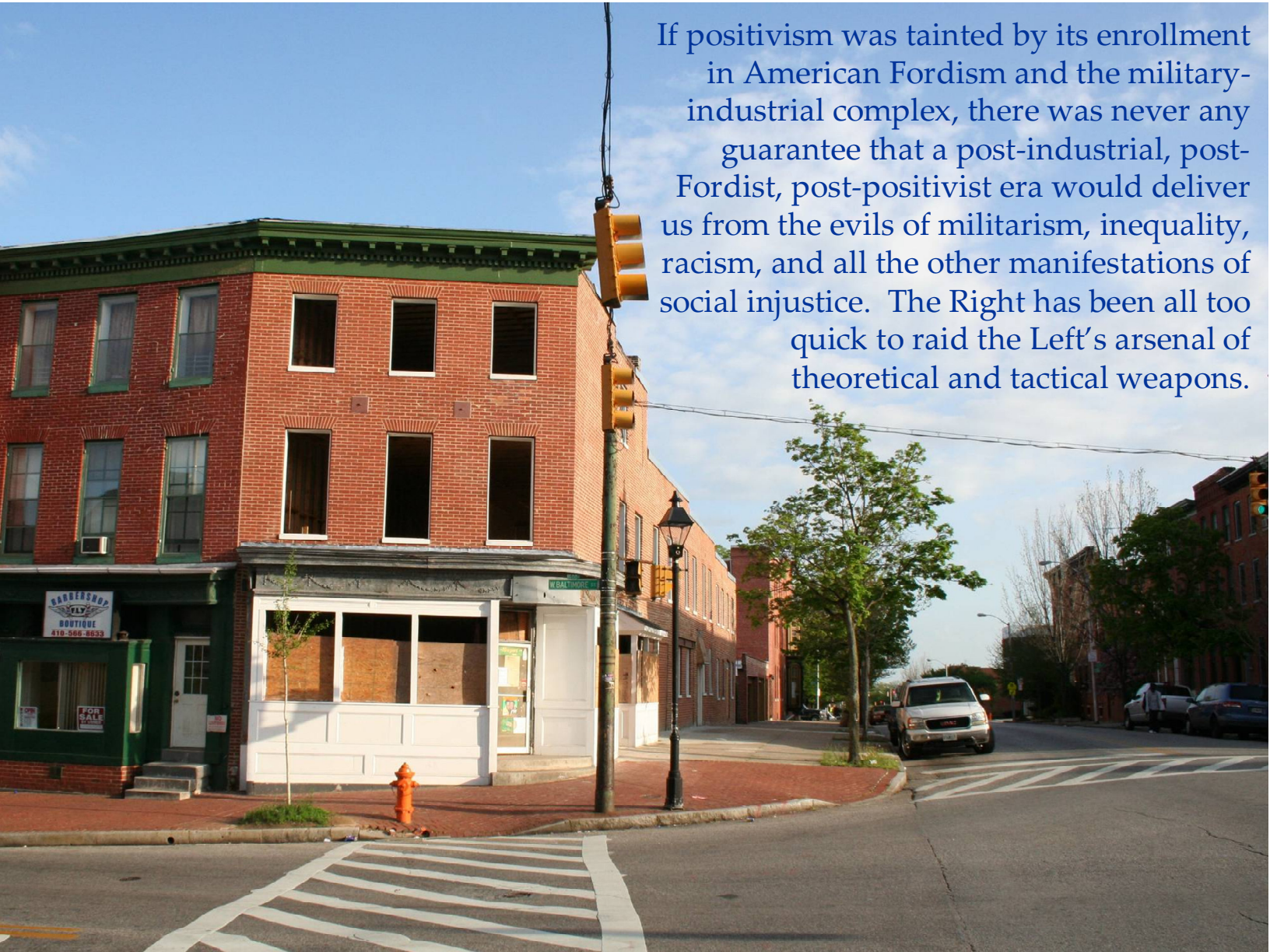
But let's not forget that there were some domestic achievements of the Fordist positivist planner, and today we realize that there was never any guarantee that a post-industrial, post-Fordist, post-positivist world would automatically deliver us from the evils of militarism, class exploitation,

and racism that were once controlled from Positivist City Hall. In their war on the right to the city, conservatives have been tactically brilliant in hijacking the theory, practice, and discourse of poststructuralism.

"We're an empire now," declares Karl Rove, "and when we act, we create our own reality." Use words that work, Frank Luntz advises, and if you control discourse you control the conversation over climate change, the death tax, and job creators. Evolution is just a theory. Maybe Obama's

birth certificate is a forgery. Maybe the Holocaust happened, maybe it didn't. As we watch Perry, Gingrich, Cain, Santorum, Bachmann, and Romney himself chase the far-right "Anybody but Romney" vote, we should be horrified by the sight of conservatives abusing the lifetime work of Harding, Haraway, Derrida, Latour, and every other postpositivist who has labored to document the social construction of scientific facts. Conservatives now understand: if reality is socially constructed, then they'll construct exactly the reality they prefer.

This is why we need to view Positivist City Hall from different vantage points. Today, urbanists recognize the machine by its positivist *epistemology* aligned with quantitative *methodology* and state-centric conservative *politics*. But these three axes were neatly aligned for a very short period in a very exceptional place -- perhaps best embodied in the Fordist positivist who went to Washington to model and supervise an imperial, neocolonial genocide in Vietnam. But look away from America's McNamara in the 1960s, and in different places at different times, the axes shift to unexpected angles.

In the early 1970s, radical sociology's struggle to create RC21 and the *International Journal of Urban and Regional Research* involved an uneasy alliance between Western Marxists challenging market hegemony and Eastern European technocrats whose positivist objectivity was positioned as a radical opposition to the official Marxist doctrines of "actually existing" socialism.

And in America, forty years after the "IBM mainframe with legs" of McNamara, right-wing poststructuralism gave us the "unknown unknowns" of Rumsfeld.

Constructivist contingency is even more radical and provocative. Attacks on Positivist City Hall are based on an intellectual history that has nearly achieved the status of Kuhnian "normal science" in a self-consciously post-Kuhnian world. In this intellectual history, the mid-twentieth century applied versions of what Steinmetz calls "methodological positivism" are most vivid, but

there is also a fairly clear image of the Vienna Circle, with their idealism before it was about to be shattered by Depression and global war. Sometimes, however, Positivist City Hall is explicitly connected with the distant, long-forgotten figure who came up with the word itself: Auguste Comte. But nobody reads Comte anymore. He's so long forgotten that he's not even mentioned once among the two hundred profiles in Simon Critchley's playful *Book of Dead Philosophers*.

If Steinmetz is correct and we are forced to live in a world of zombies, then I want to reanimate Comte. For those of you on the epistemological left, this is quite a provocation. Let me push my chips to the center. I'm all in. Here's an equally hazardous provocation for the epistemological right.

Comte, if and when he is remembered, is viewed as a nineteenth century French embodiment of Brian Berry. With all due respect to Berry, if I could talk with Comte and show him our cities of

today, I could turn him into Bill Bunge.

When Comte is remembered, it is because of the *Course in Positive Philosophy*, a giant six-volume set published between 1830 and 1842. With a narrative style that makes Marx's prose look like John Grisham, Comte traced the historical development of human knowledge through the stages of theology, metaphysics, and now science. It is from the *Course* that we now recognize the definition of positivist science, with its emphasis on observation, the use of

verification and falsification procedures, the conjunctural "if A then B" logic of causality, the unity of science, and the suspicion of all unobservable and metaphysical knowledge claims. But the *Course* was actually a distraction. Comte wrote it after he finished an earlier essay in 1822, called the "Plan of the Scientific Operations Necessary for Reorganizing Society." Comte had a gonzo moment -- "a train of continuous thought lasting for eighty hours" -- that convinced him he first had to rebuild philosophy before he could rebuild society. But that was always the goal: Comte's vision was less a Cartesian vision from nowhere and more an activist's eyes on the

prize. The *Course* took longer than expected, but finally in 1852 the second half of the project

began to appear: the four-volume *System of Positive Polity*.

When Comte is remembered, he is chopped in half. We get the *Course*, but not the *System*, in

part because Mill and other fans of the *Course* were horrified by the *System*. Comte saw no

contradiction between radical science and radical politics. In the *Course*, science challenged the

orthodox theology in which reality was decreed by the Church; in the *System*, science was

mobilized to reorganize society. The plan was to build on the history of the positive sciences --

mathematics, astronomy, physics, chemistry, physiology, and social physics -- in order to

develop a new science of ethics to replace the capricious and unaccountable decrees of theology.

Science would be freed from religion, but the ethical and moral purposes of spirituality would

flourish in a reconciliation of human imagination tempered by scientific observation.

"We tire of
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loving."
Comte (1851)

Comte was the original secular humanist: this is the project he called "the religion of humanity."
It was about science, but it was also about love. This is what Comte wrote for the first line of the
first page of the first volume of the *System*: "We tire of thinking and even of acting; we never
tire of loving."

Comte's utopianism was like Comte himself, and so it was bizarre, dramatic, and prone to what
Comte's primitive form of public relations called a "serious cerebral disturbance." After a short,
intense controversy in which Comte managed to offend every ally he had made while building a
scientific challenge to theology, it failed with a slouch into spectacular obscurity.

I want to rescue Comte from this obscurity to make a few points: positivist science was a radical challenge to illegitimate state authority. It was science, but it was also politics, ethics, and love. And it was up against a violent hegemony, an order that was at once all-powerful and unstable, always on the edge of collapse.

Dot Comte

This is where we are today, with the violent hegemony of an increasingly unequal, fully globalized, urbanizing capitalism. It is an accelerating capitalism, driven by the social and informational possibilities of digital technologies. "Social physics" has a quaint, awkward sound when we use the phrase to describe the birth of sociology, but in the age of Web 2.0 the concept makes perfect sense.

The bots and algorithms are all built on the post-Newtonian laws of motion of capital accumulation, coercive consumption, and ubiquitous surveillance.

WWACD? What would August Comte do? First and foremost, Comte would be fascinated by the naturalized, taken-for-granted way that we understand observation in positivist science.

Comte would be sympathetic to Foucault's governmentality critique of the huge data infrastructures built in the nineteenth and twentieth centuries to observe and monitor populations. But he would be horrified at the way conservatives have co-opted poststructuralist sensibilities of personal identity to undermine and destroy census data even as private dataveillance initiatives proliferate.

And he would help us understand and challenge the partially automated epistemology we see today.

Here's what I mean by automated epistemology. In the Fordist methodological positivism of our memories and textbooks, man struggled with machine to develop new ways of answering questions. The struggle was a labor relation of medieval craft guild on its way to Fordist assembly line, with teams of assistants or students punching cards for input in the pre-keyboard days. Here's one of those students, Daniel Bailey, remembering the pain of innovation:

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"All of these changes have been painful to a certain extent .... We went from the IBM 701 to the IBM 704, to the IBM 7090, the IBM 7094, to the CDC 6400 and at Colorado from the 7090 to the IMB 709. ... changes in computer operating systems and programming languages have been more frequent than changes in computer. As a consequence, the productive work is somewhat less than half of what would have been accomplished under stable computer conditions. Perhaps that is progress,"

Bailey reflected, but he didn't seem convinced.

Yet this entire enterprise was driven by the human need to understand why. The positivist scientists were trying to discern order in a chaotic world, and the machines were a means to an end. Here's Charles Wrigley's remembrance of Bailey's supervisor, the psychologist Robert C. Tryon, and his work in the days before all the giant IBM beasts:

"At that time, all computations had to be done by hand; Tryon was later to speak of his mis-spent youth, because too much of his time had been spent with a desk calculator. In the 1950s the practice of cluster analysis was restated in computer terms to enable the investigator to escape from hand calculations. Tryon and Bailey therefore planned this book to be the definitive account of postcomputer cluster analysis. The manuscript was almost finished when Tryon died suddenly in 1967." *Charles Wrigley (1970, p. v.)*

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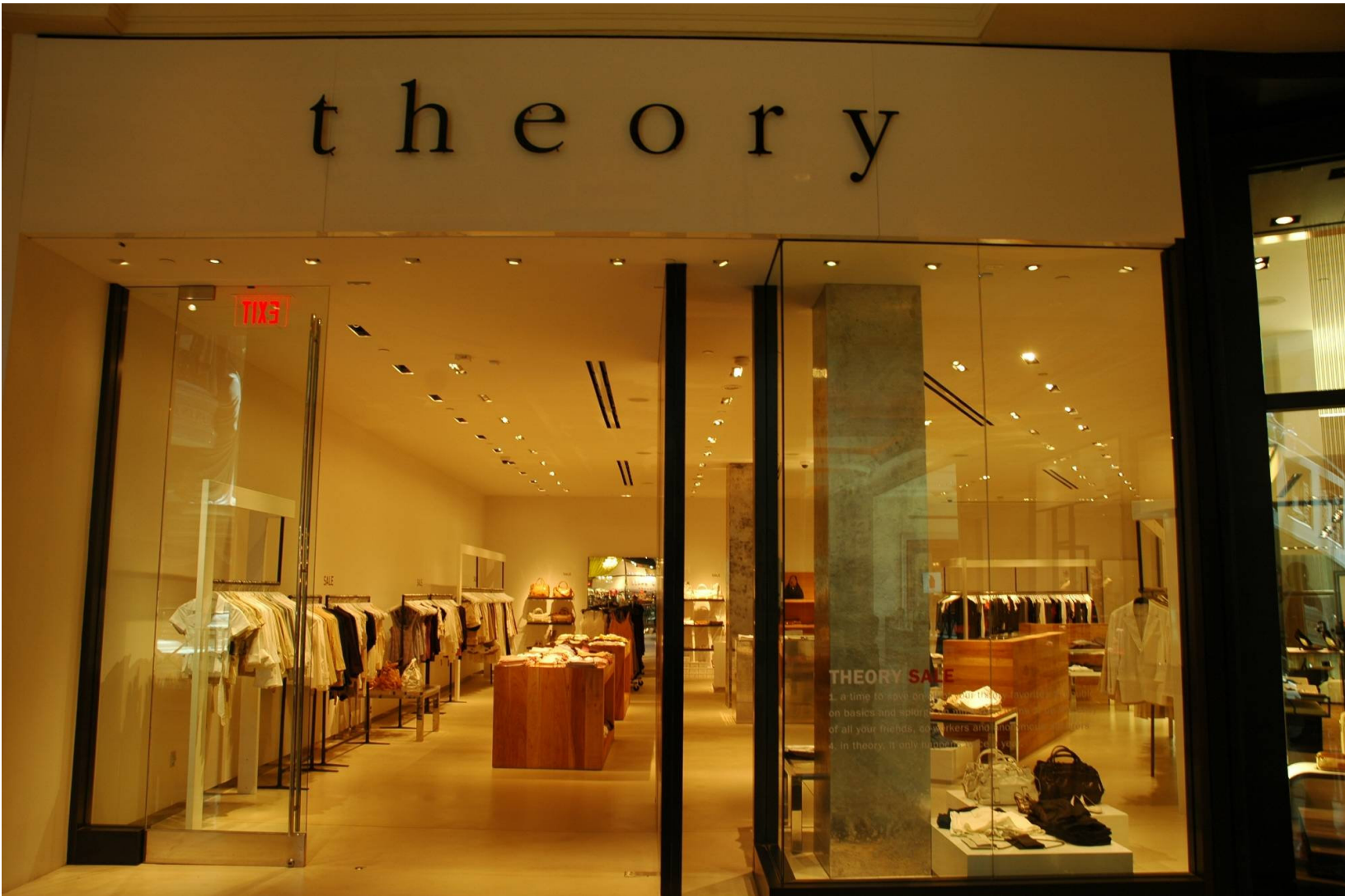
Our first instinct is to ask if anything has really changed. Desk calculators are now BlackBerries

and iPads. But I think there's more. In the transnational circuits of corporations, subcontractors,

and all the other legal constructions of homo economicus, the human being asking "why" is

being sidelined. More and more of the algorithms are pulling away from the need for human intervention, unhinging the personal connection between the ends and the means. For the busy consumer, who cares how and why the social networking site, or the smartphone app, works the way it does. So too with Wall Street firms that are using bots to scan press releases, news stories, and anything else from the discursive digital ecosystem for positive and negative words about publicly traded companies -- and then to automatically execute trades on the news. A week before the Lehman Brothers collapse in September, 2008, an accidental re-posting of a six-year-old story about United Airlines' bankruptcy filing unleashed a wave of automated sell orders. A billion dollars of market capitalization was erased in twelve minutes.

But most of the time, all the bots and apps and drones work just fine. It's now standard

procedure for corporate test-marketing plans to deploy multiple products, sites, and practices in a

real-time, digital randomized trial model that makes it crystal clear what option words best.

Why? The numbers are right there on the screen. Here are the page views, these are the

YouTube hits, this is the revenue. Why? Who cares? Look at the revenue.

This is the "computational social science" diagnosed by Gary King and his students. At one end of this evolving hierarchical hegemony, we find the corporate strategies and accumulation imperatives embedded in a code that has no human desire to understand *why*. At the other end we see the digital paint dots of a new impressionism, as we all live the lives of what Michael Curry calls "the digital individual."

Our mistake has been to see the infrastructure of computational social science as just another

positivist zombie from Steinmetz's mid-twentieth century Fordist urbanism. But computational

social science is not positivist.

It is entirely compatible with the poststructuralist worlds of situated knowledges and co-

produced realities of consumer identities performed through gender, race, ethnicity, age,

sexuality, and every other imaginable position of standpoint epistemology. But every embodied

subjective identity is seen from the View From Nowhere of a Cartesian capitalism -- not just the

individual Archimedes moment that Alan Greenspan confessed in his bathtub, but the unifying

theology of market fundamentalism.

This is where Comte shows us a radical and emancipatory path forward. Comte struggled against the hegemony of a theological order, and he was obsessed with observation because that order was protecting itself by corrupting science. Victor Cousin, the dominant philosopher in France in Comte's day, espoused an eclecticism that balanced the "partial truths" of sensationalist empiricism with mysticism and idealism,

all rooted in a Cartesian foundation of the non-deceiving God who allows humans the special privilege of self-awareness of human knowledge and the thought process itself. This is the doctrine of "interior observation," and it was crucial in the theological defense of power and privilege against the radica, revolutionary democratic possibilities of science. For Comte, interior observation was not just bad science, it wasn't science at all.

But this is the issue, isn't it? Theology and power co-opt science, and use it to disguise doctrine

as reality. "We're an empire now, and when we act, we create our own reality."

Those of us in the reality-based community are told not to worry, that the interior observation of leadership is working just fine. We should all go shopping, and we'll make sure the terrorists don't win.

Cut taxes and the job creators will save us. Today, Victor Cousin's "interior observation" is the functional MRI brain scans used by corporate consultants to refine advertising messages in the fast-growing field known as "neuromarketing."

The Radical City

I am a naive, idealistic optimist, so let me end on a positive note. Positivism need not be the

conservative hegemonic ghost we recognize from the mid-twentieth century. Marx is a scientist,

and so are Gibson-Graham, so is Harvey of Explanation and Harvey of Enigma.

Comte was more radical than we remember, and if you give me enough time on Woodward Avenue or State Street with the man christened Isadore Auguste Marie Francis Xavier Comte, I guarantee he'd become the best of Brian Berry and Bill Bunge, the best of John Adams and Slavoj Zizek.

The integrity of science is entirely compatible with radical politics: gonzo geography may very well be the only way we can unfuck the world. In a world of theologically conservative coercive capitalism, you can't follow the ten commandments of consumption without eventually getting to apocalypse and revelation.

In this world, science and positivism are downright radical, because they offer the possibility that there are some realities that we can know. There are some good things we can do. There are some good things we can build together. Science will not save us automatically. But good science and good politics are the best hope we have for building a better world. That world will be urban, and maybe, just maybe, this radical city starts right here in Chicago.

Like I said, this is my kind of town.