

NEW MACHINES

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On November 15, 2008, governor Arnold Schwarzenegger said of Southern California, “it looks like hell.” Fire surrounded all of Los Angeles. From the northwest, a vast haze of smoke rose into the sky from Montecito, the sun bathed orange with the ashes of mansions and art treasures. To the southeast, the freeways were shut down by an inferno in Orange County. And north of the San Fernando Valley, winds whipped fires into a maelstrom across the Newhall Pass, a burning thread of infrastructure connecting Los Angeles to water and power, causing rolling blackouts in parts of L.A. as the transmission lines roasted in flames.

But at LACMA, the smell of burning brush was a distant spice in the warm autumn breeze as tables marched around the courtyard, as musicians marched around lunch eaters, marching bands squeezed into elevators, children beeped gizmos, and guitarists fired off smoke machines over Wilshire.

Directly in the Path of the Fallout

It was a particularly odd coincidence to have blazing apocalypse threaten the infrastructure of Los Angeles on the day of the *Field Guide*, because LACMA’s ancestor originated with this infrastructure running over Newhall Pass. On November 6, 1913, the Los Angeles Museum of History, Science, and Art opened in Exposition Park. One day before, the Los Angeles Aqueduct began delivering water into the San Fernando Valley.¹

The museum was only built once this mechanism began threading through the desert, the foundations of a megalopolis dangling from a cascade of wires and pipes over the pass. More than an accident of history, the fact that the museum opened the day after the plumbing that made it possible is ripe with symbolic meaning, exposing an often unacknowledged relationship between the physical and cultural conduits of power buried beneath the foundations of our quotidian infrastructure.²

The World has Moved Up a Level

Museums are where artifacts go once they can be fixed into the narratives of cultural history. In a sense, they are where art goes to die, mausoleums for art.³ Which is not really a critique. Everything dies, and if art didn’t change and grow, it would be a fate worse than death—the uncanny horror of undead art. And living art is often at odds with the ongoing preservation of dead art’s fragile bones, so museums are rightfully protective of their artifacts, keeping them away from the loud, sticky, clumsy fumbling artists.

But the art of museums themselves is not in their artifacts—it is in the systems which preserve, catalog and interrelate the artifacts, the tubes and vents, stairways and courtyards, taxonomies and bureaucracies. At their core, museums are machines for demonstrating interconnectedness, a physical infrastructure for diagramming the threads of historical accident.

The Effort to Implement Ridiculously Impractical Ideas

In the case of LACMA, the museum materialized at the same time as a new network shape, a new form designed for apocalyptic survivability. In 1961 the Museum of History, Science and Art divided into two museums—the Los Angeles County Museum of History and Science and the Los Angeles County Museum of Art. This was the same year Paul Baran presented his ideas on distributed networks to “selected Air Force audiences.”⁴

While working as a researcher at the RAND corporation in the early 1960s, Baran wrote a series of reports describing a network architecture that would be able to survive a nuclear attack by routing packets of data around the post-apocalyptic ruins of the command-control system. Baran’s reports on distributed communication were collected into a book in 1964, the same year the Santa Monica freeway opened connecting downtown L.A. to the ocean.

The Way a Fungus Grows

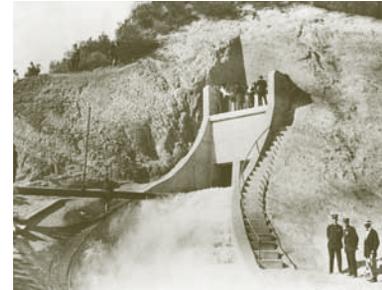
Distributed information networks and the integrated freeway system became a new mode of sprawl, a cityscape based on individually owned cars and a network based on individual packets of data, a lattice of routing and flow designed for disaster and survival, with semi-autonomous machines scurrying around the smoking craters of civilization’s remains.

In 1965 LACMA opened its Wilshire Boulevard⁵ campus, just coincidentally on a site dense with physical memory, located on top of ice age butterflies and mammoths, the bones of dire wolves and giant sloths poking through the parking garage.⁶ It’s easy to feel lost inside the galleries of the original LACMA buildings. The layout is asymmetrical,⁷ full of folds and crevices, the dark, depopulated, short-sighted spaces of a video game, a vast crenellated labyrinth designed to contain a spatial representation of cultural history, but with the uncanny feeling of being lost within a map.⁸

Exoskeletons of Cybernetic Bureaucracy

LACMA’s original architect, William Pereira, was the preeminent designer of Southern Californian exoskeletons of cybernetic bureaucracy.⁹ His signature concrete latticework served as a concretized totem of Cold War command-control structures, the caprice of an emergent network form. Along with various banks, airports, prisons, and physical plants, Pereira’s firms designed CBS Television City, the city of Irvine, the airports of Baghdad, Tehran, Orange Country, and Los Angeles, and the Transamerica Pyramid in San Francisco.

Transamerica Center, one of the first modern skyscrapers in Los Angeles, was designed by Pereira’s firm and finished in 1965—the same year as LACMA. The top floor of the main building is a fourteen-legged bug squatting on top of the structure, or perhaps it



(TOP) Opening of the gates of the first Los Angeles Aqueduct at the Newhall Pass, November 5, 1913.

(MIDDLE) 1973 freeway sign.

(BOTTOM) Pipeline of the Los Angeles Aqueduct.



(TOP) Aerial view of the Occidental Center (1968), later known as the Transamerica Center.

(MIDDLE) One Wilshire.

(BOTTOM) Rand Corporation Headquarters, Santa Monica, California.

is a computer chip with two missing pins.¹⁰ Today this building is the AT&T Center, a major node in global cybernetic capitalism.

Lost in a Map

One Wilshire (not designed by Pereira) was built a few blocks north of Transamerica Center, at the terminus of Wilshire Boulevard.¹¹ It was designed as a fancy office building for titans of industry and their servile minions. But over the ensuing decades, the humans were forced out as the entire building filled up with network infrastructure, the fancy offices replaced with floor to ceiling racks of cables, servers and switches.

It is still an apparent office building from the street, but—similar to the way a fungus grows to fill the guts of a tree—only the outer shape remains, and aside from a few caretakers of the equipment, there are no people left inside. Today, One Wilshire is one the most “connected” buildings on the planet, and by the square foot, among the most expensive real estate in the world.

Scurrying Around the Smoking Craters of Civilization’s Remains

In 1966—the year One Wilshire opened—LACMA began planning their Art and Technology project,¹² a focused partnership with the Military-Industrial-Entertainment complex¹³ which formed the substrate of Southern Californian society. LACMA contacted more than 250 corporations and technical organizations, and received about eighty artist proposals. Only about twenty of these “arranged marriages” ended up producing some kind of finished project, but the effort to implement ridiculously impractical ideas may have been even more interesting.

For example, Sam Francis wanted to create an elaborately programmed “strobe environment,” which he eventually decided should take place in the sky over all of Los Angeles.¹⁴ LACMA consulted with the physicist Richard Feynman on a scheme to fire a salvo of strobing rockets over Southern California, and Feynman even made calls to friends at NASA who estimated the cost at around a million dollars. It didn’t work out.¹⁵

The Uncanny Horror of Undead Art

As part of the Art and Technology project, John Chamberlain went to RAND as visiting artist in 1968.¹⁶ He suggested things like cutting off the phones for a day, dissolving the entire corporation, or having everyone spend the day outside taking pictures. His ideas were not well received. He decided to screen his new film, *The Secret Life of Hernando Cortez*. One reviewer offered this description:

Taylor Mead and Ultra Violet star in this independent production that features nudity and gymnastic sexual liaisons in a variety of places, including trees. Most likely this trashy

underground film is of no interest to those other than naked-flesh fanatics.¹⁷

Chamberlain planned to screen his film during the RAND lunch hour for five days. It lasted three. He then distributed an ambiguous questionnaire to the RAND corporation staff, who mostly used it as an opportunity to attack his film:

The world has moved up a level. They now call stag movies “ART.” GO TO HELL, MISTER!

You’re sick! While you were up in the Tree in your love scene, you should have STAYED

You have a beautiful sense of color and a warped, trashy idea of what beauty and talent is.¹⁸

Paul Baran probably received Chamberlain’s memos. Maybe he saw the film at lunch. Maybe he was even among the outraged reviewers. At the time, the film may have seemed like a goofy provocation and the reviews a reactionary backlash. But in retrospect, how poetically prescient to get into a flame war over Conquistador porn with the very engineers who were at that moment designing what would become the Internet.¹⁹

An Odd Coincidence

In an unintentionally revelatory remark, John Chamberlain described the staff at RAND as “very 1953... you know, like the girls wear too much underwear.”²⁰ He probably intended this as a dismissive comment on how culturally out-of-date he considered most of them. But his offhand remark referenced a deeply interwoven nexus of the Military-Industrial-Entertainment Complex, which includes the death of John Wayne.²¹

In 1953, a sequence of above-ground atomic tests called Operation Upshot-Knothole was performed at the Nevada Test Site—the famous images of a house blown apart by a nuclear explosion came from one of these tests. One “shot” in particular, codenamed “Harry,” released the greatest amount of fallout of any of the Nevada nuclear tests.²²

In a strange accident of history, the film *The Conqueror* was shot in St. George, Utah, in 1954, directly in the path of the fallout from Harry. The actors and crew knew they were rolling around in radioactive dust, but accepting government assurances, they assumed it was safe. Within a decade, at least half the people involved with the film developed cancer, and its director, Dick Powell, and several stars—including John Wayne—eventually died of cancer, most likely caused by the fallout.²³



(TOP) Ultra Violet and Taylor Mead in a still from the film, *The Secret Life of Fernando Cortez*.

(MIDDLE, BOTTOM) “Some of you have been inconvenienced by our test operations. At times some of you have been exposed to potential risk from flash, blast, or fall-out. You have accepted the inconvenience or the risk without fuss, without alarm, and without panic. Your cooperation has helped achieve an unusual record of safety.” From the pamphlet *Atomic Test Effects in the Nevada Test Site Region*, published by the United States Atomic Energy Commission in 1955.



(TOP) The tail section of U.S. Navy dirigible blown out of the sky on August 7, 1957 by the Plumbbob/Stokes test shot, visible in the background.

(BOTTOM) Leonard Bessom of the L.A. County Museum digs a prehistoric tusk, May 16, 1958.

The Sun Bathed Orange with the Ashes of Mansions and Art Treasures

The Machine Project Field Guide to LACMA was unintentionally post-apocalyptic.²⁴ Four decades after artists from LACMA entangled themselves with the corporations of the Military-Industrial-Entertainment complex, architectures of survivability and re-routable control have brought us to a point of strange vulnerability. Distributed communications are now a global weather system with their own patterns of rumor and paranoia, and the foundations of once-solid cultural institutions have dissolved in the storm. Encyclopedias effervesce into clouds and chat-rooms, museums effloresce into capstones and filigree, encyclopedic museums shard into guesswork and parties.

What was the field of this guide? Of course it was about leaving our little Echo Park storefront, going “out in the field,” and it was a study of the expanded field of LACMA, the architecture and artifacts, the frameworks woven through and beneath. But more importantly it is an examination of the field of connections between us, the coincidences and tangled relationships that intertwine our seemingly banal infrastructures into an unseen but powerful network of meaning.

We tried to examine the mechanism of the museum, to read the fossils of public space with a sidelong gaze,²⁵ examine the shape of something that has yet to be directly perceived, a pattern emerging first as noise, and perhaps over time becoming recognizable as new cultural infrastructures, new mythologies, new machines.

1. “Olé! Olé! Olé for Mullholand! / See the water fall / Hooray, hooray the sky is falling / Down on Bradbury’s mall.” Frank Black, *Teenager of the Year* (4AD/ Elektra, 1994). The term *olé* comes from an Arabic oath *الله* (w-*allah*)—“by Allah!”
2. *Apophenia* is the experience of seeing patterns in random or meaningless data, sensing meaningful connections where none exist. The term was coined in 1958 by Klaus Conrad, who described it as the “specific experience of an abnormal meaningfulness.” It’s a diagnosis, a schizophrenic symptom. But it can be turned around—where there seems to be a meaningful connection, a connection has actually been made. If enough of these nonce connections are interwoven, the patterns inscribed by this imaginal lacework can be as powerful as the freeways, the aqueducts. They can grow into concrete form, though often not as originally intended.
3. Watching workers chisel donor names into the marble at LACMA—could there be enough donors to keep skilled stoneworkers workers busy? But of course they also do gravestones.
4. www.rand.org/pubs/research_memoranda/RM3420/RM3420.preface.html
5. Henry Gaylord Wilshire was an outspoken socialist. *Really* outspoken. He left Los Angeles after being attacked by the police while delivering socialist speeches in a park in 1900. Later in life, after gaining and losing several fortunes, he returned to L.A. to capitalize on the fame of his increasingly central street. Wilshire also marketed a quackish medical device called the I-ON-A-CO, which consisted of an electrical wire strung through an inner tube and plugged in to a lamp. Patients would wear the electrified inner tube for a period of time, allegedly curing them of all manner of ills. The fact that Robert Kennedy was assassinated across the street from the hotel which still bears Wilshire’s name (The Gaylord) is just one of those things.
6. The La Brea Tar Pits are used as a metonym of forgetting, a place where things disappear into a cartoonish hole of black oblivion, like Flintstones animals toppling in with a fading howl. Of course the tar pits were never pits—they were (and often still are) seeps of tar that ooze out onto the ground in a broad pools. They are tar plateaus. And far from being zones of loss, they are the most dire and physical sites of memory, dense with compressed time. Diagrammatic dirt.
7. Although we were immediately interested in using the strange attic-like feeling of the upstairs galleries of the Ahmanson Building for the *Field Guide*, we didn’t fully realize they were an asymmetrical maze until we constructed a complete architectural model of the buildings.
8. Behind a revolving bookcase, you find a hidden room with a whole new interpretation of things filigreed on the walls. It happens. More often than you might think. You’d like to believe this whole history thing is nailed down, solid, that the walls are nonporous, that it’s an architecture you can count on, an honest architecture like a parking garage, its bones and its purpose out there in plain view. But you know how it goes. Contractors! So hard to find one you can count on over the course of a thousand year historiographic project. Things pile up. Things skip out. Things slide behind something else, slip into oblivion. Till you push on a hidden lever—so obvious now that you see it—and a wall moves aside, the world moves up a level, a new array of connections are revealed.

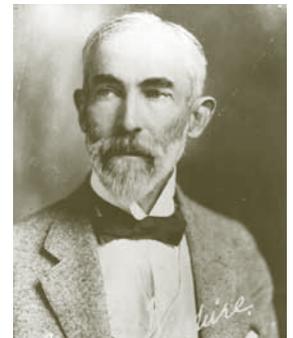
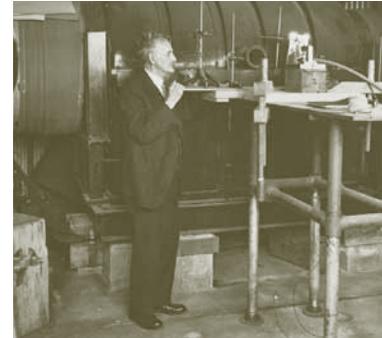


FIG. 10. A SKELTON OF MEGALOTHERIUM AMERICANUM.
From the Natural History Museum.

(TOP) William Mulholland as an old man (date unknown) in a lab containing equipment used to build the L.A. Aqueduct.

(MIDDLE) Henry Gaylord Wilshire, circa 1924.

(BOTTOM) Giant Ground Sloth. From *Extinct Monsters; a Popular Account of Some of the Larger Forms of Ancient Animal Life*, 1893.



(TOP) Predator drone at Riverside air show, 2007.

(MIDDLE) Soviet Union 6-kopek stamp commemorating Venera 3 (1966).

(BOTTOM) Close-up of John Wayne statue in front of the Flynt building in Beverly Hills.

9. William Pereira's firm designed the headquarters for General Atomics in San Diego, finished in 1958. His firm also designed buildings at Nellis Air Force Base in Nevada, finished in 1957. Half a century later, General Atomics would build the Predator unmanned drone aircraft, which was originally piloted by remote from Nellis Air Force Base. Just one of those things.
10. The Transamerica building was used for the external shots of the Encom building in the 1982 Disney film *Tron*, and in particular for the final scene in which the entire city is depicted as turning into the world of the programs, a city of woven light comprised entirely of networks and data.
11. Because it abuts the end of Wilshire Boulevard, the address of One Wilshire is actually on Olive Street. But in programming, counts always begin with zero, so from a cybernetic perspective, the first unit in the "Wilshire" series would come before the street address count of Wilshire actually began. Although this makes *perfect sense* given the building's current use as a carrier hotel, it's probably just an accident of history.
12. http://collectionsonline.lacma.org/mweb/archives/artandtechnology/at_home.asp
13. The term Military-Industrial-Entertainment complex was first used in *The X-Files*, Season 3, episode 20, "Jose Chung's *From Outer Space*," which aired on April 12, 1996.
14. For the *Field Guide*, LACMA's conservators opposed bringing flowers into the museum to recreate Sam Francis' abstract painting *Toward Disappearance*. After assurances that the flowers would come from florists, it all worked out.
15. In 1966, the Soviet space probe Venera 3 crashed into the surface of Venus—the first spacecraft to land on another planet's surface. However because it crashed, it was unable to send back any data, reducing the entire effort to an extravagant cultural gesture.
16. During the *Field Guide*, the pair of alien tourists (ing) were particularly enamored with the bright colors of Chamberlain's crushed car sculptures.
17. Dan Pavlides, All Movie Guide. www.allmovie.com/work/secret-life-of-hernando-cortez-141174
18. Pamela M. Lee, *Chronophobia: On Time in the Art of the 1960s* (Cambridge: MIT Press, 2004), p. 19.
19. www.rand.org/about/history/baran.html
20. *A Report on the Art and Technology Program of the Los Angeles County Museum of Art*, (Los Angeles: Los Angeles County Museum of Art, 1971) p. 72.
21. There's a monumental statue of John Wayne astride a horse on Wilshire Boulevard in Beverly Hills. It's in front of the former Great Western building (now the Flynt building), a dark glass oval tower designed by William Pereira. One of the only other monumental statues of John Wayne

in the Los Angeles area is at what is now called the John Wayne Airport. The original Eddie Martin Terminal (built 1967, now demolished) was designed by William Pereira's firm.

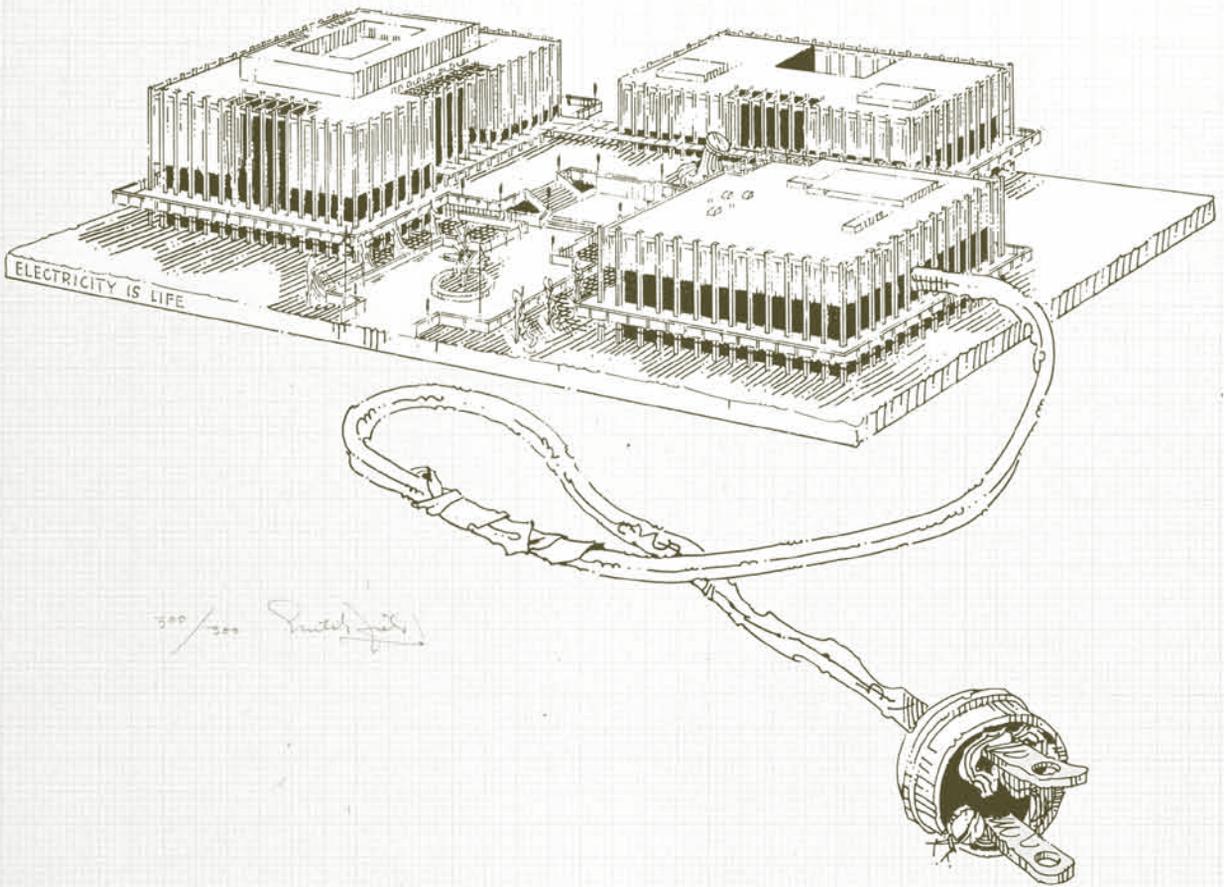
22. The 26-kiloton atomic bomb used in the "Harry" test was code named Hamlet. So technically, Hamlet killed John Wayne.
23. As producer of *The Conqueror*, Howard Hughes was said to have felt immensely guilty about the deaths of the cast. In his later, most deranged years, he watched the film over and over in his suite in Las Vegas.
24. On November 15, 2008, Rob Lowe said of Southern California, "it was just like Armageddon." www.nbclosangeles.com/news/entertainment/Rob-Lowe-It-Was-Just-Like-Armageddon.html
25. "For some of the deposits, she noted, they had to wear oxygen tanks with full gas masks because of unusually high levels of hydrogen sulfide escaping from the soil." <http://articles.latimes.com/2009/feb/18/science/sci-fossils18>



"Atomic pinup girl" in front of a mushroom cloud of the Dixie test shot of Operation Upshot-Knothole, April 6, 1953.

ART & TECHNOLOGY

LOS ANGELES COUNTY MUSEUM OF ART



LOS ANGELES COUNTY MUSEUM OF ART □ MAY 11- AUGUST 29, 1971

WILLIAM CRUTCHFIELD **ELECTRICITY IS LIFE**

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