

FROM THE CENTER OF THE
WORLD TO THE FINAL
FRONTIER

Flora's Grave ■ *Captain Jack in Plato's Cave* ■
Muybridge's Birthplace



F L O R A ' S G R A V E

I remember sitting in the darkness of movie theaters, a space that to a child seemed almost religious: so many people gathered together hushed to share the same thing, something more vivid than anything but life and more dramatic than ordinary life. In those days it usually seemed to be western movies: horses galloping across deserts and wagon trains circling up on prairies. Every so often I would look up to watch the beam of light through the darkness above instead of the story on the screen. The light flickered, broke into several beams that corresponded to the action on the screen, and made it clear that the movie wasn't only a story but a medium, a rolling stream of light in the darkness. Up above in the projection booth would have been a stream of celluloid rushing by at the rate of a foot a second, making one of those Western movies a trail of photographs miles long. The river of light and shadow and the trail of film had an origin, a source in those galloping horses and western landscapes, and it came back to that place, though the place was transformed. My city is Muybridge's city, and the places he haunted during his crucial years I often walk, and at night I see in the windows I pass by that same strange flickering light, this time the blue light of television in dim rooms.

When I went looking for Muybridge, I found him everywhere. A lot of artists have paid explicit homage to him, and he is visible in their work as a source of both specific images and general ideas. He is there in equestrian drawings by Edgar Degas; in photographs and paintings by Thomas Eakins; in many paintings of his motion-study figures by the British artist Francis Bacon; in the photographic work *Muybridge II* by the minimalist Sol LeWitt, who for more than four decades has been exploring serial imagery, a subject initially inspired by the motion studies; in Philip Glass's opera *The Photographer*, which dramatizes incidents from Muybridge's life

and turns the motion studies into choreography; in the San Francisco panorama of Mark Klett, made by rephotographing the earlier artist's vista, and in Klett's subsequent panoramas showing what he learned there; in the *Vegetable Locomotion* series of photographs that are Hollis Frampton's and Marion Faller's fond parodies of the motion studies. Motion-study sequences are a standard mode of depicting an event now, from the famous images of the first atomic bomb detonating to champion golfers demonstrating their swing in sports magazines. Web sites and advertisements have of late appropriated and paid homage to the motion studies, and the science-fiction movie *The Matrix* modeled its fight sequences after the stop-start action of the motion studies, using multiple cameras to achieve what is now a standard special-effects technique.

But if Muybridge was at the root, the zero point, the dawn of moving pictures, then he is everywhere as the ghost at the end of those trails of photographs rushing by, beamed across the world as television, dreamed across the world as the shared content of contemporary life, present not only as specific images but as several media. Muybridge is often called the "father" of something, the father of motion pictures usually, and Jane and Leland Stanford said the children of California would become their children. Here parentage works as a metaphor, for children become things their parents cannot imagine and can at best claim partial credit for, and yet they go into the unknown carrying the indelible traces of their parentage. A history streams forward from the events of the 1870s, one that sometimes seems like a relay race, a torch-passing, a game of telephone: something is transmitted, but it changes with every transmission, every carrier. The places themselves seem to tell the story best.

Flora Muybridge is buried behind the United Artists Multiplex Cinema in Colma, California. In many California coastal Indian theologies, souls travel west over the Pacific after death, and west of nineteenth-century San Francisco was a quartet of large cemeteries, a city of the dead. Flora was among the San Franciscans who were buried there from the 1860s until the turn of the twentieth century, when the expanding city decided there was no longer room for its past and banned burials. A few decades later, city workers began to exhume the bodies so that the graveyards, which had grown wild and weedy, could be recycled into real estate. The dead were sent a dozen or so miles south to Colma, the cemetery city that is now also a city of big-box stores on the San Francisco peninsula, and their tomb-

stones were recycled as landfill and building material. The exact location of Flora's remains is inked in an old ledger book at the Greenlawn Cemetery, but she is buried with hundreds of others in a scruffy field behind United Artists marked only by a single marble monument rising from the weeds. Surrounded by chain-link fence, the plot is bordered on its other sides by the better-tended graves of those who were actually buried there when they died, by a hulking Home Depot store, and by a road across which chain stores and fast-food restaurants stand. San Francisco had done what it could to erase its Ohlone Indian past, to wipe out some of its hills and bays, to cannibalize itself as building succeeded building even before the 1906 earthquake and fire took out most of the central city. It has been a transient place whose identity keeps shifting, though it always kept alive a certain kind of freedom, a certain kind of experimentalism, the freedom and the greed of the gold rush and the people who kept coming here to become something else, a freedom that sometimes seems to depend on the ability to erase and reinscribe meaning at will.

In 1872 the writer Helen Hunt Jackson came to California, where she admired little but the landscape and Muybridge's photographs of it. Later that decade she heard some Omaha and Ponca Indians from the plains on a speaking tour talk about the injustice they had experienced, and after years of dabbling and scepticism she found her calling. In 1881 she wrote a scathing report on Indian policy that failed to rock the world. Georgia O'Keeffe once said she painted her flowers big so that people would look at them, and Jackson rewrote her history melodramatically so that people would read it. She returned to California, and she set *Ramona*, her 1884 novel of racial injustice, in the southern part of the state, where the Spanish influence still could be seen in ruined missions and vast ranchos. She built *Ramona* out of vivid evocations of real places and accounts of real brutalities by Yankees against the native population. Smitten as so many would be by the romantic ruin of the Franciscan missions, she left out their domineering intolerance and focused on the way the romance of Ramona and Alessandro is blighted by the greedy cruelty of the Yankees: the couple loses successive homes and a child, and finally Alessandro loses his mind. The book became a huge best-seller, though it seemed to lead not to reform but to nostalgia, for in its celebration of Spanish California it gave the southern part of the state the identity it had sought as it grew into an empire. *Ramona* became southern California's false memory, a backward

glance touched with a sunset glow that softened the contrary and contrived details.

In 1905, a year after Murybridge died, two decades after Jackson published her best-seller, an actor who called himself Lawrence Griffith came to Los Angeles playing Alessandro in a stage version of *Ramona*, and there he too fell in love with the ruinous missions and romantic atmosphere. His acting career was never a distinguished one, and not long after his tour he stooped to acting in films at the Edison Studios in the Bronx, in those early days when stage actors regarded the movies as shameful. Movies were then short, simple, and silent flickers at the Nickelodeon, sought out mostly by the poor: Edison had gone into motion pictures, and though he was uninterested in the artistic possibilities and kept a tight hold on the budgets, his former chief cameraman, Edwin S. Porter, had already revolutionized the medium with *The Great Train Robbery*, the movie that told a more complex story with more sophisticated techniques of representing time and simultaneous events. The young Griffith moved from acting to directing, since it was both more lucrative and more anonymous, and he directed hundreds of films for the Biograph Company in New York in those days when movies were made in a day or a few days and New York and Chicago were the capitals of moviemaking.

But in the winter of 1910 Griffith brought his troupe of about thirty actors and technicians to southern California. A few other companies had already tried California, which had three great advantages: One was the golden light that never seemed to run out, day after day, month after month. Another was the landscape, or rather the landscapes. Within a few hours of the city of Los Angeles were deserts, grasslands, forests, mountains, seascides, orange groves, and farms, as well as architecture of every imaginable type: southern California looked like everywhere and anywhere for the movies. A third was proximity to Mexico and distance from the Motion Pictures Patent Company, which attempted to control the entire industry with patents on cameras, control of film stock, and detectives and thugs to enforce their powers. In a pinch, a film company could cross the border, and southern California became the capital of independent moviemaking. Cheap land helped, and so did, less directly, the lack of an established society. In New York the movies were theater's illegitimate child; in California they became Hollywood, an aristocracy of glamour that conquered the world.

By the time he settled in California, the director was using his real

name, D. W. Griffith, and he was making the new medium of film supple, subtle, and evocative as it had never been before. A technical and formal prodigy, he had new ideas about lighting, about close-ups and distance shots, about staging and special effects, and especially about editing—intercutting, cutting to details or pulling away, dissolves and fadeouts. He almost singlehandedly established the vocabulary of filmmaking. But all this was in the service of storytelling, and he told stories visually as no one ever had before. The first film he shot in California was *The Thread of Destiny*, a romantic tale about an orphan girl raised at one of the missions that had captivated him years before. The second to last on that first excursion to the West was *Ramona*, with Mary Pickford in the title role.

The relay race became a boomerang: the Sephardic Jew David Belasco was the great impresario of the San Francisco theater from the 1860s until his migration to New York in the 1890s, where he became a national figure, but his protégé Cecil B. De Mille came out to California in 1913 and began making westerns and overwrought epics that served cinema as Belasco had served theater. "Hollywood," the minor place that became shorthand for the global phenomenon of American movies, was hatched. Almost from the beginning, from Porter, from Griffith, from De Mille, the movies were obsessed with the West, that fiction of authenticity, that fantasy of gritty reality. The fluidity of identity that had always been a hallmark of the American West finally came home to roost and to feather its nest in Hollywood, for the medium of cinema encouraged it as nothing else had. The West was both the location of an industry and the subject of the fantasies it distributed around the world, fantasies about cowboys and pure heroines, Indian raids and charging cavalry, an improved national past as *Ramona* was a regional past. Hollywood was the capital of an industry as Chicago was of meatpacking, Detroit of automobiles, New York of clothes, but the product was imagination, dreams, fantasies. Later, the two world wars sapped the strength of the European film industry and gave Hollywood the economic preeminence it still holds today.

In 1907 an estimated two million people a day attended the nickelodeons that had sprung up by the thousand in cities and towns, sitting in the darkness where they were transported to the somewhere else that within a decade would almost always be southern California in one guise or another. Later, movie houses became more luxurious and larger; they were called palaces, dream palaces, dreamland, movieland; they were island

republics in which people sat alone together in the dark and let the visions enter them, became possessed by movies, lived somewhere they could never otherwise visit: the past, the future, places more glamorous, dramatic, dangerous than everyday life. The whole world dwelt in Hollywood, and Hollywood was the whole world and no place at all. D. W. Griffith was able to re-create the Civil War in southern California for his epochal 1915 masterpiece, *Birth of a Nation*, and then to build Babylon on Sunset Boulevard for *Intolerance*, his attempt to exculpate himself from the rank racism of *Birth of a Nation*, a racism that justified itself with a fantastic rewriting of history. Babylon crumbled on that thoroughfare for years.

"Hollywood is afflicted with total amnesia," one of its writers declared, "a complete group blackout and loss of recall when it comes to anything that happened more than twenty-four hours ago." And the movies themselves made fictions out of history, made up a South and a West that never existed, specialized at various junctures in westerns that turned a place into a genre that could be made anywhere, that prompted the sense of self of generations of American men, even politicians, that even generated a president who remembered as reality things that had only happened in movies. And from movies women learned how to look, how to love, how important looking and loving were. A lot of the early movies were lost forever when they were recycled for the silver nitrate in the film stock or left to decay, for the nitrate film was flammable and prone to disintegration. The people too were invented and erased quickly, stars burned out, directors were eclipsed, scandals ended careers, everyone changed their names so that the Ellis Island richness of the place was smoothed over into something reeking of the *Mayflower*. But the movies themselves made and remade history. *Birth of a Nation* fostered a resurgence of the Klan and its racial terrorism. And Hollywood movies became a huge industry themselves, grossing \$8 billion in the second year of the new millennium. (That the actual locale named Hollywood has, in Mike Davis's words, "gone from picturesque diaphragm to hyperviolent slum" in recent decades means only that this place name still corresponds to a region and an industry, but not to an actual place.)

In 1919 Griffith joined forces with Hollywood's biggest stars, Mary Pickford, Douglas Fairbanks, and Charlie Chaplin, to form an independent distribution company, United Artists. Mary Pickford was the first movie star, and the stars became hybrid beings, an amalgam of the characters they

played and the carefully controlled public images they maintained. Pickford, "America's Sweetheart" with her sausage curls, was really the smart businesswoman Gladys Smith; Chaplin was an English vaudeville comic who had, while touring Los Angeles, been recruited to movies by Mack Sennett, another early director there; Fairbanks, who reigned with Pickford as Hollywood's first royalty, had started out as Douglas E. Ulman. "The lunatics have taken charge of the asylum," said one film executive in a condemnation so lively it later became the refrain of a pop song, but United Artists thrived. A railroad administrator, Oscar Price, became the company's first president, and UA produced some of Hollywood's best movies even after the Transamerica Corporation bought it in 1967, the year UA released the trio of spaghetti westerns that made Clint Eastwood a major star.

Transamerica, a financial services corporation, was headquartered in San Francisco, and the year after it acquired United Artists, it began constructing, on the site where the Monkey Block had been, the pyramidal Transamerica Building, the most recognizable landmark on the downtown city skyline. The Monkey Block was the first four-story building west of the Mississippi when it was built in 1852. As a financial center it dominated Montgomery Street for years and had been part of Muirbridge's commercial milieu, but by the twentieth century it had become artists' studios before it was demolished. The site was reborn as a financial center: business and bohemia have always switched off like that in San Francisco. United Artists still thrives as a subsidiary of MGM, and the Transamerica Building now belongs to a Dutch conglomerate. Flora was originally buried near where the big Coronet single-screen movie theater now stands on Geary Boulevard. Had she lived seventy years instead of twenty-four, she could have seen the slightly seedy thespian milieu she celebrated in her photograph album and loved through Larkyns hybridize with her husband's innovations into a multimillion-dollar industry that ruled the world, or at least its dreams and desires, the industry that plays nightly next door to her unmarked grave.

Somewhere in Colma not far from Flora are the remains of Wyatt Earp, who was alternately a lawman and outlaw in his Arizona youth, the youth that Henry Fonda, Ronald Reagan, James Garner, and Kevin Costner romanticized in the movies. Earp himself lived long enough to become a movie consultant after he married a San Francisco actress, for there was no real gap between the Wild West and its cinematic representation. Movies

had to come back west, because no place else had the fluidity and freedom they needed to evolve, to dominate, to become that light that flickers everywhere like a new celestial body, the starlight of Hollywood. One western is still waiting to be made: the movie about an Englishman who became a rugged outdoorsman, an explorer, a murderer, an inventor, and the fastest photographer in the West, the western movie that would have been about the genesis of both medium and genre in the strangely malleable moments of the 1870s.

In the 1970s and 1980s, European and Eastern cultural theorists—Umberto Eco, Jean Baudrillard, Fredric Jameson—invaded California, which they described as the capital of postmodernism, as the place where the future had arrived. Had they spent as much time reading the region's history as they did staring out car windows and watching TV, they would have found that theme parks and drive-by shootings, rogue cops and actor politicians, amnesia and fluidly changing identities, were nothing new. They were western heritage. The West was a place where latent possibilities emerged like mutations, where Muggeridge became Muybridge and Stanford became a grand thief and patron and Norton an emperor and Griffith a genius and Pickford America's Sweetheart, the place where the dead lie unmarked behind the movie theater.

CAPTAIN JACK IN PLATO'S CAVE

One brisk spring day, I went to the Lava Beds and was surprised that nothing I'd read evoked the terrain around it, too open for forest though it was scattered with pines, too lush for desert, too sparse for grassland, a meeting of many regions, many forces. The Lava Beds, the starkly stony area within this terrain, became Lava Beds National Monument in 1925; Captain Jack was right that nobody would want the land for practical purposes. The Park Service sells a walking-tour map of the Lava Beds that lets viewers wind through the labyrinth and the events of 1873 there according to the numbers. I was a modern tourist that day, I drove a car that let me traverse great distances in comfort and solitude and seventy miles an hour, I carried recorded music to, as we say, pass the time, a laptop computer to sort out and record my thoughts, I had the electronic money of a credit card to take care of whatever needs arose. On my way to the Lava Beds, I looked at Schonchin Ridge and the site where Captain Jack killed General Canby,

and I walked the long loop through the Lava Beds trying to imagine the war and the strangeness of being stranded in the center of your world, within sight of the lake, the creation story, and the snowy cone of Mount Shasta. I tried to imagine a vanished sense of time and place that must have made this region utterly different for the Modocs who fought to stay here. More profound even than the changes in the landscape are the changes in our relation to it.

Tule Lake has been mostly drained for rice fields, and what remains of it is a rectilinear body of water that doesn't suggest much of this place from which the creator first hauled mud to make the world. The center of the world that used to be a peninsula jutting into the water now stands in a dry agricultural landscape, up a road that passes the cylindrical metal silos of the Newlands Grain Collective, a new fortress of agribusiness facing off the old lava fortress. The outcropping with its petroglyphs and swallows seems lost in its new surroundings, for its meaning came from a context that has been erased, but the petroglyphs still stand enigmatic and evocative above the dust that used to be water. I saw the Lava Beds, I saw the center of the world, I looked at my watch and saw that there was a lot of daylight left. Looking at my atlas, I saw that the Tule Lake Internment Camp was just down the road and decided to go. There was something irresistibly perplexing about these landmarks lined up in a row: battlefield, birthplace, prison, the first for a local war, the last for a world war. I turned off the main highway and drove past the small hamlet looking for a ghost town like the camps I'd visited before, but the road rolled by under my wheels, and there was nothing but agricultural land out the window. Coming back, I realized I hadn't accepted the evidence of my eyes: the high ranch gate and barbed wire around the hamlet, which was a portion of the camp.

The prison built to hold the Japanese Americans who wouldn't swear loyalty to the United States during the Second World War was still inhabited, though it was debatable what kind of prisoners were within. More than a dozen of the original wooden barracks were still there in the same grid formation, painted pink, green, brown, augmented by trailers, wrecked cars, and toys in the dust. Someone had put up barbed wire around the petroglyphs, but no one had taken down the barbed wire around the camp. I drove up and down, frightened that this place I had expected to be part of the past was in the present, wondering what poverty keeps a prison without guards inhabited, seeing no sign of life that weekday afternoon until I

noticed two little girls in bright clothes, a blond one in pink, a brown-haired one in red, in front of a doorway. The back road was named Captain Jack, as though the history of Japanese internment and modern poverty were truly linked to the last stand of the Modocs, and when I turned off Captain Jack to drive back up one of the side roads, I saw a figure holding a broom come out of the house where the girls were playing in the dust. Up close she looked to be in her midteens but also looked pregnant under her big T-shirt. I stopped my car and asked her to confirm that I was in Tule Lake Internment Camp. It was obvious that it was, but I was dumb-founded. And I couldn't ask her what it's like to live in a prison, so I asked her what it was like living in this place. "It's nice," she said wanly, her small features still blank. The little girls waved as I left. Later, the photographer Masumi Hayashi, who was born in another of these camps and has made panoramic portraits of all of them, told me that a former prisoner from Tule Lake told her that Shasta's resemblance to Japan's celebrated Mount Fuji was all that made the place tolerable. What had been the center of the Modoc world had been the bitter edge of it for the internees, but what it was for the current inhabitants I could not guess.

I drove away stunned and stopped a few miles up the road at a Forest Service office. I wanted someone to tell me how the lake could have vanished, how the prison could be inhabited, what this landscape meant. The garrulous older woman behind the desk was glad to see me, but she didn't want to talk about what I wanted to talk about. There was a monument to the camp back there, but I'd missed it, she said, and she didn't seem to think there was anything peculiar about the fully inhabited but unguarded historic prison. What she really wanted to talk about was the fact that Lieutenant Sulu in *Star Trek* was born there and came back with a group to visit a few years ago. She hadn't actually seen him, she volunteered, as though that was too much to expect, he didn't come into the office, but he came to the camp. And that was what the place meant to her. It didn't seem shameful that he—or rather the actor George Takei, who was actually born in East L.A.—spent years of his childhood there, just dazzling that a celebrity was linked to the site. For the woman in the Forest Service, it seemed, Lieutenant Sulu was more real than the people down the road.

It took exactly a century, 1867 to 1967, to go from Myybridge's return to California as a photographer to *Star Trek's* launch as a television series. You could call it the journey from Captain Jack's cave to Plato's cave. Captain

Jack's cave is a real place. It was the center of my exploration of the landscape of Modoc County, an angled pit of lava in which the Modoc leader also known as Kientpoos, his two wives, and his children lived during the siege of 1873. It could not have been a comfortable home, though it was warmer and dryer than what lay outside, and it seems fitting that Jack's attachment to the earth ended with him living in the earth itself, a womb, a grave, an ancient exhalation of molten stone become home. In Myybridge's photographs it looks like the mouth or the eye of the land, a pit full of dark awareness.

Plato's allegory of the cave has often been used to describe cinema and television. "Imagine an underground chamber like a cave, with a long entrance open to the daylight and as wide as the cave. In this chamber are men who have been prisoners there since they were children," it begins. "Some way off, behind and higher up, a fire is burning, and between the fire and the prisoners and above them runs a road in front of which a curtain-wall has been built, like the screen at puppet shows." The prisoners of the cave see nothing of what takes place outside the cave, know nothing of the light, color, and dimensionality of the outside world. They see shadows on a screen, and Socrates, who is Plato's own shadow-self, asks, "Would they not assume that the shadows they saw were the real things?" Plato assumes that when they, like Dorothy in *The Wizard of Oz*, see what is behind the curtain, they will grow disillusioned with it, find representation limited as sensory experience and as truth.

He was wrong, for watchers in the cave of representation are free to come and go, and they keep coming back; they fill the multiplexes and keep in business the dozens of television stations beaming from satellites and the thousands of video-rental stores around the country. The Modocs had stories, stories that sprang from the land and brought them back to it, but the Ghost Dance they danced to defeat time always seems cinematic to me, a movie run backward, the dead revived. They wanted to escape from time, but only so they could stay in place. Plato objected to the cave dwellers because they relied on the false testimony of the senses, but life in the cave seems disturbing now because it is disembodied, disconnected, a realm of two-dimensional shadows in the dark. Rather than being too reliant on the world of the senses, it is not reliant enough. Not absolute truth—after all, there is the Weather Channel—but engagement is missing. Enterprise, that catchword of Victorian capitalism, has become a space-

ship. If the premise of the *Star Trek* series resembles anything, it resembles the geological surveys of the nineteenth century, which were military missions seeking to know rather than to fight, missions with scientists, information gatherers, and faith in the rationality of their culture, missions that understood that knowledge is power. *Star Trek* takes place on a "final frontier" that links the show to the frontier of the American West, though the otherness of Native and Chinese westerners is supplied by genuine extraterrestrials. Earth has been left far behind, and time itself has become almost optional, for there is instantaneous spatial travel—"beam me up, Scotty"—of individual bodies and "warp speed" travel through outermost space and even, in one of the *Star Trek* movies, travel back in time. The darkness of outer space suggests that Plato's dark cave now fills the universe, that the annihilation of time and space is complete, both in the premise of the show and in the desires of the watchers sitting at home watching electrons and image fragments turn into a transporting story.

The western movies themselves were always anchored in a sense of place and a passion for it, a passion that was more the filmmakers' than the protagonists, as the camera panned riders across deserts, zoomed in on houses swallowed up in the prairie, followed herds across rivers. The desire for the real lives on, if nowhere else, in representations in which Web sites and cell phones are marketed with pictures of rock climbers and shepherds with their flocks. Another way to think of Plato's cave is as a condition in which people live entirely in representation and interior space, in a universe constructed by humans, ultimately inside the imaginations of those who came before, an operation that suggests nesting Russian dolls and a certain crampedness of the imagination after a few generations. Myu-bridge's work teetered between these two conditions, between the noplacement of the whited-out Palo Alto racetrack and the black-walled Philadelphia studio and the brilliant description of place in all his other work, from Guatemala to Alaska. He gave up place for the laboratory of motion, and it is from this relinquishment that he produced the bare bones of cinema. We are still teetering too, between Captain Jack's cave and Plato's cave.

MUYBRIDGE'S BIRTHPLACE

The house in which Muybridge was born and raised also hosted his parents' grain and coal business, a holdover from the preindustrial order of

things when work and home were seldom separate. One of his biographers who went to visit it in 1971 found that the building on High Street still sold "sea-borne house coal." But when I went there at the beginning of the twenty-first century, it was a computer store. That is to say, Muybridge's English birthplace is now an outpost of Silicon Valley, where silicon chips and the cheap, compact computers they make possible were conceived, where the acceleration and dematerialization of everyday life took a huge leap forward, the Silicon Valley that sprang, so to speak, from the loins of Stanford University, which itself came out of those eight thousand acres and the Stanfords' bereavement and their vision of what California could be and what the world should be. Muybridge's birthplace so far away is now a shell stuffed with California, and for that matter this book was written on a computer created by one set of Stanford University spinoffs headquartered in that place, printed out on a printer manufactured by another, and researched in part via a search engine made by a third. If the world is Hollywood and Hollywood is the world in terms of the pervasive presence of its entertainment in the global imagination, then in another even more pervasive sense, the world is Silicon Valley, the source of much of the electronics and communications technology that have changed the pace, expectations, and practices of everyday life.

This time the transmissions seem less like a game of telephone or a relay race than a list of begets, a great chain of patriarchs spreading out into the world, the Abrahams who are fathers of multitudes of programmers, engineers, hackers, Web site designers, and on and on, an industry of millions, and like the Biblical begets it is a list of fathers and sons, unless you count Jane Stanford in as the Eye to Stanford's technocratic Adam in the oak-shaded Eden of the Palo Alto estate. For Stanford hired Jordan, and Jordan hired Lewis Terman (the eugenicist who created the Stanford-Binet test to quantify intelligence), and Terman's son Frederick took a degree in chemistry at Stanford, studied further in the East, but came back to run a laboratory in the new field of radio communications on campus, the field that became electronics. And though this Terman did not beget David Packard or William Hewlett, he beget Hewlett-Packard when he brought his two former students back to Palo Alto to start their own electronics firm. Walt Disney, a young entertainment entrepreneur who'd worked with United Artists, placed the first order with Hewlett-Packard, for audio oscillators to use on the animated film *Fantasia*, and soon after they were servic-

ing the war industry. The products of Silicon Valley would be used by the public, by the entertainment industry, and by the military, making a sort of military-industrial-entertainment complex evident in the location of Lockheed and other high-technology war makers in the valley as well as the ever more technologically sophisticated special effects of Hollywood and those new hybrid genres such as video games (and war American-style is a lot like video games, while Top Gun, a ride named after a movie about military technology, is one of the main attractions in the Silicon Valley amusement park Paramount's Great America). Silicon Valley makes entertainment and war seem like one enterprise designed to control populations via the channeling of electrons through circuits, however divergent the details of their deployment.

The university and commercial technology kept feeding each other. In 1951, the Stanford Industrial Park opened, and Hewlett-Packard and a branch of Eastman Kodak moved in (and when French prime minister Charles de Gaulle visited California a decade later, he asked to see two sites: Disneyland and Stanford Research Park). Hewlett-Packard's founders gave more than \$300 million to Stanford University, much of it plowed back into engineering programs that generated yet more technical prodigies who founded many more companies in the place that in 1971 became known as Silicon Valley. From this university at the center of this valley have come further generations of entrepreneurial technocrats who struck it stunningly rich, among them former Stanford professor Jim Clark of Silicon Valley Graphics and Netscape and former Stanford students Jerry Yang and David Filo who started Yahoo! to navigate the burgeoning chaos of the Internet. Sometime in the 1990s, the computer itself as a tool stopped being the unit of the annihilation of time and space. It was replaced by the networks that computers link up to, a wired world that extended the globalization of the railroad and the instantaneity of the telegraph into every first-world home, into portable devices, into the everywhere that more and more becomes nowhere.

It's a remarkable landscape, an explosion of Stanford and Muynbridge's ambitions far beyond their comprehension. Only a barn remains of the stable and racetrack complex where Muynbridge made the motion studies, but Stock Farm Road is now a side road onto campus from Sand Hill Road, and Sand Hill Road, which winds through a classic California landscape of rolling hills and oaks, has two notable features. On the south side

of this road that runs past campus from the back freeway, Highway 280, is the Stanford Linear Accelerator, a sort of white-painted tunnel three miles long through which electrons and positrons are hurtled close to the speed of light for research into the structure of matter and the forces between these elemental particles. This strange sight has stood there since 1962, the white tube of the accelerator like a racetrack for basic matter. In the early 1970s the founders of Apple Computer emerged from a club of computer amateurs who met regularly in the accelerator's auditorium.

The other side of Sand Hill Road looks far more familiar, though what happens there is at least as strange. On this north side is a long series of nondescript office buildings with mansard roofs and a lot of glass, created when the manager of Stanford University's land developments decided to strike out on his own. Around the time that the place was named Silicon Valley, the first venture-capital offices went in, and this side of Sand Hill Road is the capital of technologically focused venture capitalism, the men who bankroll the acceleration of everyday life and new technologies, the Montgomery Block of its day. The film critic David Denby ventured afield to investigate the new technologies that were being bankrolled by Sand Hill's venture capitalists and concluded, "The revolution will end by changing the nature of time itself, thereby altering the way we live, work, seek pleasure, and gather together. We shall achieve simultaneity, ending the gap between desire and fulfillment; we shall no longer *wait*." Denby does not embrace this future in which those who are not hooked up to the accelerating technologies become irrelevant and points out that the utopian visions of the valley are undermined by how unlivable it is, with its manic work schedules, gridlocked traffic, astronomical housing costs, pervasive social problems. The premise of the efficiency and convenience of every technology is that it will save time, though as Stanford himself remarked, "if you could limit man's wants it might be called 'labor saving,' but as there are no limits to his wants, the machinery really increases the power of production." That production is now dematerialized too. Because machines streamline the production of material goods from apples to automobiles, more and more first-world labor is concentrated in the production and management of information, the virtual substance running through all those satellites and cables. This is the promise behind the windows of Muynbridge's birthplace, with their displays of software and hardware.

The Modoc center of the world was the center of a world a few hundred

miles across, and just as the world once had an infinite number of local times, so it had countless centers—what we mean by a world rather than the world. Greenwich Time, the prime meridian down the river from Muylbridge's birthplace, was the first attempt to make a world into the whole earth, though it was an abstruse effort noticed mostly by astronomers, nautical navigators, and the makers of schedules. California is the first center of the world that is coextensive with the planet, but it is the center of displacement, distraction, and a kind of transcendental disembodiment, as well as endless images of bodies, from Hollywood and even from the capital of the porn industry a few dozen miles north in the San Fernando Valley (and the huge online porn market). Which means that most of us do not live at the center of the world but look toward it, a center that, as Pascal once remarked, is everywhere and nowhere.

Now when I walk in downtown San Francisco, where Muylbridge walked and photographed, it sometimes seems that all the tourists are videotaping and all the locals are talking on cell phones. That is to say, the tourists will only experience the place later: the locals have entered a disembodied private space in public, a space they share with those who are not there and that shuts out those who are. The stores that line the streets are, with every passing year, more and more likely to be outlets of international chains, so that this place becomes more and more indistinguishable from countless others. The pace at which people walk is unchanged, but signs, lights, music, machines, all turn the street into a dazzle of distractions. At the end of the twentieth century, Silicon Valley invaded San Francisco. South Park, where the Muylbridges lived early in their marriage and Flora met Harry Larkyns, was nicknamed Multimedia Gulch as it changed from a quiet Filipino community to a buzzing, upscale center of networking, dot-com offices, and of the magazine *Wired*, which preaches the gospel of salvation through gadgets and accelerations. The whole South of Market area where Muylbridge had long resided became the global capital of this new industry of online information and commerce, financed more often than not by the venture capitalists down the peninsula. But the venture capitalists there had financed other technologies too.

Mission Bay at the south end of South of Market was a real bay that had in the nineteenth century become a landfill and on the cusp of the twentieth the Southern Pacific train yard. At the end of the twentieth century ground was broken, ground that had been water, to build a huge biotech-

nology facility, for Stanford and Silicon Valley and Venture Capital Row had involved themselves with the microcosm of genes as well as the macrocosm of communications networks. The Carellus Corporation, a spinoff of Southern Pacific, is the real estate agency managing the transformation. It also represents SP's transformation from the nineteenth-century transmission of people and materials to the present-day transmission and manipulation of the microcosmic, of electrons and genes. The Central Pacific and the Southern Pacific were always about reach, about extending technology into new arenas to gain wealth and power, and genetic engineering extends the human reach into the genetic code of all life. The multimedia explosion, like Silicon Valley, was compared again and again to the gold rush, for the frenzy, the rush into the unknown, the uncertainty with which the daring could become billionaires or flops, the generation of huge new supplies of wealth and a brave new world to spend it in. Sometimes those who made the comparison remembered the dark side of the gold rush, the extermination of the Indians and the evisceration of the motherlode landscape, the greed and the stampedes. A bust followed the boom, but the changes are here to stay. The world seems run from Silicon Valley now, run by engineers whose decisions affect all of us, those engineers whose constant question is never why, but only how.

Not all the stories are so unsettling, though. Mark Hopkins's Nob Hill house, from which Muylbridge photographed his great 360-degree panorama, was given by his heir to the San Francisco Art Association, which had been headquartered on Pine Street when Muylbridge was a member and sometimes a resident. (Up there where the Big Four once dwelt in splendor, the site of Hopkins's house is now the Mark Hopkins Hotel, next to the Stanford Arms Hotel, the Huntington Intercontinental Hotel, and the Crocker Parking Garage.) Out of the Hopkins-housed Art Association grew two institutions, the San Francisco Museum of Modern Art and the San Francisco Art Institute. The two institutions, one the second museum of modern art and the other for a while one of the preeminent art schools in the country, did much to foster a continuing cultural life on the West Coast. San Francisco was the center of several significant art movements from the 1940s on, but it never stopped being the capital of photography: the pictorialist movement that was soft-focus both literally and intellectually only really came to an end with the founding of the f64 group in San Francisco in 1932 by Imogen Cunningham, Edward Weston, Ansel Adams,

and a few others, and Adams taught for years at the Art Institute. By then it was housed not on Nob but on Russian Hill, the other high point of San Francisco's central saddleback, a few blocks from where Philo T. Farnsworth invented television with the help of a loan from Crocker Bank, another Big Four spinoff.

In the 1970s the Art Institute's president found, behind the couch in the school library, a number of Muybridge's Yosemite mammoth plates, doubtless a legacy of the Hopkins era, and he sold them to buy the school's first video cameras for what became the influential Performance/Video department. Many students emerged from that department to make a mark, but two pieces by the professors who have been there almost from the beginning stick in my mind: Douglas Hall's *The Terrible Uncertainty of the Thing Described*, which with a Tesla coil throwing bolts of lightning and several video monitors replicates the disturbing sublimity of violent weather, and Paul Kos's *Chartres Bleu*, in which a tall stack of video monitors in the approximate form of a window in that Gothic cathedral display in accelerated time the changing light pouring through the stained glass, a piece that is like Hall's both ironic and iconic about the old world behind us, the pace and power of celestial forces we feel more seldom now. It is a study of the motion of the sun akin in some way to the panorama's study of the movement of light across the city, a test of whether the luminous spirituality of another age can come to us through electronic media. It suggests too that the technologies that surround us can be yoked to the service of the slow, the contemplative, the beautiful, as well as to the usual jumble of advertisement and information; it is the window one would want in Plato's Cave.

Muybridge pursued the transformation of bodies and places into representations, representations that in some ways fed that unslaked desire for landscape, geography, beauty, embodiment, and the life of the senses, but Stanford, who hammered the Golden Spike, pursued the annihilation of time and space without mercy, without misgivings, without deference to what might be lost, and this might be the difference between Hollywood and Silicon Valley. Hollywood would become the center of the world of movies, while Silicon Valley is the center of the world of information technology, and in the way these two institutions dominate the world one can say California is the center of the contemporary world, but of a world in which time and space have been annihilated, a world that is in some ob-

scure way so disembodied, dislocated, and dematerialized that the very idea of a center is perplexing.

Muybridge and Stanford died far too soon to have any inking of the high-speed world of electronic communication and information processing, but their own pursuits and desires prefigured it and laid some of the groundwork. This too is inscribed in the landscape. Stanford pursued speed in its most evident nineteenth-century forms: railroads and racehorses. Muybridge refined speed from a material to a visual phenomenon with the most high-speed photographs of his time. His birthplace, the house that is now a computer store, once dealt in grain grown locally and brought in on horse-drawn carts; his grandfather in the same town had moved at a predictable pace through a world in which human beings and their voices and knowledge were no faster than the animals and water and wind that surrounded them. There are infinite ways to measure what has been gained and what has been lost, and only one clear thing: the world is utterly changed.