5. Burning Down Vesuvius: Late Baroque Gizmos[1] and Fiery Illusions, 1750–1780

In 1750, Mount Vesuvius was built in Rome as ephemeral architecture, then erupted as fireworks.[2] In 1755, another miracle of wonder, another *meraviglia*, was built at the Piazza Farnese in Rome. Live animals were sculpturally placed atop a false tower for the annual celebration of Chinea, honoring the feudal due of a white horse given each year by the King of Naples to the Vatican.[3]

Finally in 1776, to remove what was seen as an increasingly uneasy alliance, the Chinea (another pale feudal remnant) was abolished[4] by Ferdinand IV of Naples. One of the last signs of papal dominion, it vanished during the fiscal crisis that sparked a revolt in Naples—on the year of Jubilee, at the ascent of Pope Pius VI to the Vatican throne.

In 1730, to honor the birth of the French Dauphin, a copy of the Pyrenees is set up along the Seine in Paris. Two "volcanoes" rise eighty feet high, with the goddess Iris straddling between them.[5] A false dawn rises behind her, then a rainbow. The effect was "easier to imagine than to describe."[6] To describe them, "it is necessary to paint;" but for *Spectacle,* it is necessary to paint with actions."[7]

In 1746, Benjamin Franklin conducts experiments with electricity, using the newly developed Leyden jar (a primitive battery). For many, these experiments equaled his political achievements. His place in the history of special effects was assured. He helped initiate the craze for electrical illusion, particularly in Paris.[8] When he arrived at the French court in 1776, he was welcomed as the American Apollo.

In 1755, the Comédie Française produces Voltaire's oriental drama, *The Orphan of China*, with so many accurate costumes and settings, the audience was forced to move back many rows. A bizarre and exaggerated interest in naturalism had taken hold of Parisian scenic design, particularly *le gout chinois*.[9] For decades, Voltaire remains a fierce supporter of special effects in the theater.[10]

In 1724, an artificial ruin is built near Audley's Castle in Ireland.[11] It is one of the first *folies* during a century filled with special effects as landscape: miniature kingdoms, castles, zoos, grottoes with shells, castellated rubble. They often were no more than an intimate facade, a home for ducks; but from a distance, they and the estate looked gigantic. The late Baroque follies made the garden an Artifice. Near the Chateau at Chantilly "plastic cutouts of trees" were added next to a real forest, "to shut out reality."[12]

Baroque special effects reach a heyday after 1750. Their markets expand as far as China, even Japan.[13] And yet, Baroque theatrical effects clearly "looked" extremely retro—very ornate, laden with creaky feudal hierarchical references. They were a glance backward, to the courtly seventeenth century. Perhaps that is why they were singularly ignored by the High Enlightenment, barely a word, a few plates on automata[14] in Diderot's *Encyclopédie*, even less written about theatrical illusion by Rousseau, Kant, Hume, except as crafts behind the stage, not much as theatrical illusion. Only La Mettrie[15] and Franklin[16] refer to special effects very much at all.

There are exceptions. In England, Dr. Johnson often visited "scientific" theatricals, then ignored them in his vast correspondence; as did Boswell. Jonathan Swift lampoons theatrical effects in his chapter on the flying island of Laputa. Hogarth caricatures "false perspective." Generally, not until early Romanticism do we find a literature about special effects once again—the Baroque as decay. After 1780, "the moment of wonder" turns a bit acrid, in stories about necromancers and the Gothic. Baroque effects suddenly look grizzled, corrupted by waning feudalism and superstitious pageantry.

The seventeenth century had been quite different, of course. Descartes, Hobbes, Leibniz, Galileo, Newton, even Locke felt compelled to discuss "Wonderment" and Artifice. But much of that had disappeared by 1750. Even theories of Magick Science and the Neoplatonic no longer required special effects (Artifice). Platonic "chora" tended to point more toward mathematics and *techné*, to nature as machine.

On the other hand, special effects shifted ideologically. In pamphlets and advertisements, particularly in England, the language of feudal culture was pruned away, to serve a more exclusively bourgeois audience, in popular recreations away from court. Special effects join an expanding entertainment culture in growing cities like Paris, London, Rome—at theaters along business streets, at fairs, even at brothels, in the home, at *spectacles pyriques*, "radiant tableaux combining fireworks, dance and music."[17]

They eventually parallel the bourgeois aspect of the Salon Arts as well, pieties about family and commerce; but mostly after 1789, if not 1780. In French "scenic" wallpaper, updated during the Empire by the Dufour Company, a sprawl of panels emphasize "sensibility" more than *quadratura*, more about bourgeois seduction than courtly power; about cultural relativism, an anthropological" impulse. But mostly, they suggested bourgeois imperialism: noble savages posed like oranges ready for harvest.

From 1750 to 1780, Baroque effects were considered holdovers from an old marriage. Imagine two species of Enlightenment, rival cousins from the same great-grandfather. By 1750, special effects were the annoying old-fashioned cousin, *the Baroque style of Enlightenment*. They were old parlor "magick" upgraded to the Enlightenment science, a cabinet of curiosities stuck inside the scientific "cyclopedia." Most of all, Baroque effects were a retro modernity, a 1650 version of the Enlightenment, now quaintly upgraded for 1750. Part of the Gothic revival we still find in Raspé's *Adventures of Baron Munchhausen* (1785), or even Shelley's *Frankenstein* (1818); and finally, like something alive but forgotten in the basement of Rotwang's robot in Metropolis. I even find essence of Baroque Magick upgraded on TV, as secret science on the X-Files alien abductions, haunted ancient technologies. But more on that later on.

For now, I fill a room with illusions from this period, 1750 to 1780. I line up my files, mostly about special effects from England, France, and Italy after 1740: fireworks; ephemeral architecture; automata; puppetry; early panoramas; early arcades; scientific and optical toys; theatrical machines; grottoes; Swift, Sterne, Hogarth, Voltaire, Diderot, Lessing, Johnson's gloomy reactions to special effects; the gothic architectural *vedute*; the phantasmagoria of Boullé; "picturesque" gardens designed by Sir John Van Brugh and others;[18] the growth of opera; early consumerist entertainments; wallpaper—the shift toward ornament away from scripted spaces. I also have stacks on the Americas, mostly colonial Mexico, and the fledgling U.S. But if this were a detective story I would be studying a dime that no one wanted to notice.

Special effects leave almost no hint of impending revolutions, neither industrial nor political—even after 1789, except perhaps the marching-band pageants for Reason in revolutionary Paris, and the somber carnivals for Napoleon. They are confabulated reminders of a fact very much alive in 2003, that storm warnings are not always that clearly observed. Institutional supports may wither, but entertainment goes on. Special effects are a history of how to ignore the weather.

Automata: Machines that Breathe

> Life is but a motion of limbs, the beginning … in some principal part within … (Why not say then) that all *automata* (engines that move by springs and wheels as doth a watch) have an artificial life? For what is the heart, but a spring; and the nerves, but so many strings; and the joints, but so many wheels, giving motion to the whole body, such as was intended by the Artificer (God).
> —Thomas Hobbes, 1651[19]

The automaton is the most widely discussed carryover from the Baroque after 1750. Earlier, Leibniz provided the classic summary. He tried to unify what Descartes saw as an innate split between the natural and Artifice.[20] For Leibniz, each living thing is animated through both a "natural" (as in the body) and an "incorporeal" automaton.[21] When these two mesh their gears, the "divine" machine is set in motion. This machine individuates each person, a kind of theoretical genome. It also contains all (the monad). He likens this process to the brass wheel buried inside an artificial automaton. It seems so abstracted, yet in a monadic sense that wheel turns to generate movement.[22] Thus, even the artificial machine contains the germ of the sentient and the universal.

However, from 1720 onward, that vital force grows even more amazingly artificial. Beginning essentially with master designers like Vaucanson or the Droz family (father and son), hundreds of improved clockwork creatures were featured across Europe. They moved strangely, even seemed to breathe. Vaucanson's famous duck could swallow, digest, then take a decorous shit. Droz's most famous automata played music or wrote words. In Paris, (1847), the magician Robert Houdin featured Antonio Diavolo, a startling trapeze automaton operated like a puppet by pistons and pull-cords offstage.

In Vienna, Friedrich von Knauss built a mechanical theater with three speaking heads, a musical android that played six melodies; and four writing automata. In his dock The Horsemen (circa 1750), metal curtains open to reveal "five levels" of "Baroque colonnades and emblems in stone-work."[23] Inside, two armies of metal horsemen face off. They "joust" while the upper level of the clock "plays martial music."[24]

Throughout western Europe, Baroque toys became a sub-industry, dominated by clockmakers. A toy figure would be attached ingeniously to a hidden metal column. This column then turned a sequence of pins and notched cams. It triggered the levers that timed the flutter of birds, bears, dancers,

courtiers, like animated hood ornaments. The most renowned "toys" tended to be humanlike: mechanical flute and piano players; or still lifes as sculptural machines—severed metal hands that wrote words. The most famous of all, of course, was Von Kempelen's mechanical chess player (1769) that went on to defeat Benjamin Franklin (1783), even Napoleon (1809),[25] and Charles Babbage (1819).

Was this a transition from Artifice (Baroque) to Natural Harmony (Classicism)? Or a continuation of the discourse on Artifice itself? These were not "thinking" machines. They were parodies of the courtier. They were mobile and fragile, not at all instruments of state; they were parlor tricks, symptoms of a world dying off slowly, in style, breathing artificially.

Clearly Diderot brushes on these questions in his *Conversation with D'Alembert* (1769).[26] Is a statue a sentient thing, D'Alembert asks? Can flesh be carved out of stone? Similarly, Diderot wonders if statues that move make us think about our five senses. What animates life, if an animal is an automaton, as Descartes has said? To touch a statue that looks like flesh is a special effect. It sends a slight chill through us. We think of our skeleton, of our body as simply a machine, or carved in stone.[27]

Late Baroque effects are indeed Cartesian. They emphasize the boundary between bodies and sculpture, then between stone and machinery. Descartes was fascinated by the hydraulic special effects at the Royal grotto in the suburb of Saint-Germain en Laye.[28] The sculpture seemed to speak and wonder out loud. Sound, texture, and sight became his boundaries for discovering the human automaton; also the boundaries of "wonder," or the marvelous (a term that finds its way finally to the Surrealists, very much as that automatism that is human and sculpture /machine). Special effects were the bridge between Enlightenment materialism and Romantic introversion, a bridge over water, and peopled by sculpture. Even seemingly hard-nosed materialists like La Mettrie or Condillac lead easily toward the Cartesian Baroque as Romanticism in *Frankenstein*, *The Sandman*, or the tales of Poe. The machine has a body; the body cannot decide where its humanity begins. That is essentially what Diderot is suggesting.

A few species of the machine as body:

Baroque Automaton	Clockwork that imitates life; "magical" workings inside, actually cams around a shaft.
Romantic Imaginary Automaton	Perverse (even erotic) machine that resembles human flesh, but is not human (Hoffmann, Mary Shelley).
Industrial Toy	The nineteenth-century mass-produced automaton, generally for children; repetitive motion; simple bodies from molds; also the mechanized doll and puppet; and digitized toys (in the nineties: Tameguchi, Dogz, bots).
Imaginary Robot	1920s; industrial golem who cannot think, only work; in American movies since the fifties, robots cheerfully serve as butlers and nannies.
Industrial Robot	"Reprogrammable, multifunctional manipulator de-signed to move materials, parts, tools or specialized devices through programmed action."[29] Used in factories; no body, only housing, essentially an environment.
Digital Control and Feedback System[30]	Monitors people's movements and decisions by using face recognition, miniaturized video cameras, chips in cell phones; becomes a prosthetic space that people wear like a membrane, at work, when shopping.
Imaginary Cyborg	Loyal robot, but emotionally divided; digital workings inside, with bionic flesh outside; memory industrially made, but often unstable; feedback as thought.

Cybernanthrope[31]	A term from philosopher-sociologist Henri Lefebvre. People who are cybernanthropes wish they were machines, and thus lose much of their humanity.
Android[32]	A machine as humanoid. In science fiction, androids can mix unnoticed among humans inside the city.
Cellular Automata	Computer processors arranged in a lattice, following a program of transition rules, to reenact problems in physics, biol-ogy, astronomy.
Avatar	A digital body that can be assumed by a player in a game, and then animated; "your body double in cyberspace."[33]
Walking Avatar in real space	People absorbed by cell phone or GPS satellite; their body leaves real space while it walks.
Smart rooms and houses	Invisible butlers in real space: inputs using cameras, microphones, sensors, to recognize and interpret human movements; the body joins the vapor of inputs.

With so many "species of robot" to choose from, it is hardly a surprise that since 1990, literature on eighteenth-century automata has grown considerably.[34] But as I review histories of automata, the same sources tend to reappear, mostly from Romantics. Those were, after all, the touchstones in their day, how the automaton was remembered during the nineteenth century, first through interpretations by Goethe, Kleist, Hoffmann, onward to Poe, Baudelaire. And then, into the twentieth century: the automaton rediscovered as *Ballet Mechanique*, as psychotropic allegory, mostly after 1920; in critiques by Lacan, de Man, the Surrealists, Bellmer, Duchamp.[35]

Thus, automata are understood today not that differently than in 1830. In that sense, memory has stood still. Automata were late Baroque gizmos as Enlightenment entertainments, frolicsome proof of La Mettrie's Man a Machine (1748), where machines instead of men walk the earth. Automata were the products of disappearing petit bourgeois craftsmen, manufacturing before the factory. They were interim creatures, atavisms and hauntings from the Baroque during the Enlightenment, fetishes that help explain the transition between 1750 and 1840.

On the other hand, these clockwork gizmos also reinforced what remained of Baroque alliances. Automata were prized at the princely courts, as if a new

"benevolent" feudality were about to begin. They were designed very much as gaudy tokens for the noblesse, as nostalgia for the etiquette of seventeenth-century magic, like fireworks and lavish docks, like ornamental time. To be honest, that leaves no consistent path for these toys inside the standard Enlightenment historiography.[36] Automata do not hint fiercely at factory industrialization or the French Revolution to come, or the scientific revolution, for that matter. They proved scientific method by debasing it, turning it into cheap tricks for the wealthy. For theater you find a stronger case. Certain disaster plays clearly prophesy something like the Revolution. In some Parisian plays by 1770, audiences watch palaces go up in flames, like a preview of the French Revolution to come. For a good bourgeois seat, you pay twenty-four sou; for standing room among the mob, you pay only two sou.[37]

By contrast, these gizmos from 1760 simply enhanced the clock mechanisms of 1660, a continuity of sorts: hairlike brass cads that choreographed childlike bodies, or brought forth astrological bellringers from inside cathedral clocks. Unlike the paintings of David, Chardin, Gainsborough, even Fuseli, and others, the automaton copied an aristocratic style—very ornate, laden with Baroque hierarchical references. They were an ironic look backward; and yet, perversely enough—at the same time—highly advanced, clearly bourgeois, brilliantly engineered, preindustrial. The automaton undoubtedly helped pioneer the fascination for industrial machines—but not by designers' intent. Perhaps more intentionally, it helped establish the route that entertainers would take in the birth of the entertainment economy after 1790. The tech of automata was sneaking in-to more than just vaudeville acts.

The *Encyclopédie* features Vaucanson's aristocratic duck as both entertainment and industry in part because Vaucanson also does practical bourgeois work: he designs "automatic" silk looms. Swift sends Baroque special effects aloft, but as the dreamy island of Laputa. Gizmos seemed a fading remnant from 1650, before Newton—more like Cyrano on the moon—before the commercialism of the eighteenth century, before sugar and coffee become popular at coffeehouses. As late as 1780, Baroque toys were hawked mostly for the bourgeois who wanted a touch of the aristo, as if for Baron Munchhausen. The fact that these gizmos could be easily adapted to bourgeois markets, even to factories, was barely noted, even by Diderot.

The Ephemeral Late Baroque

There was clearly a late Baroque for special effects. It has been generally ignored by histories written after the French Revolution. It was more like a bourgeois Baroque. From 1740 to 1780, during an era of growing confidence among the middle classes, the message of scripted spaces was ideologically shifting. While they still were identified with the prince, they enter the applied arts more than ever: as Rococo interiors after 1710; as entertainments for wealthy merchants and city gentry.

But as outdoor pageantry Baroque scripted spaces are on the increase after 1730. They still speak for the prince much as they had a century earlier. Not so for interiors: the fashion for gaudy palaces slows down. Thus the ephemeral replaces the permanent scripted space—more *folies*, fireworks. The aesthetic of ephemera transforms much of the discourse around special effects; it shifts away from Neoplatonism—away from Artifice and Natural Magick.

Flaming Kisses

However, this aesthetic shift was highly ambivalent, does not classify easily. The "later" version of Baroque discourse does parallel what took place in the salon arts, but much more slowly, and unevenly. Special effects do respond to bourgeois theories on the sublime, but only later on, after 1780, and less consistently. Gradually, they feature bourgeois seduction more than princely power, no longer heralding feudality and hierarchy. That courtly fashion, so essential to Baroque special effects in 1650, all but vanishes. But the "fragrance" lingers. Baroque gizmos are still marketed as aristocratic toys, even while many of them are remodeled as bourgeois entertainment.

We could strengthen the case for a bourgeois Baroque in special effects. I could refer to Kant's theories on space, his rejection of Neoplatonism, his desire to integrate Enlightenment science with waning feudal metaphysics. For 1740, the Rococo interior might fit as well—how the scripted space devolves into a more seductive and sublimated *fête galante*. We could recruit Watteau, Fragonard; but just as easily recruit the history of wallpaper, and wind up with something quite different.

However, my files point toward an equivocal story for 1740–1780: it is neither the death nor rebirth of the Baroque. That is why I call it a world parallel to the Enlightenment. Baroque special effects are an ancestor to the En-

lightenment, but already a species apart. The architectural tricks (trompe l'oeil, anamorphosis, immersion) remain staunchly aristocratic. They mostly elude the Enlightenment after 1740, while the gizmos still repeat much of the language of the clockwork Baroque. I could make the historical elements almost fit, but I would be constructing an erasure. For example, from 1740 to 1780 in France, neither the philosophes nor Rococo salon artists lean much on special effects. Artifice was transitioning.

After 1780, the transition is much clearer. In place of (Baroque) "theatricality," as in painting, a turn toward optical absorption more than (princely) immersion. Scientific gimmickry takes over. By 1790, a broad shift in special effects can be seen, but still in early stages. Special-effects manuals borrow directly from the Enlightenment, but also from the occult wizardry. The authors have read Diderot and Voltaire, but also love "Popish" Natural Magick. This is a golden age for popular hoaxes; and fake cures for everything. Nor does post 1790 mass culture simply favor the lower classes. It cheerfully sells to both high and low; from modiste salons to pubs irradiated by the smell of cock fights. Bourgeois "wonder" is always like that, a guileless blur of the snob and the slob in the same breath. Hollywood celebrity would be much the same, from the mid-twenties on.

In 1792, an *Enyclopedia of Amusements in the Sciences, Mathematics and Physics*[38] appears in Paris. It clearly was assembled with Diderot's Encyclopédie in mind, even down to the accompanying volume of plates. The Natural Magick of the seventeenth century has been replaced, none of the Neoplatonic verbiage or courtly jargon. But the mood is decidedly escapist—not a hint of the Revolution anywhere. When I turn to "electricity," the tone shifts toward old Baroque jargon—about the marvels of electricity" "the spectacle that astonishes."[39] In lavish detail, it teaches you more than fifty parlor tricks using electricity. My favorite is "the flaming kiss" (*baiser enflammé*): Place a "delicate" jolt of electricity on your lady's lips. It will send little shockwaves of delight into her. Frankly, the technique suggests a man's "hobby". The article also shows you how to keep electricity going in your glass rod (*étincelle piquant*). That way, you can blow up a luminous bottle.[40] Or explode an animal.[41] Make a bouquet with magnetized shavings.[42] Set your hair on end.[43] Or dance objects in midair. With parlor tricks, we are not looking squarely at the Enlightenment, nor the Revolution. Instead Baroque illusionism is turning toward mass entertainment, entering popular recreations. It joins an early entertainment culture that suits the growth of cities like Paris, London, Rome.

Afterward: Overlaps After 1780

> The imitator goes on exaggerating greatness into monstrosity, wonders into impossibilities.
> —Gotthold Lessing[44]

The Baroque scripted space is not a form of *ornamentation*, not as ornament was understood by 1790. *Ornament* did not suggest a navigation through perspective awry. It meant patterning, without pauses and accelerators—an interior nocturne. Thus, throughout the nineteenth century, ornament is the steady erasure of space, until at last with Cubism, the space disappears altogether. Ornament is an engine for abstraction, even for Art Nouveau. When Adolph Loos heaps damnation on ornament, as "the sadism of the eighteenth century,"[45] he is simply emptying his spaces of the compression brought on by abstracted, ornamental, anti-architectural logic. He frees his architecture from ornament, to make it a blank slate for new scripted spaces. He replaces the ornamental store window, the facade, with something like the scripted, immersive department store.

During the same period, after 1780 (even earlier), the memory of Baroque special effects already increasingly signifies decay, from Edmund Burke on the sublime as terror and pathos (1757), to Nietzsche defining the Baroque as "the ugly sublime," to Wölfflin seeing the Baroque as the decay of the Renaissance.[46] Even Walter Benjamin's resurrection of the Baroque is filled with nocturne and decay, a seventeenth-century birth of tragedy as the birth of the modern.

In English Gothic novels, this obsession with Baroque decay often becomes the stirring, special-effects climax, when Baroque magic resolves all the "horrid foreboding, like a nightmare of the heart" (1820).[47] In Goethe's *Faust II* (Act 1), the devil brings "the [Baroque] fire and flames trick"[48] to entice the Emperor. In *Frankenstein*, special effects (both Baroque and panoramic) are reenacted by the creature, as he awakens to his first sight of the moon:[49]

> Soon a gentle light stole over the heavens and gave me a sensation of pleasure. I started up and beheld a radiant form rise from the trees. I gazed with a kind of wonder. It moved slowly, but it enlightened my path … On all sides various scents saluted me; the only object that I could distinguish was the bright moon, and I fixed my eyes on that with great pleasure.

In England, museums by clockmakers valorize the end of Baroque special effects. John Joseph Merlin's Mechanical Museum fascinates the young Charles Babbage, who later purchases a dancing automaton, the Silver Lady, and repairs it while he works on the Difference Engine.[50] James Cox's museum of automatons is visited by Mary Shelley weeks before beginning Frankenstein.

Architect John Soane turns his house into a Baroque reliquary and museum (mostly 1792–1806). He adds trompe l'oeil tents to two rooms, turns his vast library into a cabinet of curiosity, builds a Gothic monk's parlor and a Baroque "Pendentive" dome as deeply layered in miniature as anything Pozzo could have imagined. In the century that follows Soane's work, many others will design "visionary" special-effects houses as well—homages to the lost Baroque, most notably King Ludwig of Bavaria, whose schizotropic castles, 1868–1886 (Neuschwanstein, Linderhof, Falkenstein) obsessed Walt Disney.

But Soane lived so much nearer to the source. He met Piranesi. He was addicted to comprehensive research. He had a magnificently subtle feel for lighting and new building materials. His use of theatrical and spatial effects was encyclopedic. Then he gathered all of these illusions under one principle, like his tricks with mirrors into a single mirror. "He passionately admired Gothic *effects*, and tried to bring them within the capacity of his style. Gothic effects and Picturesque effects were to him synonymous."[51] Soane comes the closest to inventing a new grammar for these fading Gothic Baroque phantasms.

Finally (very final), the fiercest corrosive of Baroque special effects was commerce itself. Throughout the eighteenth century, new materials for trompe l'oeil in the home developed, mostly to make the copies easier and more profitable. Better wallpaper copied drapery, which in turn was matched by better stenciling that copied wallpaper. Papier-mâché (or "chew'd paper")[52] could be molded into any ornament, any sculptural inlay. Intarsia, the Renaissance art of trompe l'oeil wood inlay and mosaic, now could be copied with cheaper materials. Floorcloths could simulate fine carpets. Stamped tin looked like hammered brass or copper ceilings. The nineteenth century would improve on cheaper, more durable copies; and the twentieth century became the age of Formica.

So, while the Baroque looked decayed after 1780, the neoclassical often looked degenerated—and fetishistic. By citing fetishistic (kitsch) copies of Baroque special effects, Veblen's[53] theories of conspicuous consumption trace the jump toward mass-produced modes of the copy. The commodity fetish began its marriage to special effects with shrunken-down toys for the home. In Adorno's words, the copy began "the domination of abstract equivalence

through self-made concretion."[54] Better to deceive oneself with "illusions of the concrete … than abandon the hope that clings to it." Small replicas for the home project "opaque human relations onto the world of things." They are miniatured copies for children to play parents, and hot tubs as Versailles for their parents. One process leads to both of these: when kitsch replaces Baroque special effects in the home—during the early nineteenth century, at the beginnings of the industrialization of desire.

Wallpapering Polynesia

In 1806, Joseph Dufour produces wallpaper that copies drapery. Then stencils are designed by competitors that copy Dufour. Also in 1806, the Dufour company makes a splash at a trade show with their *papiers panoramiques* (also called "scenic papers" or "paper without ends"). Panoramas spanning 360 degrees were already very much the rage. Dufour responds with theatrical illusions featuring light similar to work by Carmontelle and de Louterbourg (and the tapestries of Bucher and Fragonard). But most of all, he was reacting to the popularity of Rousseau as anthropologist. Dufour filled his rather stiff but stately panoramic wallpaper with noble and ignoble savages in exotic locales, from Polynesia to the Incan Peru to the Bosporus, to scenes from *The Odyssey*; or Chateaubriand's frontier America in *Paul and Virginie* (1820), "a magical and new effect in wallpaper."[55] Possibly their greatest triumph was the *Sauvages de la Mer Pacifiques*, a *panoramique* in twenty vertical panels[56] about Captain Cook's voyages to Polynesia, even including various murders, and Cook's death along the way, and unspoiled Polynesian harmonies under the shadow of a volcano.[57] These wallpapers were something of a culmination, Rousseauism set in cheerful theatrical lighting. Their harmonious panels, with trees at the edge to make installation easier, echo the popularized picturesque. Be in harmony with nature while dining by the garden. See "savages" act out racist myths, especially of Captain Cook murdered by cannibals. Savor the fragrant effects of neo-imperialism.

Steadily, with each decade, more special effects as wallpaper are made for the home. By 1850, Philipon, the publisher of Daumier and Doré's caricatures—but also the son of a Lyon wallpaper manufacturer—would reprint their cartoons as wallpaper. They were a bonus for subscribers, a jittery wall of gags and poses, like animation frozen—awaiting the arrival of cinema.

Also around 1780, the circus big tent became another reliquary of sorts for Baroque special effects, now that Baroque illusion no longer served the prince. After 1777, along with the first panoramas (1787) and the first balloon flight (1783), a retired cavalryman, Philip Astley, developed the first "modern" circus in London. At first, Astley's was only a summer theater. His premier acts were mostly equestrian, mixed with short burlesques. There were human pyramids, an apiarist who rode with a swarm of bees on his face, a rider who could leap through the body of a hackney coach suspended twelve feet in the air.[58]

By 1823, Astley's had grown into the largest theater in London. The irony in all this is that Astley's also specialized in melodramas, that new form of opera where the characters did not sing. Both worlds coexisted on the program—Baroque equestrian fantasias, *harlequinades* (clowns), Baroque music hall, and industrial (anti-Baroque) melodrama that had evolved out of Gothics. The line, between the two remained thin, and still equivocal.

Potemkin Villages

Lev Manovich, in his groundbreaking study *The Language of New Media*, begins his "archaeology of film compositing" (the basis of movie special effects) in Russia at the end of the eighteenth century. Catherine the Great's first minister and lover, Potemkin, had a series of fake villages built, with pretty facades facing the road—to give Catherine the illusion, when her carriage passed, that her peasants lived well. Manovich compares Potemkin villages to nineteenth-century panoramas, and then to "a much more effective technology for creating fake realities—cinema."[59]

The decline of Baroque illusion had taken on a perversity similar to the remnants of feudalism that were about to crumble throughout Europe.[60] Marie Antoinette's architect Mique builds imaginary feudal poverty to play in—a false, weathered peasant house at Versailles, with all the conveniences of royalty inside.

Potemkin villages were a new mode of special effects as power, as the erasure of memory in the late eighteenth century. But the principle evolves beyond one's wildest imagination. All movie sets are Potemkin villages before they are shot as film. And all wars since 1989 have become Potemkin villages when they appear on global media. And yet, Baroque special effects already pointed toward this problem by 1650, that Baroque illusion served uneasy alliances to cover up the decay and misery of the kingdom.

Most of all, the decay of the Baroque marked a turn inward, toward interiors at the home, and toward what came to be called the unconscious. With each generation, from the Romantics forward, the subject becomes more internalized, much the way the automaton and the puppet are joined in fantasies that become darker, more about the passages between life and death, the flesh and the stone. Trompe l'oeil becomes a body lost between the organic and the inorganic, between decay and never being born. Internally, we are a puppet's body, Heinrich von Kleist suggests (1810), where "a paradise is locked and bolted, and the cherubim stand behind us. We have to go on and make the journey round the world to see if it is open somewhere at the back."[61]

By 1816, that journey has entered a new stage of curiosities. In London, at Piccadilly's Egyptian Hall, stuffed rain forests compete with Napoleon's carriage from Waterloo. At Baker Street, Madame Tussaud's waxworks deliver the great and the ghastly, like prisoners of war.