A CULTURAL HISTORY OF THE SENSES
IN THE AGE OF EMPIRE

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Sensory Media: The World Without and the World Within

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The nineteenth century created unprecedented opportunities for heightened sensory engagement with an array of new sights, sounds, smells, and tactile experiences in cities across Europe, Asia, and the United States. Metropolitan hubs were melting pots where an influx of peoples from the hinterlands contributed to the visual and aural cacophony of exotic bodies and strange tongues. Cities throbbed as architectural, technological, social, and cultural changes melded the old with the new, the familiar with the foreign. Aside from improvements to infrastructure such as public utilities and mass transportation, the city was transformed by the invention of the new media technologies of photography, telegraphy, the telephone, phonograph, and motion picture. These technologies ushered in new modes of perception, sensation, and somatic engagement with the world: they were part of an entire lexicon of material and perceptual recalibrations that citizens made in the modern world; as media historian Lisa Gitelman argues in *Always Already New*, "media mudd[ied] the map," affecting business, culture, the arts, social, and interpersonal relationships (Gitelman 2008: 4–5). Whether viewed as the scientific instruments of society or as engendering new chronotypes of human behavior, new media certainly did matter, and on the subject of the senses, they mattered a great deal.

The nineteenth century witnessed what Richard Menke called an emergent "culture of information" that "both reflected and inspired the creation of new media" (Menke 2008: 5). As technological, social, and cultural formations that harnessed the magical power of electricity (in all except photography), new media were persistently associated with paranormal or spiritual phenomena, part and parcel of a utopian technophilia that shaped much of the discourse on nineteenth-century electronic media (Sconce 2000: 22). *Where* one encountered a new media form in the late nineteenth century also mattered a great deal in terms of power relations, fantasies of omnipotence, and questions of human agency. Photography, the phonograph, and motion pictures found homes in both public spaces such as world's fairs, scientific meetings, and other public forums, and in the private realm of the parlor, where the rhythms of domestic life personalized the experience. The telegraph made communication across these spaces instantaneous and its social benefits went beyond the diffusion of knowledge to include "collective amity, even the prevention of crime" (Menke 2008: 92). According to the 1873 *Handbook of the Electric Telegraph*, "crime, to a great extent, must cease, from the impossibility of commission without detection" (*Handbook* 1873: v, cited in Menke 2008: 92). The telegraph's annihilation of time and space assisted law enforcement in crime detection, since information about suspects could circulate with greater speed, thus aiding capture of the criminal.

This chapter explores how new media affected the balance of the senses, how they privileged structures of feeling and topoi of sensory pleasure in two distinct, yet surprisingly similar, public spheres: the field of ethnographic representation and the penitentiary. The senses were engaged in fundamentally different, yet paradoxically proximate, ways in each of these spaces, which attempted to control and reform bodies with varying degrees of success. As sites presenting native peoples in diorama life groups (mannequins posed in illusionistic settings behind glass) and living villages in world's fairs and expositions or prisoners incarcerated in the penitentiary, the museum and prison were reformative spaces, governed by paternalistic ideals, incorporating both spectators and the objects of their gaze who crossed their institutional doorways into disciplinary regimes that were uncannily similar in their furthering of normative values about race, gender, and the nation.

New Media, Ethnography, and The Senses

New things to look at were a defining feature of life in the mid to late nineteenth century. Social life in the big city, as German sociologist Georg Simmel argued, provided a "great preponderance of occasions to *see* rather than *hear* people" as a direct result of the time people increasingly spent staring at the person sitting opposite or next to them on streetcars, omnibuses, and railroads (Simmel cited in Otter 2008: 23), and photographs of urban life (including tourist images of slums, prisons, and insane asylums) were enlisted in the project of documenting the travails of the underclass as well as the triumphs of those in power. Photography facilitated virtual travel to the near and far, even to the life hereafter as spiritualists brought back the dead through the use of techniques such as double exposure (see Chéroux *et al.* 2004: 45–71; Gunning 1995). Photography's emergence in the 1830s, the culmination of experiments by Louis Daguerre, Nicéphore Niépce, and William Fox Talbot, held out great promise for amateur explorers and scientists who were eager to add this latest device to their arsenal of techniques for recording information about the world's exotic peoples (see Gernsheim 1986; Gernsheim and Gernsheim 1995). As I have shown elsewhere, by the mid-nineteenth century, photographs of native peoples circulated in a wide range of venues, in an equally wide variety of forms, including photographic albums, books, magic lantern slides, postcards, *carte-de-visites*, stereographs, cabinet cards, and newspaper and magazine illustrations (Griffiths 2002: 86–124). Thanks to its mass reproduction and portability, photography's ubiquity was something of a double-edged sword for scientists, especially as anthropology was professionalized toward the end of the nineteenth century. While photography's seeming objectivity and *difference* from non-indexical methods of ethnographic inscription such as engravings, sketches, diagrams, and written accounts might have placed it in a category of its own, its reality effect was eventually challenged (or at minimum critiqued) as anthropologists questioned the veracity of the indexical and returned to their familiar pens and paper. And given that photographs shot by trained scientists for professional use and those made by amateurs and tourists circulated (and were even published) in both professional journals and popular magazines, issues of accreditation, the enunciation of ethnographic knowledge, and cross-pollination of iconographic tropes were troubling and unavoidable.

If anthropologists were obsessed with recording visual data about native peoples—anthropometric photographers posed subjects in front of grid-like backgrounds standing next to wooden measuring devices—they were nonetheless fully aware of the inherently sensual nature of the

ethnographic encounter, something photography could only hint at through photographing indigenous people against illusionistic backdrops. For example, studio portraitist J. W. Lindt shot Australian Aborigine Clarence River in his studio sitting naked on an animal skin in front of a painted backdrop surrounded by corroborating flora and material culture including a boomerang and fishing net. River's awkward and slightly ridiculous pose reinforces Daniel Novak's argument that "rather than being bound by time, frozen in place, the impressionable, incoherent, and interchangeable photographic subject is always already out of place and time" (Novak 2011: 70). Photographed in a non-place (photographic studio) and indeterminate time, the hint of sadness in River's eyes gazing out of the frame away from the camera imbues this image with an emotional power, evocative of Roland Barthes's *punctum*, the inimitable detail in a photograph that carries its emotional and, I would argue, its sensory weight (Barthes 1981: 27). But River was a professional, part of a traveling troupe of Australian Aboriginal performers, so this was all just part of a day's work and once the shoot was over, he slipped back into his clothes and readied for his next appearance.

Photographs such as that of Clarence River from the early 1870s changed people's understanding and perception of the world in several ways; they enshrined ideas about cultural difference, memorialized special occasions, promoted new experiences and products, and supported (and in some instances replaced) written records of people, places, and events. As cameras became easier to use and photography a pastime for a larger swath of the population, views of virtually everywhere and everything could be bought, held in the hand, framed, sold, exchanged, loaned, and secreted away as keepsakes. And just as photographs became enshrined in all manner of institutional, social, and cultural practices, from using Alphonse Bertillon's system for identifying criminals to memorializing the death of a child in funerary photography, as material artifacts photographs engaged not just the visual register but touch and smell as well; the crinkled edges of a photograph, its glossy or matt surface along with its smell (often contingent on where it had been stored) triggered a corporeal engagement that was heavily and headily sensorial.

Individuals sometimes assessed the material (and nonmaterial in the case of smell) properties of photographs unconsciously and absorbed subtle details that may have triggered all manner of associations. Color added other sensations; experiments in color photography began in the mid-nineteenth century and French cinema pioneers Auguste and Louis Lumière introduced the autochrome system, the first commercially successful motion picture color process, in 1907. Photographs are powerful examples of sensory media and the practice of enframement, which included "ritual, storytelling, or most obviously, placing the valuable substance or object into a fitting container," heightened this effect. For example, placing locks of hair into a locket with a photograph of a loved one created a reliquary that medievalist Cynthia Hahn argues "constitutes as its very mission the support of memory" (Hahn 2011: 9). Both photograph and hair share an uncanny correspondence to their signifier and are sensual insofar as they leave traces of what has been or seen, and evoke the body without ever fully re-constituting it.

It was the telegraph, however, that most engendered ideas of "presence," what Jeffrey Sconce calls an "animating, at times occult sense of 'liveness'" that is vital in understanding the emergence of electronic media as not only a technology but the site of projected fantasies about life, death, romance, and a new way of engaging with the modern world (Sconce 2000: 6). Experiments in electric telegraphy conducted by the German physician, anatomist and inventor Samuel Thomas

von Süommering in 1809 could only communicate messages a few kilometers in distance and required multiple wires. Carl Friedrich Gauss and Wilhelm Weber built an electromagnetic telegraph in Göttingen in 1833, connecting Göttingen Observatory and the Institute of Physics; this was followed three years later by Dr. David Alter's first American electric telegraph. Commercial uses of the electric telegraph co-developed by Sir William Fothergill Cooke and Charles Wheatstone began on the Great Western Railway in Britain in 1837, running 13 miles from Paddington to West Drayton stations (see Beauchamp 1999; Blondheim 1994; Hubbard 1965). Telegraphy's ability to collapse spatial and temporal barriers fascinated Victorian commentators who, as historian of science Iwan Rhys Morus argues, waxed lyrically about the telegraph's ability to break down national boundaries, increase commerce, and institute disciplinary regimes (Morus 2000: 455–75; see also Morus 1996: 339–78). Telegraph messaging demanded standardized, terse communication, eliminating idiomatic speech and forcing compliance to its codes of transmission; freeing the message from the mode of communication, the telegraph could reach people virtually anywhere.

In this respect, the telegraph shared a discursive function with the ethnographic "living village" found in world's fairs and expositions, a reconstruction of a native village where performers re-enacted aspects of their lives—material culture production such as basket weaving, cultural rituals, dance, and more prosaic activities such as childcare for the duration of the fair, living *in situ* for sometimes as long as eighteen months (see Rony 1996: 21–44). In both the telegraph and ethnographic "living village," time and space were bridged (a replica of Gauss and Weber's electromagnetic telegraph was created for the Vienna World Exposition of 1873). And just as the telegraph served as a metaphor for the nervous system and as a means to discipline and control the body politic, so too did the living village. Cordoned off from the larger fair either through a low brick wall, roped fence, or other means of demarcation, the living village was telegraphic in the sense that it distilled into a three-dimensional enclosure synechdochal highlights of an indigenous group of people. And if the telegraph and living village were both hailed as miraculous, they differed in one important respect: telegraphy, as Menke reminds us, "signifies electric information that lacks a corporeal body, and that seems identifiable with no body in particular," whereas the ethnographic village was *all* about the body, a racialized body that provoked complex responses from fairground officials and spectators.

Native peoples were displayed at world's fairs no differently to other spoils of empire, but unlike photographs, the performers in the living villages were very much alive, seeing, hearing, touching, and smelling subjects who returned the gaze and whose bodies sometimes brushed against those of other fairgoers as they became part of the midway. Physical contact with Euro-American fairgoers did not come without risk, however, as outbursts of racial hostilities, as occurred at the Philadelphia Centennial in 1876, were not atypical (Howells 1876: 97, cited in Rydell 1997: 14, 63). The human sensorium was most definitely on high alert throughout the world's fair experience. Moreover, the hegemony of the visual as the primary means for encountering the ethnographic Other was challenged, as auditory, haptic, and olfactory sensations transformed living villages into multisensory experiences. The ability to touch native peoples, something showmen exhibiting indigenous peoples and freak show managers scripted into the performance, although not sanctioned in the anthropologically-endorsed exhibits at world's fairs and expositions, played into transgressive fantasies about the Other. Touch, "regarded as the least regulated of sense, [and]

frequently appropriated for the purposes of exploring presumably authentic and unmediated human experience," got people into all sorts of trouble, as Constance Classen points out in *The Deepest Sense*, since criminal behavior was very often about unlawful touching of property and persons (Classen 2012; Colligan and Linley 2011: 4).

One year after the 1876 Philadelphia Centennial, Thomas Alva Edison announced the invention of the phonograph, a device for recording and reproducing sound that was patented on February 19, 1878. Though also deemed miraculous and exploited by showmen for the first couple of years, its novelty soon worn off, and, as Rick Altman argues in *Silent Film Sound*, Edison did not return to the subject of recorded sound until the gramophone was perfected by rivals Alexander Graham Bell, Chichester A. Bell, and Charles Sumner Tainter. Edison had been interested in the synthesis of sound and moving image since 1887 (or so he claimed in a statement made in 1894), and from 1884 to 1895, W. K. Laurie Dixon headed Edison's team to perfect a system whereby "motion and sound could be recorded and reproduced simultaneously" (Altman 2004: 78; see Spehr 2004: 82–92).[1] The phonograph's emergence was an accidental outgrowth of Edison's desire to perfect a device for transcribing telegraphic messages. Its uncanny abilities to reproduce the spoken word or sound made it a sure-fire hit with audiences, as traveling phonograph shows were typically structured around the before and after pattern of the visual cuing of the sound source (speech, music, a dog's bark) followed by its phonographic repetition; as Altman argues, "the quality or interest of any particular sound was less important than its match to the original" (Altman 2004: 79; see Gitelman 2008: 25–57).

Figure 9.1. Capturing native voices: a recording session with a Blackfoot chief. Library of Congress.

Efforts to synchronize sound with moving image were undertaken by scientists as well as individuals with more commercial interests. British anthropologist Alfred Cort Haddon included the phonograph as a data-gathering device in his 1898 expedition to Mer Island (part of the Torres

Strait off the north-east coast of Australia). Experimental psychology student and expedition party member Charles Myers was responsible for the phonographic recordings which, in addition to native song and language, included the sound of a Mer Island woman crying following the death of her baby (Myers 1898–9, cited in Griffiths 2002: 134, n. 18). It is interesting to speculate as to why Myers chose to include the sound of a Mer woman's grief-stricken wails among more culturally and linguistically-specific recordings; how would crying betray traces of the culture? Would the sound of the woman's voice tell Myers anything specific about Mer Islander grieving practices or was it so primal, so trans-cultural, and so transcendent even that it bespoke something essential about the human condition? (Myers was training to be an experimental psychologist under the supervision of W. H. R. Rivers.) Re-living the grief sonically speaks to historian of sound John M. Picker's argument about Victorian responses to the phonograph, which he claims were "inherently more personal and interactive than modernist ones to the gramophone" (Picker 2003: 112, 117). The phonograph was linked to death in other ways too; its ability to record "last words" by dying individuals shared an uncanny correspondence to the death mask, insofar as both provided indexical traces of that which had once lived. In fact, Edison's British overseas agent, Colonel George E. Gouraud, a key proponent of the phonograph in the UK, displayed a strange propensity for recording the deathly and dying, a logical application of the phonograph in the era before mass-produced playback machines and disks replaced the phonograph (Picker 2003: 117). Edison, too, foresaw the salvage ethnography possibilities of phonography, telling an interviewer in 1878 that his device could be used to stave off the extinction of the Onondagas and Tuscaroras Indian languages (Edison called them "accents"), which were believed to be on the brink of extinction (Gitelman 2008: 32).

The mechanical reproduction of sound and voice emerged in an "age of auscultation" in which listening was not only heightened through such inventions as the stethoscope but also associated with suffering; as Picker argues, "in more ways than one, Victorians were hearing things … and in newly amplified forms, as voice, noise, vibration, music, and electric echo" (Picker 2003: 4, 13). Sound could be experienced as either the work of magic and strangely divorced from the body, as in the phonograph or its unmistakably corporeal antithesis, the noisy street musician, construction worker, or barker. Organ grinders not only drove some London residents crazy in the early nineteenth century but also symbolized a slackening of national borders. An influx of foreigners, who unlike the native peoples performing at the Egyptian Hall or exposition, were free to roam the city and encroached upon the private lives of the middle and upper classes. The performer's music thus became "a 'lawless' other, a threatening double to the respectable concert or drawing-room recital" (Picker 2003: 63).[2] In an age of empire, sound was culturally coded, value oriented, and invested with considerable semiotic meaning. The noisy bodies of the street musicians (they became one with their instruments which were strapped to their bodies) can be contrasted with the disembodied noise produced by the phonograph. And whereas the phonograph was framed as an uncanny scientific discovery that did the rounds on the lecture circuit with a trained operator, the music from the street organ was eventually associated with nostalgia, what Picker calls "quaint curiosities, exotic reminders of the life that once animated metropolitan streets" (Picker 2003: 77).

The uncanny powers of the phonograph to seemingly resurrect the dead (at least the sound of their voices) were outdone, however, with the emergence of motion pictures in 1894. Russian author Maxim Gorky's oft-cited recollection of seeing film for the first time at a demonstration of

the Lumière Brothers, *Cinématographe* show in Russia is famous for underscoring how sensorially discombobulating it felt for Gorky to view motion pictures:

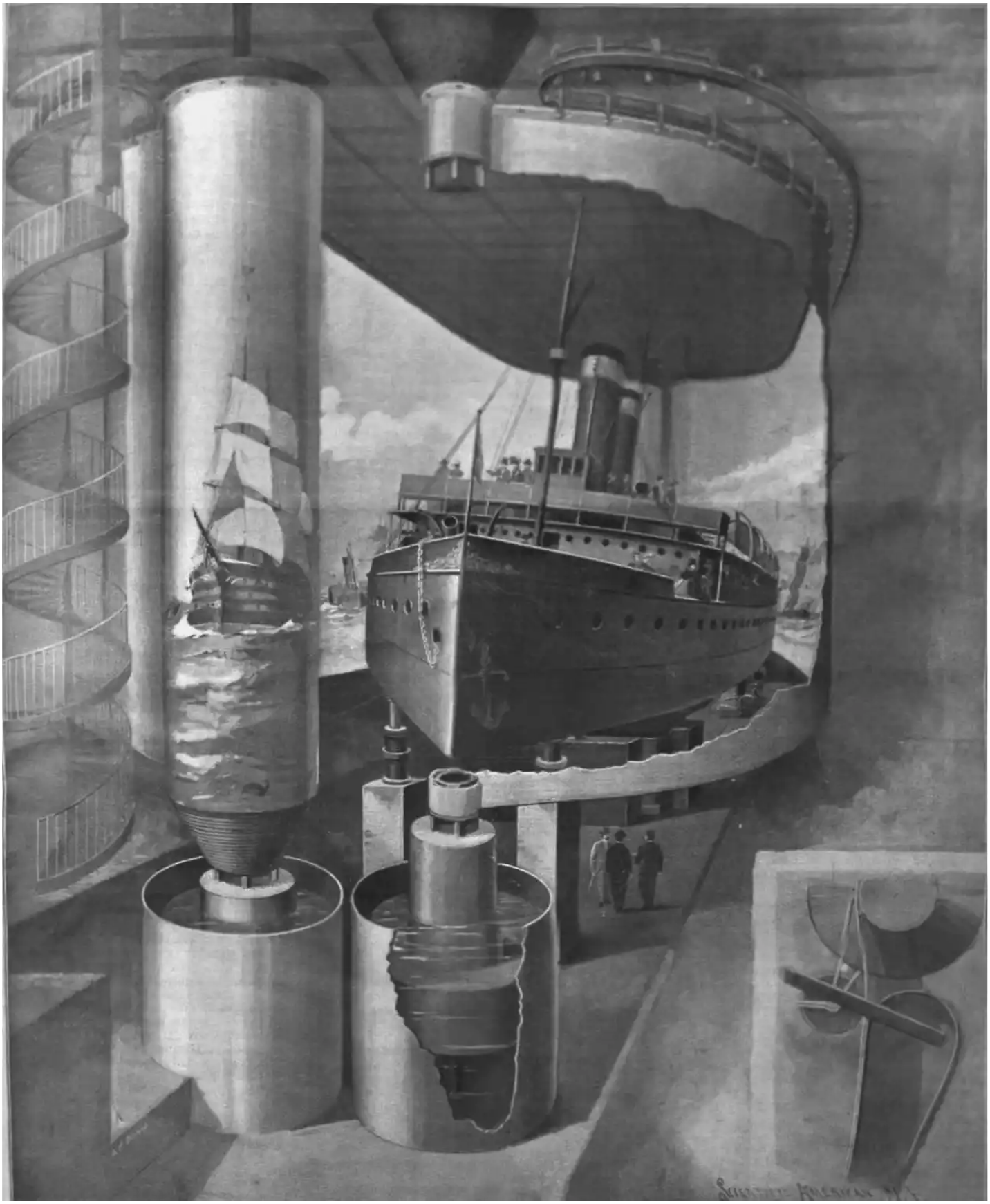
> Last night I was in the kingdom of shadows. It is a world without sound, without colour … The smiles are lifeless, even though their movements are full of living energy … Their laughter is soundless, although you see the muscles contracting in their grey faces… *It is terrifying to see, but it is the movement of shadows, only of shadows. Curses and ghosts, the evil spirits that have cast entire cities into eternal sleep, come to mind and you feel as though Merlin's vicious trick is being enacted before you*.
>
> -- Gorky [1896] 1996

Cinema was not so much hyper-real for Gorky as impoverished, uncanny, contradictory, and unsettling; its liminality, its status as an absent presence affected Gorky deeply as he equated motion pictures with sorcery. One is reminded here of the nineteenth-century Phantasmagoria Show, a spectacular *trompe l'oeil* in which lanternists, using mirrors and lighting effects, created the illusion of ghostly apparitions floating through the air toward a terrified audience. Several things about motion pictures affected the senses, but the most affecting was French film theorist André Bazin's idea of the mummy complex, cinema's ability to preserve the deceased just as the Egyptians had embalmed their leaders (Bazin 1960: 4–9).

Like photographs and other technologies of virtual transport such as the nineteenth-century panorama, which as a result of its newspaper function can be considered the first mass visual medium, motion pictures looked back to earlier visual technologies as well as forward into twentieth-century electronic media. And while cinema shared certain phenomenological similarities with panoramas—they both privileged spatial and temporal dislocation, discourses of armchair travel, and via distinct means, a sense of immersion—the panorama was by no means a stepping stone to motion pictures, ebbing and flowing throughout the nineteenth century, existing simultaneously with cinema, and undergoing formal experimentation (see Griffiths 2008: 37–78). As Vanessa Schwartz has shown in her work on mass culture in *fin-de-siècle* Paris, panoramas shared the popular cultural stage with other spectacular realities such as the display of bodies in the morgue, waxworks in the Musée Grévin, and early cinema (Schwartz 1998). Embodied spectatorship through heightened sensory engagement was a prerequisite for commercial entertainments that comprised the entire "o-rama" craze in the nineteenth century; verisimilitude and the insertion of the spectator into the spectacle were prerequisites in the construction of the illusion, and rather than threatening panoramas, as Schwartz argues, motion pictures were incorporated into the display. For example, in 1898 Louis Régnault opened the "Mareorama" in Paris, a simulated boat ride lasting thirty minutes that took as many as 700 passengers to various Mediterranean ports (see Figure 9.2). When the lights dimmed on the ride, "instead of a painted canvas rolling by, visitors watched 'movies' of coastal views photographed from boats." Incorporating a moving platform and compressed air to simulate wind and waves, the Mareorama rocked back and forth, more or less vigorously depending on the external vista; the multisensory experience was explicitly referenced in the program, which claimed that it would "make an impact on all of the senses at once and … obtain the most complete realistic effect" (Schwartz 1998: 171).

Panoramic perception, as Wolfgang Schivelbusch argues in *The Railway Journey*, symbolized a new way of seeing the world; space, time, and motion were recalibrated as the train annihilated distances. The image of the world rushing past the window, reminiscent perhaps of a speeded-up moving panorama, which unlike its circular panoramic cousin consisted of a huge canvas that slowly scrolled past a seated audience, served as a potent metaphor for cinema (see Schivelbusch 1987). This view out of the side window or, more thrillingly, from the front of a train or other moving vehicle, is known as the phantom ride in cinema, and in G. Albert Smith's three-shot film *A Kiss in the Tunnel* (1899) provided the opening and closing shots in one of the earliest multi-shot films (a man kissing a woman in the darkened tunnel serves as the middle shot). Sharing the organizing principle of contemporary dark-rides at theme parks, the phantom ride became a trademark shot of Imax cinema, the sensation of penetrating space a signature feature of so many early transportation films.

Figure 9.2. A virtual voyage: the Mareorama. *Scientific American* (September 29, 1900).



In an age of empire, motion pictures performed much of the same discursive work as world's fair living villages, shoring up colonialist projects, entrenching myths about racialized hierarchies, and commodifying indigenous culture into readily consumable visual spectacle. In this respect, motion pictures were a logical outgrowth of the vibrant visual culture of the fairground Midway; Little

Egypt was the stage name for at least three popular belly dancers, one of whom, Fatima Djamile, was the subject of two Edison films: *Coochee Coochee* made in 1896 and *Fatima* from 1897.[3] Little Egypt became a synonym for belly dances in general and several of these dancers performed at the 1893 Chicago World's Fair. So worried was Edison that Fatima's exposed midriff and erotic gyrations might deliver almost as much sensory thrill as the live performance that he created a censored version of the film in which Fatima's torso is covered by what looks like a white picket fence across the center of the frame. As a symbol of parochialism and small-town American values, the white picket fence is ironic, since it becomes a literal overlaying of prurient values over insalubrious ones, and yet because we can still make out Fatima's body from behind the bars, the picket fence ultimately fails. Edison's *Coochee Coochee* film transformed the place-bound experience of the Little Egypt belly dance into a circulating commodity that continued to make money, even after the show was over. And if the film fell short of the live experience of watching Fatima do her dance, it nevertheless brought Fatima to a far larger audience and over a longer period of time.

In France, brothers Auguste and Louis Lumière debuted their cinematographe in Paris in 1895 at the Salon Indien du Grand Café; unlike Edison's, their camera was peripatetic from the start, making films that shored up French nationalism and brought exotic peoples closer to home through a number of titles such as *Arab Cortege* (1897) (see Musser 2004: 15–30). In addition to re-signifying the discursive and aesthetic logics of the world's fair living village; ethnographic film was also indebted to the museum life group, the subject of the first of our two mini-case studies on the operationalization of sensory media in the hallowed halls of the museum and the dank cells of the penitentiary.

The World Without: Media and The Senses in The Museum

Museums were spaces of wonder for nineteenth-century metropolitan and provincial audiences. Whether entranced by the technological sublime of watching a machine in motion at the South Kensington Museum in London (today's Science Museum), staring at a taxidermy specimen through the glass at the American Museum of Natural History (AMNH) in New York City, or wandering the quiet corridors of a modest small-town museum where rows upon rows of stuffed birds lined the walls, the nineteenth-century museum was a portal to the "world without," where the spoils of empire and dazzling products of scientific discovery and the Industrial Revolution were proudly on display (see Griffiths 2002: 3–45, 2008: 159–94). Natural history museums can be considered residual spaces, giant silos where the loot from world's fairs secured permanent homes; for example, the Field Museum in Chicago absorbed a great deal of the 1893 Chicago World's Fair, as did the Science Museum, which ended up with the objects from London's Great Exhibition of 1851. As I have argued elsewhere, museums, like world's fairs and expositions, occupied a liminal zone, neither fully part of the world nor completely outside it, brimming over with objects that through the act of display were transformed into collections. Policed by uniformed guards, museums were the outposts of empire, giant department stores showcasing Western imperialist might, the material legacy of colonialist expansion, and plastic and hyperrealist methods of display. Museum designers learnt a great deal from exhibition techniques that had been tried and tested at world's

fairs; at the same time, curators struggled to maintain a careful balance between sanctioned, so-called scientific framing mechanisms on the one hand, and the visually striking cornucopia of the department store, dime museum, and Midway on the other.[4]

It's no surprise, then, that one of the most popular exhibits in museums of natural history—both in the late nineteenth century and today—was the habitat group, a glass enclosed display case containing taxidermy specimens contextualized with natural flora. An enigmatic signifier over-determined by discourses of magic, wonder, death, adventure, loss, and the uncanny, taxidermy's mode of address, its status as an absent presence, is reminiscent of cinema; as signifying devices, both motion pictures and taxidermy perform visual alchemy, bringing back the dead through different forms of mummification (taxidermy on the one hand, photorealism and the illusion of movement on the other). The habitat group, a naturalistic diorama with painted backgrounds and an admixture of re-created and preserved specimens, contextualized the taxidermy, shoring up its reality effect via a pop-up story book aesthetic. The sensation of approaching the exhibit was akin to looking out through a very large picture window into a frozen moment in time. One of the earliest life groups to appear at the AMNH was Jules Verreaux's "Arab Courier Attacked by Lions," first displayed at the Museum's original 5th Avenue location in 1869. Winning a gold medal when it was displayed in the "Maison Verreaux" at the 1869 Paris Exposition, the sensationalist display depicts a lion that has reared up on its hind legs to try and bring down a camel and its driver (another lion lies on the ground next to the camel). Exploiting popular orientalist iconography, the group hit a home run with its integration of taxidermy and human form in the same display; the sensation of arrested motion contributes to the overall effect, since to capture this in real life would have been next to impossible. The AMNH minced few words justifying the inclusion of such a dramatic group; AMNH Director Frederic A. Lucas said the group was an attempt to "show life and action and an effort to *arrest the attention and arouse the interest* of the spectator" (Lucas 1814: 10). The group performed a similar ideological function to the yet-to-be-established field of modern advertising. It had the desired effect of piquing the interest of spectators who might be more motivated to take an interest in surrounding display cases once they had drunk in the visual excesses of the "Arab" group. In light of shared phenomenological correspondences across habitat and museum life groups (plaster-cast mannequins of indigenous peoples), it's not hard to imagine that spectators made a similar associative leap when they traded standing in front of a life group to sitting in the auditorium to watch an ethnographic film. The organizational principles of the habitat and life group were re-signified in motion pictures; spectators sat before a giant screen that projected images from another time and place. Captions accompanying the habitat and life groups were substituted by the presence of a live lecturer in the film screening and by intertitles that were more common in film after 1903, although appeared as early as 1901 in a film adaptation of *Scrooge, Or Marley's Ghost*.

But life groups and motion pictures were linked phenomenologically in other ways as well; in both, spectators were psychically transported to the bracketed time of the illusion and while this doubtless contributed to their appeal with museum-goers, it generated consternation in some anthropologists and curators who worried that the heightened illusionism of the exhibit would undermine the ethnographic object lesson. The senses were piqued when consuming both of these displays; each had strength and weaknesses with regards to issues of verisimilitude (how they magically conjured up their absent referents). In both, the bodies of the ethnographic Other were

the site of projected fantasies and sensory pleasure; real-looking hair and skin in the life group versus larger-than-scale faces and movement in the motion picture. Cultural anthropologist Franz Boas' 1896 suggestions for the optimal viewing conditions of life groups could well be a description of an early motion picture theater; according to Boas: "In order to set off such a group to advantage it must be seen from one side only, the view must be through a kind of frame which shuts out the line where the scene ends, the visitor must be in a comparatively dark place while there must be light on the objects and on the background" (Putnam [1896] 1985, cited in Jacknis 1985: 102).

Film screenings at the AMNH, which began in 1908, were decidedly multimedia affairs, involving material artifacts, magic lantern slides, and live music, either in the form of piano accompaniment or the demonstration of indigenous instruments during a screening. Natural history and science museums began showing films shortly after the emergence of motion pictures for several reasons: to get with the times and spice up otherwise dry lectures; to document a recent expedition; and to attract a broad-based audience. Stand-alone screenings were just one of the ways museums used films; motion pictures were also used in lectures, the same footage sometimes recycled across lectures and even re-purposed for an entirely different talk. Until the late 1920s and the invention of the Dramagraph, a viewer-activated stand-alone viewing device that looped short films and could be stationed in the gallery next to an exhibit, motion pictures were seldom shown in the gallery, since the logistics of setting up a projector and screen, expense of hiring a projectionist, and building code which prohibited film screenings without a fire-proof booth, served as deterrents (see Griffiths 2008: 243–6). That said, long before screens became ubiquitous in galleries, visitors would have been accustomed to seeing all manner of residual media such as photographic transparencies displayed backlit so that the image beckoned the visitor and provided indexical proof of the animal, tribe, or phenomena. Recorded sound was also used in the gallery. For example, gramophones provided commentary on photographs and objects on display in some of the galleries of the 1908 International Tuberculosis Exhibit at the AMNH, and while there is no extant discussion of a rationale for their use, one cannot help think that the novelty alone of the technique (gramophones were not used routinely in museum displays until the 1930s), as well as their role in imparting vital information to the significant percentage of illiterate visitors to the exhibit, must have played no small role in the phenomenal success of this temporary show (Griffiths 2008: 236).[5]

Though hardly cutting edge in their showcasing of new media—permanent galleries are hugely expensive to renovate, one of the reasons for the disjunctive feel one sometimes gets walking around museum galleries that contain a mix of old and new displays, techniques and installations—museums are nevertheless fascinating spaces to examine with regards to sensory media since they brought under one roof both familiar and unfamiliar ways of processing the world and making sense of cultural difference. Many of the visual display techniques found in museums were derivative, as curators drew freely from the worlds of science, commerce, and popular culture. The exposition pavilion, department store window, art museum period room, dime museum display case, and natural history museum gallery borrowed freely from one another and, were it not for the broader interpretive context, visitors might be confused as to where they were. Museums were, after all, giant advertisements for imperialistic and paternalistic endeavors that said as much about

the culture *doing* the displaying as the culture *on* display. Embedded as they were in the geopolitical formations of the day, museums were always on the lookout for wealthy benefactors, new members, and eager to be high on the list of a city's cultural patrimony.

One of the biggest shifts in curatorial practice during this period was a move away from typological presentation of material culture to region-based, contextual exhibits influenced by theories of cultural relativism, pioneered by German-American anthropologist Franz Boas. Old and new media coexisted in the museum; photographs, sound recordings, and motion pictures took up a place alongside more traditional representational forms such as panel paintings, display cases, and labels. The museum was an emporium of visual culture, taking visitors on a simulated journey through cultural geographies that were wondrously different from the one they lived in, yet strangely inviting (and through representation of the nuclear family in many life and habitat group display cases, reassuringly familiar), for they represented a forgotten time, the pre-modern, where people felt less harried. The uncanny and mimetic properties of dioramas and motion pictures were largely responsible for their powerful effect on the human sensorium; perpetuating the old adage that seeing is believing, they shone light (literally) on distant worlds and peoples, although the diorama's circumscribed world could not begin to compete with cinema's capaciousness. Both illustrated a tension between imitation and authenticity that Miles Orvell argues was a key constituent of American culture, and while only one of them (cinema) was involved in the mechanical reproduction of images, both were fundamentally concerned with ways of restructuring the world that looked, paradoxically, both from the outside in and from the inside out (Orvell 1989: xvi). As technologies of reification, dioramas and motion pictures were designed to be consumed collectively, no different from other, coterminous forms of mass consumption. They are examples of what Miriam Hansen calls "vernacular modernism," emerging modes of "organizing vision and sensory perception, a new relationship with 'things,' different forms of mimetic experience and expression, of affectivity, temporality, and reflexivity, a changing fabric of everyday life, sociability, and leisure" (Hansen 1999: 60). Most closely affiliated with the textual forms and ideologies of the travelogue, both ethnographic cinema and the diorama life group engendered what Jennifer Peterson calls a form of "poetic reverie" that was deeply sensual, erotic even, and tinged with nostalgia. A vast world could be scaled to fit into the glass enclosure of the life group or the frame of the screen. And in both, an essentialized and miniaturized world came alive. Let us turn, then, to a world culturally far removed, though geographically often near by the museum, where the human sensorium underwent an experience as radical as one could imagine and where new and old media coexisted in a delicate balance.

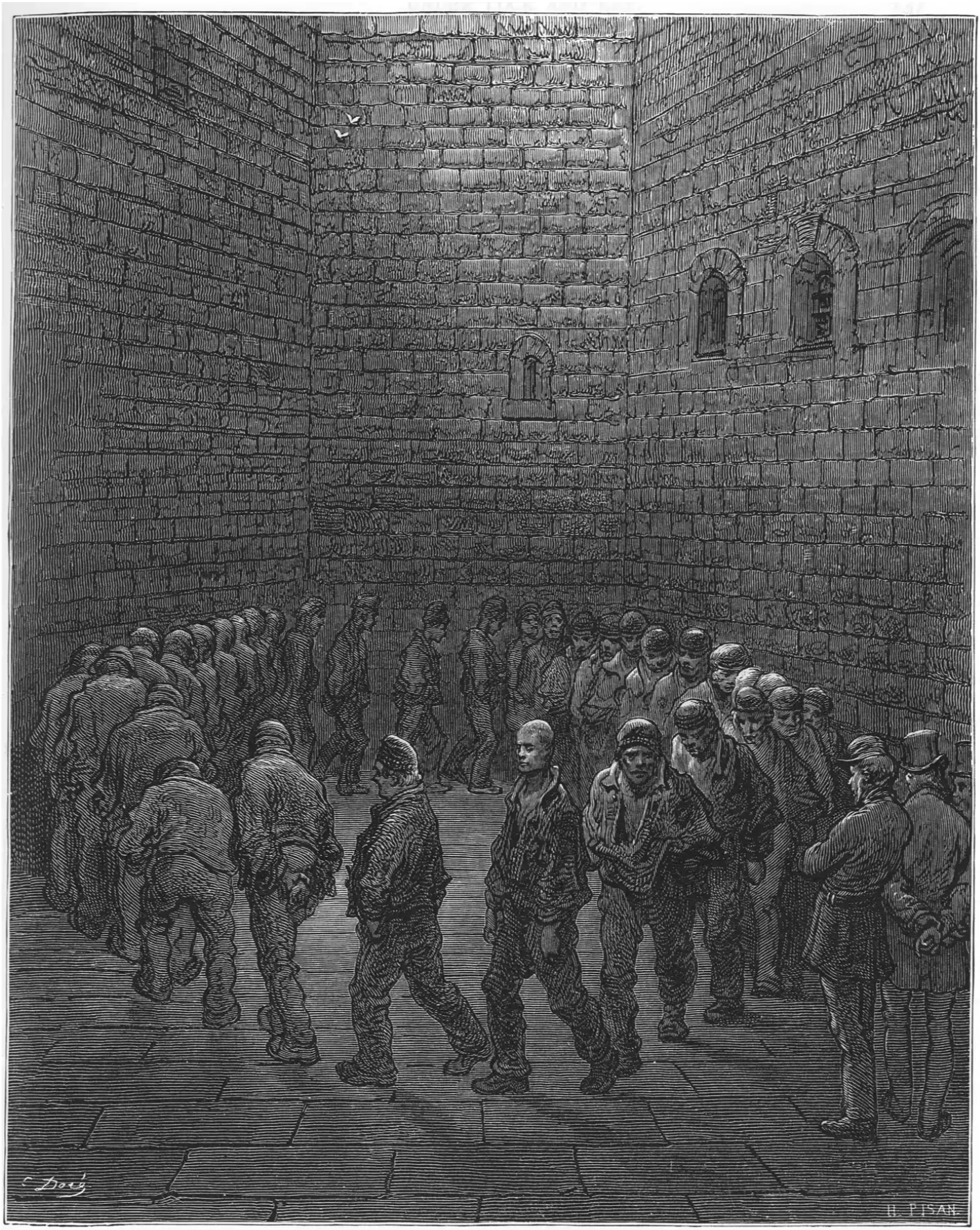
The World Within: Media and The Senses in The Prison

Known variously as a gaol, jail, penitentiary, reformatory, house of refuge, detention center, borstal, or correctional facility, the prison is far less indeterminate than the name suggests. Prison is an intensely corporeal experience, depriving and numbing the senses, and, paradoxically, heightening them (see Classen 2012: 171–81). Prisoners display many of the same neurotic behaviors as caged animals, and studies on the effect of incarceration indicate that prisoners are at higher risk of mental illness than the general population, especially if they are held in solitary confinement. Prison is one of those spaces that acts *upon* the body. Inmates are victims of assault, communicable diseases, depression, bad diet, physical inactivity, and boredom. Hermetically sealed from the

outside world, the prison is a gray, noisy, unforgiving world. For obvious reasons, the prison serves as a powerful antipode to the museum, and yet there are points of convergence as well as divergence in the way both institutions police their occupants and inculcate ideas of uplift, reform, and national identity in the organization of space, human senses and value systems.

The case of the prison calls out for a reconsideration of received historiographic models of the media consumption in the late nineteenth and early twentieth centuries, especially the traditional model of a paying audience attending a theatrical screening on their own volition. Given the unique conditions of reception in the prison (similar to schools and other non-theatrical venues in some ways and the persistence in prisons of the older exhibition practice of mixing magic lantern projections, motion pictures, and the phonograph in the public lecture and cell block, what it means to "got to the cinema"—the social experience of film behind bars—resists standard explanations of early film attendance and requires considerable nuance (see Griffiths 2012: 420–40). Sensory media were heavily imbricated in the prison, including the rationed, and highly sought after, visual culture of books, magazine subscriptions, and illustrated educational lectures; the audio-escape of the phonograph, especially its therapeutic role on death row where "last request" Vitagraph records were played to break the deathly silence and soothe the nerves of the condemned; the radio headset in individual cells that allowed only sanctioned stations from the prison's central receiver; and, starting around 1905, motion pictures.

Figure 9.3. Sensory deprivation in Newgate Prison, illustration by Gustave Doré. Blanchard Jerrold, *London: A Pilgrimage*. London: Grant & Co., 1872.


Doré
H. PISAN

Long before any of these media forms found their way into the prison, inmates enlivened the senses via other means, through music, reading, and feats of imaginative fancy. In Auburn Prison, near Syracuse in upstate New York, inmate number 25,551 coined the term "air castles" in an 1899 article published in the *Star of Hope*, a bi-weekly magazine published by Sing Sing's Mutual Welfare League. The author challenges the hegemony of vision in the hierarchy of the senses, a logical move if we consider the prisoner's poverty of visual variety. "Did you ever stop to realize that the vision of the eye is an impediment to the vision of the mind in abstract thinking? It is when we built 'air castles' with the eyes shut that our mental vision is clearest" (Auburn 1899: 2).

Music from neighboring cells was another way to trigger the building of air castles, since music can stir the memory and arouse the senses in all sorts of provocative ways. Permission to play a musical instrument in the cell was considered a milestone for men "whose minds tire of reading and walking from one end of the cell to the other, and staring blankly at whitewashed walls, who wish to drown the dark thought that cross[es] their unhappy minds, and who wish to be spared from insanity and worse." Unlike the concert performances, music coming from the cells had an ethereal quality to it, since it was often hard to know exactly where it was coming from, and men playing other instruments would often join in. Auburn inmate number 26,336 had this to say about the sounds he heard: "As I write these lines, from the Gallery below comes a sweet, faint murmur of music, played softly on a guitar. The melody is taken up by a violin and harmony added by a banjo, played by a man on the Gallery above. The music swells—nothing is heard except these sounds that seem to come from heaven" (Auburn 1901: 57).[6] Thomas Mott Osborne, prominent prisoner reformer and creator of the Mutual Welfare League, arranged to be confined for one week in Auburn under the name Tom Brown so he could experience prison life first hand; he described the exact same sensation of a (this time discordant) soundscape slowly building from the initial sound of Mendelssohn's Spring Song (what he called a "musical pandemonium"): "unfortunately he has not played many bars before more instruments join in—jew's harps, harmonicas, and other things. It is an extraordinary jumble of sounds—a wild pandemonium after the *deadly quiet* of a few moments ago. A train blowing off steam … is also contributing its quota of noise" (Osborne 1937 : 47). Even the more prosaic sounds that made up the auditory landscape, an "occasional cough, the sound of a stealthy football, the jar of some iron door or the clank of a distant bolt or bar" were magnified as the mind filled in a visual corollary (Osborne 1937: 62). Sound could also provide vital clues as to the time of day, something else undermined by the ban on watches in the cells. Admitting that "usually [I am] very good at guessing time, but in this place I am utterly unable to make an accurate calculation," Osborne's ability to *sense* time underwent a bizarre shift, as ordinary sensory stimuli were replaced by a void that paradoxically made the senses razor-sharp to subtle changes in the environment (Osborne 1937: 62).

Osborne wrote passionately about the sensory deprivation of life behind bars, which made the experience of the music so memorable. We should remember, too, that Osborne lived in a period of "unprecedented amplification" according to historian John M. Picker, "alive with the screech and roar of the railway and the clang of industry, with the babble, bustle, and music of city streets, and with the crackle and squawk of acoustic vibrations on wires and wax" (Picker 2003: 4). No surprise then that the auditory faculties of prisoners at Sing Sing prison, whose prisoners stemmed mostly from New York City, were especially heightened as a result of possessing an ear practiced in the acoustic vibrancy of urban life, an era of "close listening … an auscultative age" hastened by

the invention of the stethoscope in 1816 (Picker 2003: 6). Sounds in the prison cell could very well have been stimuli for "air castles." The sounds of keys, slop buckets, metal doors, a train whistle, the night-time tapping of pipes as a medium for telegraphic communication, and the human voice, were all amplified, creating a kaleidoscope of sounds that rarely changed (see McGowen 1995: 106). Outside of the cell, organized concerts and community singing were designed to lift spirits and alleviate boredom and during inclement weather, the inmate population was frequently "turned into the auditorium where they are allowed to participate in a period of community singing. These sings [*sic*] cheer up the group, encourages them to forget their troubles and influences them into a buoyant spirit which is conducive to resocialization" (Christian n.d.: 9).

Writing poetry was another way prisoners built "air castles" and was a serious business behind bars, "not written solely for the purpose of whiling away the dreary moments of leisure when the thoughts try to find utterance in some way, nor to calm the mind only, but because the composer knows it is his moral duty." Poetry was seen as mind food, a mental workout that would strengthen the moral compass and have an effect upon the entire body, as an anonymous contributor to *The Star of Hope* explained in 1900: poetry was capable of "stimulating and strengthening the readers mind, thereby reacting upon his body, weakened from long and close confinement in prison, making him stronger, wiser, and better" ("Undercurrents" 1900: 17). More so than reading or listening to lectures, composing poetry triggered a mental release, regenerating not only the mind but also the entire body. Poems were regularly submitted to the *Star of Hope*; for example, during the magazine's first year, 388 poems of various kinds and styles of verse were submitted, constituting 11,958 lines of poetry. Reflecting on all aspects of the incarcerated self, these poems were composed in the smallest of prison spaces, the cell, where the mind was arguably the most active (Editor in Chief 1901: 1).

In addition to writing poetry, reading in the cell was somewhat similar to reading in other confined quarters where people increasing found themselves from the 1840s onwards: the nineteenth-century railway car, a transitional space where new patterns of Victorian readership and social mores emerged (and, based on *A Kiss in the Tunnel*, were challenged). While there are obvious differences between the railway car and the prison, both produced captive subjects that turned to reading to either while away the time, avoid having to talk to people, or create *some*-time out of what would otherwise be a *non*-time, before arriving at a destination or getting out on parole. Of course, this does not factor in the experience of travel as novelty, the journey culminating in a new locale, or the sheer thrill of moving at speed. And while the subject of the railway and cinema has generated considerable scholarship, cinema was literally conjoined with trains in 1909, via a plan by an Italian engineer to install moving picture screens in railway cars. Touted as a "powerful advertising scheme," the traveler would "see on a screen in the car the different views, buildings, monuments, art treasures, etc. of the different countries they were passing through …[and] the different local industries" (see "Cinematography on railroad cars" 1909: 363; Furstenau 2011; Kirby 1997; Schivelbusch 1987). An announcement for an American version appeared in the trade press two years later, although this version offered a prototype of today's electronic train indicator, in which lantern slides with the latest train information would be displayed on the platform. Train depots were also considered potentially profitable parallel spaces of entertainment along with moving pictures on trains ("Another good suggestion" 1910: 1525).

The idea of "air castles" is significant, therefore, not only for clawing back agency on behalf of the prisoners but for better understanding how they tried to stay sane using techniques that share an affinity with Kierkegaard's theories of mental circumvention. Existentialist thought could even be used to explain the discrete pleasure of the motion picture: "Amusement … will lift those who see it out of themselves, out of their surroundings, which for one reason or another may be irksome, or depressing, and *place them, temporarily, at least in an imaginary world where things seem to go right*, and where discouragements and disappointments are apparently alike unknown" editorialized the *Moving Picture World* in 1908 ("Future of the motion picture" 1909: 234). The fact that many of the fantasies prisoners wrote about involved virtual travel is almost too clichéd to be true (who wouldn't, when banged up, fantasize about being some place else?). In similar ways to the books, journals, newspapers, poems, and magazines consumed in the cell, motion pictures punctured the routine by introducing a new one: going to the movies behind bars. It's hardly surprising, then, that when films first began appearing in prisons, journalists jumped on the novelty of film being shown to audiences that were literally incarcerated. This imbued much of the coverage of motion picture use in prisons with a pseudo social scientific feel, as if journalists were reporting on a social experiment in which the prison served as a laboratory and cinema the experimental variable. Rather than view cinema as an apotheosis of new media developments in the prison, I argue that one evocation of the cinematic experience—the sensation of staring at the rectangle of light of the cell window—helped lay the ground for the arrival of motion pictures behind bars. One could argue that prisoners were sensorially primed for cinema long before it made its (relatively) late appearance in United States penitentiaries between 1905 and 1914. And while cinema brought the outside world it, it also turned the prison inside out, as a result of location shooting making it more visible to the outside world on film.

Figure 9.4. New spectacles of light: *Reynaud's Théâtre Optique* by Louis Poyet. Public domain.

Conclusion

Prisons and museums are iconic nineteenth-century institutions that wreaked havoc on the senses; the museum delivered sensory overload, physical and mental fatigue as the body traversing the halls had few opportunities to sit down, the prison, the opposite, inserting the body into a gray, inhospitable world where agency, dignity, and sensory pleasure were in small supply. Media, in the form of books, magazines, photographs, magic lantern slides, phonographs, and motion pictures (and later radio and television) were integrated into and spun off from these institutions (both Sing Sing and the AMNH published magazines, the *Star of Hope* and the *Museum Journal* respectively, and countless movies would be set in prisons and museums. And whereas media use in the museum played second fiddle to the more spectacular, wondrous, and visually arresting mimetic exhibits, in the prison, media were salves, in some cases preventing inmates from transforming into "stir-bugs"—Sing Sing Warden Lewis E. Lawes's term for incarceration-induced mental sufferers (Lawes n.d.: 2). Individuals passing through these institutions brought with them sense memories of where they had encountered these media before; the prison and museum called for adjustments, behavior modification that fitted the institutional decorum. Entertainment in the prison was free, relished with immense gratitude, and served as portal to the outside world; Lawes wrote that the most "appreciative movie fans are to be found within the grim, gray walls of a prison" (Lawes n.d.: 1).

In both spaces, we see evidence of residual media, older forms persisting longer than in commercial settings where motion pictures replaced the lantern show; even the telegraph, as we saw in Warden Thomas Mott Osborne's recollection of being incarcerated at Auburn, was refashioned in the pipe tapping undertaken by inmates. In the museum and prison, the outside world was not only miniaturized—one could traverse vast continents walking through the halls of the AMNH, and the prison was a virtual city, with its own hospital, commissary, morgue, and auditorium—but the importation of the world's objects and representations were strictly curated in both institutions. In the museum world, over-abundance was in tension with singularity, the idea of a surplus of indigenous artifacts that can be offloaded to the museum versus the unique objects, the rarely obtained that triggered an overflow of Benjaminian aura.

Knowing one's place was vital in both institutions. Euro-Americans traversing the galleries of the AMNH knew just where to position themselves on the evolutionary ladder, as did inmates, prior to the abolishment of the prison stripes in 1901 when they wore stripes on their arms to indicate whether they were first-, second-, or third-termers. Prior to this, the inmate was little better than an automaton: "his eyes never beamed, but kept themselves fastened on the guard and the walls. His nerves were frayed beyond conception. He couldn't even force a laugh. Deprived of the right to express his emotions, he had none … In short, he forgot he was a human being" said Lawes (n.d.: 5).

New media were thus enlisted to train the senses and morals of citizenry in a wide swath of late nineteenth- and early twentieth-century institutions: their usefulness (see Acland and Wasson 2011) was defined by governances, civic mandates, and at times ad hoc policies such as when Sing Sing introduced nightly screenings in the late teens to lessen prisoners' exposure to the severe damp in the cells and to mitigate (or so they thought) same-sex practices (Griffiths 2012). New media were conscripted in discursively similar ways to pre-cinematic entertainment forms, although as I've shown in this chapter, issues of liveness, immediacy, presence, embodied spectatorship, and the organization of time and space stimulated the senses, if not with uniform effect. In the ocularcentric modern city, urban dwellers and visitors were subject to a kaleidoscope of sensory attractions, novel diversions, and the hegemony of the visual in a burgeoning commodity culture. Photography and cinema revealed and reified the underworld of modern society and criminals, like native peoples in the ethnographic field, were measured, documented, and finger-printed using Alphonse Bertillon's infamous project of human cartography; perceived as "urban" as opposed to "ethnographic savages," who came from "outer" rather than "inner" worlds (the metropole's grimy underbelly), criminals and the poor were surveilled in a similar manner to other subject peoples. Photography and film assisted immeasurably in the Victorian project of positivistic knowledge that divided the world, as Thomas Richards argues in *The Imperial Archive*, into "little pieces of fact" (Richards 1993: 6). Looking at the uses of media at the margins of society, the museum and the prison, helps us see more clearly how it shaped mainstream culture and how the senses responded to a world that was inexorably changed by mediation and intermediality, a defining feature of our contemporary media landscape.

[1] Even though Edison conceived of the phonograph for the business community, he was savvy enough to see its popular cultural applications and recorded singers and public figures, and began working on a talking doll in 1888. By 1890, a toy version of the phonograph was in the works (Spehr 2008: 197, 82–92).

[2] City dwellers dealt with the "problem" in incrementally harsher ways: whereas some complainants resorted to paying off some street musicians to play someplace else, in July 1864 the British Parliament unanimously passed the Anti-street Music Act (Picker 2003: 63).

[3] The other two dancers are identified in Wikipedia as Syrian born Farida Mazar Spyropoulos (1871–1937) and Canadian Ashea Wabe (born Caterhine Devine [1871–1908]). No birth date is listed for Fatima Djemille, although she died in March 1921 (http://en.wikipedia.org/wiki/Little_Egypt_(dancer)).

[4] Of course, issues of sustainability, especially with endangered species, and taxidermy's shifting meanings, come into play in contemporary museum display politics; for example, some of the display cases in the British Museum have signs saying that the reason some of the taxidermy looks as if it should be replaced is deliberate, since the BM now has a policy of not replacing or restoring old cadavers.

[5] Ten thousand visitors turned up on the opening day of the show, a total of 753,954 over the course of the seven-week run, 72 percent of the AMN's recorded attendance for 1908–9. To accommodate the crowds, the Museum stayed open thirteen hours a day on weekdays and until 8 p.m. on the weekends (Griffiths 2008: 236).

[6] According to the author, inmate musicians were model prisoners as well as being thoughtful, remorseful, and optimistic about a brighter future. Music drove the monotony of life away and made "less irksome the restraint under which they were placed" (Auburn 1901: 57).