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☐ Kinetic Architecture and Aerial Rides: Towards a Media Archaeology of the Revolving Restaurant View

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Ever since the erection of the Eiffel Tower in 1889 and its overwhelming public success, cities have continued to incorporate various types of kinetic observation structures into their urban tissue, serving as an influential visual medium for the masses. In my media-archeological project, of which this text is a part, I explore how the experience and current innovation of these structures relate to the new imaging technologies that shape our contemporary media culture. In this text I will be treating the revolving restaurant as an optical device, where the attributes of elevated view combined with mechanical motion evoke a cinematic experience. In order to describe the relationship to cinema that such a view inhabits, I have turned to what I call *cinéma trouvé*—a cinematic experience of sites or places outside the traditional cinematic apparatus.

The artist duo Bull.Miletic (2011) have written about the genealogy of the revolving restaurant view as a panoramic desire starting from the Italian veduta, the Claude glass, and the picturesque gardens of the early eighteenth century. By tracing the origins of this vision machine through the development of immersive imaging practices such as the panorama and diorama, and the coming of modernism with urbanization, ferro-vitreous architecture, and the development of the railway and tourism, the revolving restaurant experience is firmly situated within New Film History's media-archeological context (Elsaesser 2004). Bull.Miletic examine the disparate and far-flung links between the revolving panoramic view and what Tom Gunning (2012) has called "the technological image", understood as an expanding arsenal of technological devices (from nineteenth-century philosophical toys to the cinema to video and digital media). My short comment here is thus intended as a contribution to an existing media-archaeological discourse in which the development of moving image media are seen in a larger cultural context.

The specific experience enabled by kinetic architecture and mechanical rides appears early in cinema as part of "the cinema of attractions" in the form of non-narrative phantom rides and exhibitions such as Hale's tours (Gunning 1986). In his Walter

Benjamin-influenced account of the changes brought to society by the invention of the railway, Wolfgang Schivelbush (1986) claims that "panoramic perception, in contrast to traditional perception, no longer belonged to the same space as the perceived objects: the traveler saw the objects, landscapes, etc. *through* the apparatus which moved him through the world" (Schivelbush 1986, 64, emphasis in original). Relying on related accounts such as "cinema by other means" (discussed in Levi 2012), "the body as a site of spatio-sensory perception" (in Bruno 2002), "the mobilized and virtual gaze", and "the virtual window" (Friedberg 1993, 2006), among others, this line of thought leads to my concept of "readymade cinema" or *cinéma trouvé*, a cinematic experience produced by an observation machine in which the spectator simultaneously travels through physical space and his or her own memory of conventional cinema. The concept of *cinéma trouvé* is a useful media archeological heuristic device, as it generates new and unconventional ways of thinking through issues of embodiment and materiality across mediated and physical experience. Below, I will jump-cut further along the aerial view to include what I, after the film scholar and media archeologist Pavle Levi (2012, 77), would call the cine-dream of kinetic architecture found in the wake of aviation's golden age and leading up to Cold War heterotopias.

Bel Geddes's Aerial Designs

Norman Bel Geddes's model for the *Aërial Restaurant,* a three-floor circular construction that was to make one full revolution every thirty minutes, was designed for the 1933 Century of Progress Exposition, also known as the Chicago World's Fair (Figure 1). What was supposed to be the world's first revolving restaurant was never realized due to structural and economic problems, but the mobile aerialized spectator was finally reinstated in Geddes's *Futurama* a few years later, drawing on the same basic principles. Geddes's *Futurama* model of the "world of tomorrow" at the 1939 New York's World's Fair demonstrated how the transformation of the city into a distant object of visual consumption had an ideologically recuperative effect, and how the miniature or model works on the same principle. As Mark Dorrian has noted, its "usefulness as urban planning's most potent tool of public persuasion endures through precisely such powers of sublimation" (Dorrian 2007, 6). In the model of Le Corbusier's *La ville radieuse*, we see the hand of the architect as a god-like liberator of urban space. At the same time, the vertical abstraction does away with history and compresses space into defined territory. Based on 119 aerial photographs, and presented as part of the automobile giant General Motor's *Highways and Horizons* exhibit in the tremendously popular Transportation Zone, Bel Geddes's "number one hit show" (Figure 2) enchanted a nation struggling after the Great Depression and longing for prosperity and progress (Morshed 2004, 74).[1]

For Bel Geddes and his contemporaries, new breakthroughs in aviation technology and the idea of traversing aerial space had a significant impact on the imagination of future civilizations. As Morshed remarks:

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1. For a general discussion on the *Futurama*, see Bush (1979), Marchand (1992), and Hauss-Fitton (1994).

FIGURE 1. Norman Bel Geddes, Model of *Aërial Restaurant*, 1929 (courtesy of Harry Ransom Center, The University of Texas at Austin).

> Solitary in his monoplane, the aviator was the modernist trope *par excellence* representing a privileged view of the earth and was a catalyst for new models of aesthetic experimentation in literature, science fiction, and the arts during aviation's golden age. (Morshed 2004, 79)

Prior to the *Futurama*, a number of Bel Geddes's designs engendered his fascination with aerial ascension and mechanical motion. Within a couple of years after the historic event of Lindbergh's flight over the Atlantic in 1927, Bel Geddes had conceived of an aerialized architecture, "a V-winged leviathan aerial vessel with a wingspan of 528 feet and sleeping accommodations for 606 persons" (Morshed 2004, 85). This design marked a significant shift, as Paul Virilio (1997) has pointed out, tilting the concept of architecture out of its age-old gravitational axis. Similarly to the train ride, the airplane flight offered mechanical thrust through previously unimagined perspectives of space-time, dissolving the grounded identity of objects and subjects. As James Gibson has noted:

FIGURE 2. Norman Bel Geddes, *Futurama*, New York World's Fair, 1939 (courtesy of Harry Ransom Center, The University of Texas at Austin).

> Seeing the world at a traveling point of observation, over a long enough time for a sufficiently extended set of paths, begins to be perceiving the world at all points of observation, as if one could be everywhere at once. To be everywhere at once with nothing hidden is to be all-seeing, like God. (Gibson 1979, 197)

The all-seeing God-like view is also the cinematic view. Of "city symphonies" such as Walter Ruttman's *Berlin: Symphony of a Great City* (1927), Gunning remarks: "The street remains an essential image […], but the filmmaker rises above its one-way logic, employing cuts that move without friction, even with collisions. The camera remains disembodied, aerial, transcendent" (Gunning 2011, 70). The film camera's ability to see the world with an altogether different perspective from that of the human eye is in itself a kind of aerial view: "An exclusive realm detached from earthbound mortals" (Morshed 2004, 94).

Tati's *Playtime*

In his acclaimed film *Playtime* (1967), Jacques Tati's camera offers a dystopic no-place, rather than an aerial overview; "a glistening antiseptic environment" has become what is left of the aerial promise (Ockman 2000, 178). As if Bel Geddes's Aerial Liner Number 4 crash-landed at Orly, the traveler's continued journey now depends on the artificiality of the multiple glass surfaces in the unidentifiable airport terminal. The location of the film, according to Ockman, is "set outside normal space-time relations […]. It initiates the viewer into an 'other' order, a time of aesthetic play, cinematic time—*playtime*"

(Ockman 2000, 178). The background for Tati's vision is clear, Ockman reminds us: "Between 1954 and 1974, 24 percent of the buildable surface of the city was subject to demolition and redevelopment" (Ockman 2000, 83). A process started with Haussmann about a hundred years earlier, this violence of urban space's creation begins with an aerial view; as Walter Benjamin reflects: "Haussmann's urbanistic ideal was one of views in perspective down long street-vistas" (Benjamin 1997 [1935], 173), and with the Haussmannization of Paris, the citizens "began to become conscious of the inhuman character of the great city" (Benjamin 1997 [1935], 174). And equally, an aerial view will be its only remedy, commoditized through Ferris wheels, outlook towers, and eventually, revolving restaurants. "The violence of the urbanism 'on the ground'", as Dorrian states, "would be sublimated into the quasi-pastoral spectacle of the 'urban landscape'" (Dorrian 2007, 6). As Ockman concludes, the relation of film and architecture "is a paradigm of the relation between physical experience and the advancing forces of dematerialization and virtualization" (Ockman 2000, 93). The motion of the revolving restaurant adds to the dissolving-of-reality effect, making the external scenery less real, more cinematic, and, most importantly, relentlessly more ideal.

Cold War Heterotopias

The continuation on this media archeological journey takes me to the multi-media architectural practice of the Space Age architects Charles and Ray Eames. Their works and attitude towards architecture and spaces of information serve to illustrate how the politics of visual media and information strategies in post-World War Two USA created spaces of heterotopias on a global scale.[2]

The Eameses' contribution to the 1959 American National Exhibition in Moscow brought significant attention to the backdrop of Cold War strategies. Their multi-screen installation *Glimpses of the USA* provided over 2200 still and moving images separated onto seven gigantic 20-×-30-ft screens. Suspended from the roof of Buckminster Fuller's massive 250-ft diameter dome, the visual effect overpowered any previous multi-screen experience hitherto constructed. Here, the aerial shots we know from the city symphonies are repeated. The flying all-seeing camera, now from as high as outer space, starts up with star constellations and planets. Spread across the seven screens followed aerial shots of cities and landscape before closing in on details such as milk bottles, newspapers, and eventually the intimate private sphere of the family breakfast and the startup of everyday life. As Beatriz Colomina (2008) has noted, the *Glimpses* installation emphasized the domestic and personal "good life" in combination with aerial views and outer space voyage. Domestic life became "suspended within an entirely new spatial system—a system that was the product of esoteric scientific-military research but that had entered the everyday public imagination with the launching of Sputnik in 1957" (Colomina 2008, 81).

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2. I retain here the concept of heterotopia elaborated by Michel Foucault, as a concept of human geography. According to Foucault (in a 1967 text for a lecture that was published later without his approval), heterotopia describes places and spaces that function in non-hegemonic conditions: "Places of this kind are outside of all places, even though it may be possible to indicate their location in reality. Because these places are absolutely different from all the sites that they reflect and speak about, I shall call them, by way of contrast to utopias, heterotopias" (Foucault 1986, 24).

On the agenda for the exhibition in Moscow was an attempt to soften the arms race and tame the space race of the Cold War into a dialog of domestic life and a competition in kitchen appliances. However, as Colomina notes, the final outcome of the gigantic seven-screen installation was "that of an extraordinarily powerful viewing technology, a hyper-viewing mechanism, which is hard to imagine outside the very space program the exhibition was trying to downplay." As such, Colomina continues, "this extreme mode of viewing goes beyond the old fantasy of the eye in the sky" (Colomina 2008, 81). The *Glimpses* installation showed the good life of domestic America, but "without ghettos, poverty, domestic violence or depression" (Colomina 2008, 84). The Situation Room in the White House, where multiple screens are set up to bring in information from all over the world, may have inspired the multi-screen design. The Eameses were preoccupied with the organization of information, and *Glimpses* was "organized around a strict logic of information transmission […] where the central principle is that of compression. […] The space of the multi-screen film, like the space of the computer, compresses physical space" (Colomina 2008, 85). As Colomina insightfully observes, for the Eameses "architecture is all about the space of information". We no longer need concern ourselves with "space" but rather with "structure" or, more precisely, with time. "Structure, for the Eamseses is organization in time" (Colomina 2008, 89). Propelled by the same spatial regime, Bel Geddes's revolutionary restaurant design was re-born at Seattle's World Fair in 1962 as the Space Cage (Figure 3)—the initial name of the Space Needle.

Nowhere is the architecture as information, as structure in time, and as such a cinematic experience, more evident than in the revolving restaurant. Growing out of the same Cold War mentality, the very beginning of the information age, the gently rotating overview reassured the audiences of their mediated existence. As with the 360-degree-cinemas (and the painted and moving panoramas before that), the concept was a complex mixture of the clarity of overview and a sensory overload. As one commentator observes, the Space Needle

> became a flying saucer, or halo in the sky, the symbol of the 1962 World's Fair. It fit the fair's theme of a cheery Space Age tomorrow, defying cold war anxiety over nuclear annihilation. (Egan 2012)

The moving image absorbed and projected back the existence of modernity and became part of every aspect of life, turning architectural design into micro temporalities. The status of architecture, Colomina concludes, is transformed into an enclosure of information, "a space we now occupy continuously without thinking" (Colomina 2008, 91). These spaces can be classified as heterotopias in the way they operate through perceptual modes, placing the subject out of joint between immersion, abstraction, and different dimensions of time.

Concluding Thoughts

I have argued that the elevation in combination with mechanical motion set the revolving architecture apart from normative architectural experience and transgressed into a cinematic elsewhere. An archaeology of the revolving restaurant sends us further back in history, to the multiplicity of early attractions and the historical quest for total immersion. At
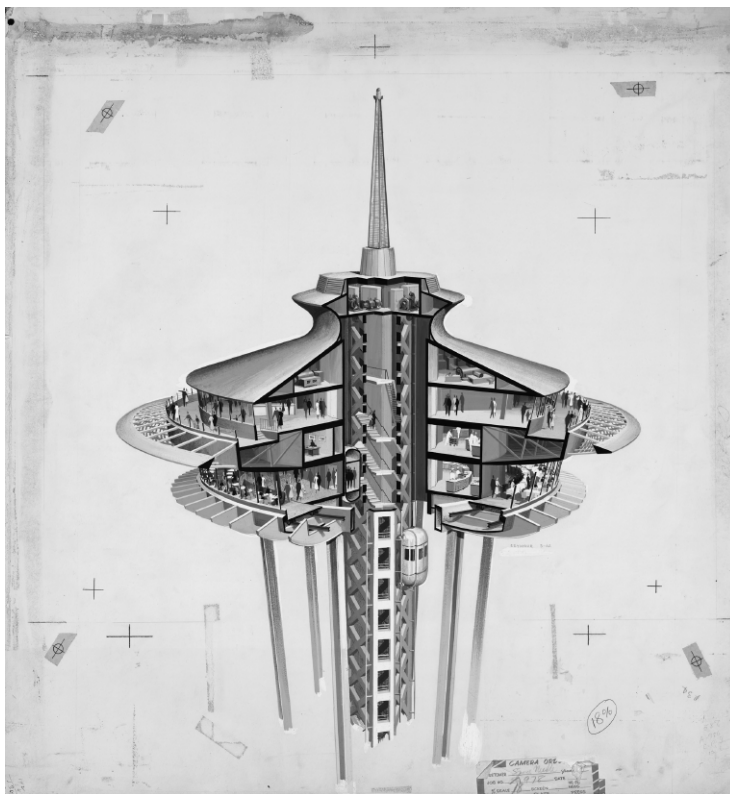
FIGURE 3. Century 21 Exposition (Seattle, Washington), design for the *Space Needle*, cross-section of restaurant. Architectural drawing by Seymour, acrylic or gouache on board, 1962, 68 × 64 cm (courtesy of University of Washington Libraries. Special Collections Division. UW18955z).

the same time as arousing complex feelings of overview and vertigo, power and dizziness, control and confusion, these elevated perpetual motion machines can tell us something about our relationship to moving images historically and today. The 135-m-high London Eye (re)launched the interest in urban observation wheels in 2000 and was soon followed by an unprecedented boost in urban wheels globally.[3] In parallel to this circle-centric development, other types of aerial rides such as the recently-installed Emirates Air Line (2012), a cable-car crossing the Thames by the Millennium Dome, and Oslo's own Sneak Peak (2012), a free-standing glass "elevator to nowhere", also contribute to this trend. In addition, the emerging technologies of commercial space rides and high-altitude ballooning promise to offer its passengers "the unexpected emotional reaction and unparalleled perspective-shift that comes from seeing our planet suspended in space" (World View n.d).

Alongside the apparent boom in aerial rides in the physical world, digital-cinema and new aerial-imaging technologies have prompted scholarly discussions on what has

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3. A short list would include, but not be limited to: the Star of Nanchang, China (2006, 160 m); the Singapore Flyer (2008, 165m); the High Roller, Las Vegas (2014, 168 m); the New York Wheel (under construction, 192 m); the Beijing Great Wheel (planned, 208 m); the Dubai Eye (under construction, 210 m); and Moscow View (planned, 220m).

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emerged as a new visual paradigm. Scholars such as Farocki (2012), Steyerl (2012), Elseasser (2013), and Dorrian and Pousin (2013), to name a few, have pointed to the increasing importance of aerial views prompted by new technologies of surveillance, tracking, and targeting such as Google Maps, drones (Weizman 2015) and satellites. Others (Brown 2013; Morgan 2015; Gunning forthcoming) have called for a more systematic study of camera movement impelled by the spatial configuration in digital cinema.

According to Erkki Huhtamo, media archaeology shows us how "the new is 'dressed up' in formulas that may be hundreds of years old, while the old may provide 'molds' for cultural innovations and reorientations" (Huhtamo and Parikka 2011, 25). As camera movement and aerial views emerge from older forms of cinema back into focus in digital cinema, the observation rides of the physical world correspondingly receive a boost of technological innovation. It is the resonance of these two spatial configurations that I am concerned with and that I am exploring in my media archeological project of the aerial view in motion. The revolving restaurant does not only show us a history of mass media and the way we are severely conditioned by our non-human machines (Kittler 1999; Ernst 2010); With this preliminary presentation I also hope to have shown how the view from a revolving restaurant can offer a nuanced media-archeological alteration of thought.

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☐ Fragile Storage, Digital Futures

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Data storage is a fragile thing; it is physical and in need of care, or else it breaks. Yet data are often thought to be both ephemeral and everlasting, categories for which a kind of physical fragility would seem to make little sense. Assumedly, data are both too fast and too slow to be fragile. This perception has long animated illusions of the digital as a fluid, ideal world divorced from the everyday dirt and matter of daily life. It produces dreams of an everlasting cloud of digital documentation, accessible everywhere yet located nowhere in particular.

Anyone attuned to the material culture of technology knows that these narratives are false, even if they produce everyday ways of acting with technology. Examples of the materiality of digital media breaking through these fantasies abound. For instance, when Pixar went to produce the DVD release of *Toy Story* (dir. Lasseter 1995), they found that around a fifth of the film's original files were corrupted as their disk storage had failed. The