

in the context of deepfake AI can serve as raw data for computer-generated voice assistance (at best) and for deepfake porn (at worst), as encapsulated and quoted in one provocative slogan: “Ever wanted Natalie Portman to yell obscenities at your neighbor? Adobe has you covered” (73).

On the topic of technologized and/or roboticized female voices, O’Meara significantly develops existing theory by mobilizing three case studies of media that cinematically represent female digital assistants. Bringing together work on AI and the posthuman voice, she argues that women’s voices are now, and have been, used as “central anchoring devices in the dystopic presentation of technologically enabled diegetic worlds” (54). Once again, it is, to use Doane’s term, the phantasmic body—the humanness of voice—that adds complexity and ambiguity to the posthuman aesthetic. By drawing a link between ASMR voices as “heteronormative models of care and intimacy” and the notably “damaged” or artificial quality of female voice assistants, O’Meara demonstrates how such digital voice performances are focused not on the content of the messages but on the quality of voice as a carrier of meaning (62). Given that voice in the digital realm is at least partially cyborgian, the book makes yet another connection to contemporary critical media studies in arguing for the inherent queerness of the technologized voice. Beyond the idea that cyborgs are queer, O’Meara masterfully weaves together examples across media, bringing in actual queer voices in programs such as *RuPaul’s Drag Race* (Logo TV, WOW Presents Plus, and VH1, 2009–) in order to conceptually link queerness with the posthuman voice. As AO Roberts argues in the essay “Echo and the Chorus of Female Machines,” sonic renderings of transgender voices already stretch conventions of what constitutes male and female vocal register. Further, the performativity of the drag voice on television oscillates between intermedial tropes of gendered vocalicity and cyborgian dimensions of dubbing that have been a historical cornerstone of drag performance.

O’Meara’s final destination on the continuum of female voice iterations (and, ironically, the first topic I associate with her work) is the soundless medium of memes. Using both GIFs and static visuals with captions, she argues for memes as “voice” bytes that enact playful political activism by silently echoing imaginary voices. While “unvoiced,” these intermedial artifacts can be seen as a return to silent film, where the recognizability of the source personality renders the voice audible through “mental enunciation” (150). What is more, the full affect is experienced through a combination of superimposed text, movement, and external intertextual reference.

Once again, O’Meara moves much further with her theorization than a celebration of memes as surrogate voices for voiceless groups. In terms of political affect, she positions these subtitled experiences of voice as digitally novel incarnations of political cartoons aimed at a media-savvy audience, which is then likely to “hear” the message in a particular voice, with particular performativity, as an intertextual reference of popular culture.

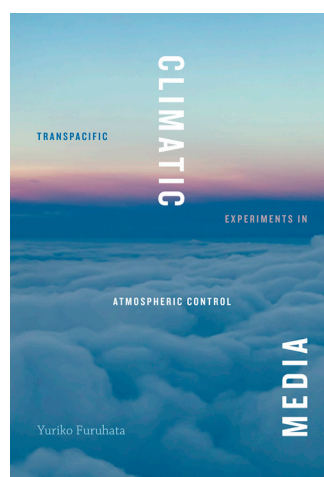
O’Meara masterfully revisits some of the core assumptions in past theorizations of the female voice on-screen, most notably revising the preconceived semiotics of the voice-diegesis relationship. Given the diversity of temporalities, platformization, and accompanying cultural poetics of listening, her claim that the acoustic mirror has been shattered is justified—and she skillfully threads a narrative of its dispersing vocal shards. O’Meara doesn’t just survey and update theory; she lays out a multifaceted framework for future analysis of the female voice across emerging technological and visual platforms. As rare as it is to find within a mature field like critical media studies a text that delivers a paradigmatic update on a major conceptual framework, Jennifer O’Meara has done just that. This will be the book to read for any and all scholarly work on the gendered voice and its intersections with technology and the screen.

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BOOK DATA Jennifer O’Meara, *Women’s Voices in Digital Media: The Sonic Screen from Film to Memes*. Austin: University of Texas Press, 2022. \$90.00 cloth, \$29.95 paper, \$29.95 e-book. 320 pages.

## LAURA BELTZ IMAOKA

*Climatic Media: Transpacific Experiments in Atmospheric Control*, by Yuriko Furuhashi



The omnipresent threat of global warming hastens the need to control the virtual thermostat of atmospheric bubbles that keep bodies comfortable and data centers functioning. This increasing dependence on a habitable environment and the growing drive to secure one are a warning to which Yuriko Furuhashi’s

*Climatic Media: Transpacific Experiments in Atmospheric Control* offers answers by weaving together and decentering its geopolitical transpacific history. One of *Climatic Media*'s main objectives is to make climate visible as media, challenging how media are conceptualized and studied. Furuhata moves beyond conventional media (film, television) into the domain of instruments, modes, and platforms that make climate legible, following the turn in environmental studies, infrastructure studies, media archaeology, and German media theory. She considers air conditioners, fog sculptures, capsule housing, physiochemical compositions of the air used in numerical weather predictions and cloud seeding, and networked systems of surveillance that work through signals in the air and ground.

By constructing a "lineage of visualizing the atmosphere," Furuhata defines this pervasive "thermostatic desire" as a "technophilic" one where the atmosphere, as "an object of calibration, control, and engineering," conditions space and the conduct of people and things within it (2, 29). The architectural, scientific, and artistic techniques and technologies used over the last century to control climate and modify the weather are implicated in the act of expanding and securing territorial borders and managing populations. Each participates in what Sloterdijk calls "atmospheric explication," turning the taken-for-granted existence of the environment into an object of manipulation and thus becoming visible expressions of a desire to "dwell inside a climate-controlled environment" (26, 38).

While reflecting on the prevalent insecurity of living in a technologically mediated environment, Furuhata's research does not ignore the complex transpacific contexts of imperial and capitalist modernity involved. By focusing on Japan, *Climatic Media* offers a welcome counterdiscussion to situating North America and Europe at the center of media history. It departs also from nationcentric approaches to the relational geopolitics between Japan and the United States, and their shift in alliance from the years preceding World War II to the Cold War.

Japan's first world's fair, in 1970 (Expo '70), provides a social library for Furuhata to unpack "a transpacific geopolitical context of site-specific weather control," the site's "geographical, climatological, and meteorological complexities" (26, 42). Expo '70's displays are the connecting dots and nodes between engineers, environmental artists, and architects—all experimenting in climate engineering and designs of built environments.

The book's first chapter explores the connection between weather control and environmental art by reading

the water-based artificial-fog sculptures of Nakaya Fujiko in a framework of atmospheric explication. Fujiko's fog-concealed dome at Expo '70 is more than a device of visual obfuscation for Furuhata: its techniques are "a scaled-down version of commercial, industrial, and military geoengineering that controlled and modified weather" (39). Fujiko's sculptures call attention to larger historical processes of the study and control of the atmosphere, including early-twentieth-century mimetic experiments reproducing natural phenomena in the simulated and controlled environment of the lab.

Furuhata is attentive to connections that informed the practice of atmospheric control, whether they are scientific, militaristic, or familial. Nakaya Fujiko's father, Nakaya Ukichiro, was the physicist who invented artificial snow in the mid-1930s. This leads Furuhata into an exploration of a career that reflects the repositioning of Japan from enemy nation during World War II to American ally during the Cold War. Thus, Nakaya Ukichiro benefitted from military-funded research and later worked with research labs established by the US Army Corps of Engineers. These two lineages bind fog sculpture to weather control, and artist to scientist.

Chapter 2 transitions from outdoor weather to indoor climate control and the increasing maintenance requirements of cloud computing and data centers and the latter's reliance on air conditioning. Furuhata takes Expo '70's simulated future city and its experimental use of networked computing and district cooling to understand the "proliferation of compartmentalized microclimates and customized foresight into future trends" (51). The future atmosphere, Furuhata shows, is a product of computing and engineering. Futurology's utopian embrace of digital computing is contingent on cooling down computer rooms. At the same time, mechanical air-conditioning systems are integral to the prediction of outdoor natural weather.

Chapter 3 considers the transpacific geopolitical undertones of architecture as climatic media by looking at the Cold War scientific expeditions and proposals of the Tange Lab. Its prewar design of prefabricated capsule houses built to withstand extreme polar weather grew out of geopolitical discourses about expanding the empire's "living sphere" into cold climates such as Manchuria's. The German word *Lebensraum* ("living space") was appropriated by Japanese politicians and political scientists in the 1940s as "living sphere"—a semantic shift that sought to justify an expansionist orientation of organically unifying an imagined sphere of Greater East Asia. Furuhata thus traces the infusion of Japanese architectural endeavors with biopolitical

overtones. Capsule houses would later be repurposed for peaceful scientific expeditions and become the basis for orbital space colonies. Such a lineage shows how “the scales of atmospheric control shift but they exhibit the same thermostatic desire” (103).

The use of petrochemical products in the building materials of Tange Lab–affiliated Metabolists, adherents of a postwar Japanese architectural movement inspired by nature, comes under closer scrutiny in chapter 4. Biological concepts of cell renewal embedded Metabolist design with “harmonious connotations of renewal and sustainable growth” (116). The movement sought to optimize reduced postwar territory with extensions of megastructures into the sky and sea via artificial land. Furuhata takes a Marxist perspective “to shift the term *metabolism* away from its associations with a holistic view of nature-human relationships, and put the emphasis on the political economy of production” (110).

The chapter unpacks Kisho Kurokawa’s holistic vision of plastic-capsule housing, which was designed to be replaceable or renewable in ways similar to the cells of living organisms. The materiality and production of these prefabricated capsules opens up a discussion of the ecological impact of the petrochemical and chemical industries and the detrimental reliance of this architectural movement on plastics and oil.

Chapter 5 departs from prior chapters by turning to intangible networked systems of urban surveillance (remote sensors, closed-circuit television, networked computers, and tear gas). Most of these techniques are atmospheric, Furuhata argues, because wireless signals are carried by radio waves that saturate the urban atmosphere (134).

Tear gas, the “ordinary counterpart” of networked surveillance, is an immersive and communicative, or “doubly mediatic,” form of atmospheric control (136, 138).

Situating each against the geopolitical backdrop of the Cold War and the cybernetic turn of architecture and urban design helps tie this final chapter to the preceding chapters. Its main case study is Kenzo Tange’s efforts “to rethink urban design through the lens of cybernetics”—an effort that predates his encounter with McLuhan and is more in line with Wiener’s influence in Japan (138–39). Envisioned as a “living organism” that “self-regulates” via “networks of communication and control,” the city (and networked surveillance) would be predicated on cybernetic understandings of feedback and systems theory, as Furuhata shows (145).

*Climatic Media* marvels in its connections. Even chapter 5’s return to Expo ’70, with efforts of crowd control as “a top security issue” for the Japanese government, binds these novel techniques to the events, experiments, and complex relations of the actors (scientists, architects, and artists) of the day (161). Furuhata’s bid to define climatic media and to establish the ecological and transpacific geopolitical feedback loops that “undergird atmospheric control as forms of air conditioning and social conditioning” becomes a refreshing and necessary endeavor (165).

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