

Introduction

Studio Perspectives

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If you're reading this book, you're probably at work. Be that a specific place (your office, say), or someplace else, wherever you are has become, in the predicative sense (*to be working*), a workplace. Consider, for a moment, that place, with its chair and surface; its screen or screens; the shelves and piles of papers and books; a mug, perhaps, or a thermos or paper cup; those pictures that remind you of somewhere else, or other windows to the world outside—the non-, or after-, work. If you're a professor, your workplace may be the stereotypical image of order in chaos, or maybe you like it *just so*. If you're a student, an adjunct professor, or just someone who avoids offices, you may be at home on the sofa or surrounded by library patrons or coffee and tea drinkers. Wherever you are, this is the world of your work; the world you make to work; the world your work—the act of working—makes. If all goes well, you probably don't think too much about this place while you're working; it just *is*. It is the condition of your labor, and your labor is its condition. As such, this place has no doubt left an indelible mark on your work. But can you define it in any precise way? Has it left a legible, knowable trace?

Try now to forget about that place again (you are *working*, after all). Writers have always had such places, however different, ephemeral, or tentative they may have been. Think of Hemingway's Paris morning routine in his *chambre de bonne*, or Emily Dickinson, who wrote everything in the Homestead, or Walter Benjamin, famously holed up in the Bibliothèque nationale or, more provisionally, seeking peace and quiet in the woods of Ibiza.¹ These places, whether given or made, are one condition of writing and the written worlds we create. Our work is always, in this sense, doubly constituted: we create these worlds—these conditions of creation—for the purpose of creation. They are everywhere in our work and also nowhere.

This book is no exception. Behind its words lie specific places and all of the material, economic, and political realities that more quietly—at a distance—define its pages. Though we don't often foreground them, those spaces, with all of their hidden costs, need to be thought.

This volume applies such thinking to a place—the studio—that has often been subjected to this kind of reflexivity by the artists and filmmakers who use them. Take, for example, René Clair's 1947 film *Le silence est d'or*. Set in the early days of French cinema, the film appealed to France's silent-studio past in a moment of tremendous uncertainty about its studio future. Clair, having spent the war in the United States, no doubt chose this reflexive narrative as an appealing way to announce his return—and, he surely hoped, his home industry's return to prominence. One of the great challenges French filmmakers faced when Clair landed in Paris was precisely how to redevelop an aging studio infrastructure that, even where it hadn't been damaged during the war, trailed far behind the newer studios found in places like Clair's recent filmmaking home, Hollywood. As set designer Lucien Aguettand lamented in an undated memo written, most likely, in late 1945: "There is something incomprehensible about the fact that our films, which are highly appreciated on the foreign market, come out of old studios, most of them 30 years old, with few or no technical advantages. If no effort is made, we may soon find ourselves with these installations worthy of film antiquity, unable to continue our productions."²

The end of the war had left Aguettand, like his counterparts in other French industries, charged with imagining a new future for French infrastructure. For cinema that meant studios. In addition to listing more technical concerns about what it would take to compete with the facilities at Pinewood or Cinecittà, Aguettand insisted that in reimagining their studios, French industry leaders must not neglect the human element, for, indeed, studios were workplaces like any other. Early studio designers had, Aguettand insisted, created almost "inhuman," "monstrous" working environments "and surrounded these demonic places with so-called 'workers' cities,' too often hopeless, sad and pitiful, making even more painful and discouraging the lives of those who work in the factories."³ Now was the time to avoid the mistakes of their predecessors.

It was particularly fitting, then, that Clair would make those earlier places his film's subject. The project could hardly have been more reflexive. Shooting took place on the foundations of a key site of what Aguettand could now dismiss as "film antiquity" but that had once been the height of French studio glory: the former Pathé studios at Joinville.⁴ In his preparatory images for the film's sets, Léon Barsacq, like Aguettand, one of France's most significant set designers from the interwar years, conjured this studio past for the present, reproducing in fine detail a studio interior that readily reprises Georges Méliès's first studio at Montreuil-sous-Bois and the similar glass-enclosed studios built by Pathé in the decade that followed (fig. 0.1).⁵



FIGURE 0.1. Léon Barsacq, Maquette de décor, *Le silence est d'or* (ca. 1956). Dessin sur carton; 18.8 × 24.6 in. Cinémathèque française, Bibliothèque du film. © 2019 Artists Rights Society (ARS): New York / ADAGP: Paris.

The film's plot—with a love triangle featuring an aging director (Maurice Chevalier), his younger assistant (François Périer), and a young woman (Marcelle Derien) newly arrived from the countryside—sounds like something from the *Nouvelle Vague*. More significant, the industry's deep concern with the studio infrastructure necessary to make such films highlights the importance studios retained in France in the leadup to, and the aftermath of, the movement so lauded for its preference for shooting on location. In Aguetand's desperate desire to develop an "ideal," socially conscious studio environment in the midst of Reconstruction-era impoverishment, as in Clair's reflexive studio (re)turn, and in Barsacq's faithful reprisal of France's glorious studio past, we find the blend of material concerns, profilmic needs, labor practices, textual products, and symbolic values that make studios rich objects of historical analysis.⁶

With attention to all of these facets of studio history, this volume emphasizes the critical role studio spaces and their creation have played in the history of visual culture. Together, its chapters examine how studio worlds have been made and how such worlds, in turn, have made the worlds of the moving image. The book's collective argument, stated most broadly, is that when we foreground these worlds and the processes through which they are created, inhabited, and used, we gain new insights into moving-image culture and the material, ecological, social, political, and economic determinants that prefigure and mark, if not always in readily legible ways, the worlds that appear on our screens. These chapters focus on studios from specific, if widely diverse, geographic locations and historical periods. But together they offer approaches, as I will argue in this introduction, with much broader application for historians and theorists of the (moving) image who may not be interested in studios per se but who may seek methods, be they spatial, material, ecological, or political-economic, for understanding the conditions that shape images and image culture.

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The studio has long held a central role in the practices and discourses of art and global media. On the one hand, studios have, for centuries, been at the very heart of visual cultural production and the language used to describe it. For all of the changes to moving-image culture in the age of “new” media, studios continue to define the daily work of artists and film and television crews in physical locations around the world, as well as the virtual spaces—software suites, apps, and other digital creation platforms—that increasingly allow forms of “studio” production to take place in any location with electricity and a network connection. Despite the dispersal of production across such sites, real and virtual alike, cinema remains marked by its studio past. We continue to use the term *studio* to designate Hollywood’s classical industry (“the studio system”), to deploy the buildings as metonymic substitutes for the companies they house (“the studios”), and, more recently, to refer to the virtual spaces—Final Cut Studio, DaVinci Resolve Studio, Corel VideoStudio, Microsoft Visual Studio, etc.—in which virtual image worlds are increasingly made.

On the other hand, the studio—as a physical place—has consistently been overlooked in film and media studies, even despite the “spatial turn” that has generated such a substantial literature about cinema’s relationship to urban environments, its treatment of space and place, and its representations of architecture and infrastructure. This paradox, as I have argued previously, has partly to do with the nature of studios themselves.⁷ From their origins studios were designed to generate technological visibility by remaining unseen. As a hidden necessity for illusive forms of cinematic and televisual production, they were often present but rarely noticed by film and television viewers or acknowledged by critics. Hiding in plain sight, these critical sites readily faded into the background of text- or exhibition-focused critical discourse.

Or, one might say, studios were *made* to recede from critical view as part of the disciplinary formation through which film studies, not altogether unlike art history (especially in its modernist strain), has focused on visual form, textual analysis, and aesthetic lineages—the formations of style—more than the conditions from which texts arise. To wit, film and media students tend to learn film language and textual analysis first. The “film analysis” paper or “scene analysis” test (or, in art history, the identification exam and visual analysis paper) embody disciplinary emphases on form, style, and text. Such norms of instruction emphasize the capacity to recognize form and to analyze representations, not to ask whence and how those forms come to be. As Lee Grieveson has argued, this emphasis, at least in the American context, has roots in efforts by the Hollywood film industry, dating to the silent period, to make the study of film a form of connoisseurship, or “appreciation,” thereby discouraging studies of the political economy of media or its potential ideological effects on audiences.⁸ One might posit a less insidious intention behind this move, but the field’s roots in English departments has nonetheless helped encourage a focus that, although it shifted with the New Historicist tradi-

tion and related New Film History, remains rooted in analyses of textual forms. The merging of film studies and art history around analyses of film and/as art has reinforced this emphasis on form and its textual histories, even if it has also encouraged greater attention to sites of exhibition as film and media scholars and art historians converge at the sites and histories of “expanded” cinema, the “black box” in the “white cube,” and other forms of (new) media installation.

Meanwhile, work like the latter, which has challenged this focus on texts, often by calling attention to their contingent meanings and ideological effects, has at times shifted attention further away from the conditions of production. Led by feminist film theorists and, more recently, by scholars working in queer and critical race history and theory, such work has highlighted the important processes through which visual forms come to have different meanings according to variations in exhibition setting and, especially, spectator experience. This mode of analysis can often, and for good reason, temporarily bracket off the messy details of how film texts, at least in the dominant mode of industries like Hollywood, arrive on our screens loaded with all of the ideological weight of heteronormative, patriarchal production norms, the product of which—the text—may nonetheless be productively subjected to deconstruction, reading against the grain, or analyses of fans’ capacity to (re)use the content for their own ends. When it does not take this for granted, for example by tracing inequalities in Hollywood production practices, such work demonstrates one value of analyzing the working conditions behind the screen.⁹

Three recent research initiatives have created fertile ground for yet more attention to such conditions. In film and media studies, the subfield devoted to media industry studies, or “production studies,” has put renewed focus on the practices of media making. Working at the intersection of political economy, cultural studies, and varying iterations of anthropology, sociology, and media ethnography, its scholars have taken up what Vicki Mayer, Miranda Banks, and John Caldwell describe as “the crisis of representing producers, their locations, industries, and products.”¹⁰ Part of this “crisis” is precisely the spatioepistemological gap separating sites of exhibition (and the media texts displayed in them) from the harder-to-access places and social conditions from which those texts emerge. The work of overcoming this gap by getting behind the scenes has not, however, tended to mean greater attention to the studios themselves. In fact, production studies scholars have often explicitly bypassed the studio on the assumption that studio knowledge is old news. As Mayer, Banks, and Caldwell put it, “It was not so long ago that studies of film and television production limited their geographic considerations to the space of a studio set,” a limitation that leads their contributors to seek production stories elsewhere.¹¹

At work here is a broader assumption, dating at least to canonical accounts of the “studio system,” that even the most detailed analyses of studio working practices need not consider the studio itself in great depth. Take, for instance, the

descriptions in *The Classical Hollywood Cinema* (1985). In her essential sections about Hollywood's mode of production, Janet Staiger acknowledges that "it is not unimportant that this system of production centralized its work processes in the studio/factory . . . the focal site of the manufacturing of fictional narrative films." The system itself—hence the "studio" moniker—was, Staiger argues, "particularly manifest in the physical plant of a Hollywood studio," with its buildings numbered according to the ordered division of tasks that defined filmmaking as a form of factorylike assembly.¹² Staiger's account includes early attention to what scholars have only recently come to recognize as the critical material and environmental costs of creating the studio world, which, in the case of the Lasky studio built in 1918, to cite just one example, reportedly required "a tract of timberland in Oregon and a private sawmill and steamers to transport the wood to Southern California."¹³ There, however, largely ends the account of studios, at least as sites and material forms. The emergence of production studies, with its primary focus on the working practices of the present, has—with few important exceptions, including sections of Ben Goldsmith and Tom O'Regan's useful study, *The Film Studio: Film Production in the Global Economy* (2005)—not seen fit to extend that view in either historical or materialist ways.¹⁴

The emergence of media infrastructure studies has offered perhaps greater potential to reconsider sites of media production, at least those of the recent past. Recognizing that media technologies, as Brian Larkin has argued, "are more than transmitters of content" and that "they represent cultural ambitions, political machineries, modes of leisure, relations between technology and the body, and . . . the economy and spirit of an age," such work has highlighted the significance of the many materials, objects, and systems that define the media world behind, around, and beyond moving-image texts.¹⁵ Attention to these media infrastructures, defined by Lisa Parks and Nicole Starosielski as "situated sociotechnical systems that are designed and configured to support the *distribution* of audiovisual signal traffic," has helped to flag the significance of the long-overlooked networks and objects of media distribution: satellites, antennae, cables, waystations, and so forth.¹⁶

Once again, however, this emphasis on distribution and exhibition has tended to imply that production infrastructures are already sufficiently understood. As Parks and Starosielski put it, part of the power of "adopting an infrastructural disposition" is precisely to counter the tendency "to prioritize processes of production and consumption, encoding and decoding, and textual interpretation."¹⁷ In adopting this otherwise significant approach, however, work about media infrastructure has too readily collapsed, as this description does, "processes of production" (itself an overly tidy category) into the work of "encoding" and "textual interpretation." Production processes and their infrastructures are *not*, as it turns out, something media scholars already know (more than) enough about. The sheer quantity of new insights found in this volume should make that point amply clear.

The related emergence, in film and media studies and in art history, of significant subfields devoted to artistic materials and media ecologies has offered newly productive routes into such knowledge. Parks and Starosielski, for example, emphasize the heuristic utility of tracing the relationship between infrastructure and materials, noting that “exploring material forms and practices . . . bring[s] new settings, objects, and stakeholders into the arena of media and communication research.”¹⁸ So, too, with a reconsideration of studios. In both their physical forms and as nodes in networks of modern life, studios embody and facilitate broader interactions between cinema and the worlds of science, technology, architecture, and ecology. The focus on materials, particularly as it intersects with ecology, has done perhaps the most to encourage reconsideration of studios as material, resource-dependent environments. Nadia Bozak and, more recently, Hunter Vaughn, both citing a key 2006 UCLA study about the relative “sustainability” of the motion picture industry in Los Angeles, have foregrounded the environmental costs of making culture. As Bozak put it first, and most succinctly, “cinema is intricately woven into industrial culture and the energy economy that sustains it.”¹⁹ As I have argued, and as Jennifer Fay has taken up more recently, the film studio embodies not just this resource dependence but also cinema’s broader worldmaking ambitions—an anthropocentric desire to control and simulate the nonhuman world.²⁰

As these growing subfields—with their respective concerns about production, infrastructure, and materials/environments—should suggest, the studio’s relative absence from critical discourse represents a significant blind spot in film and media historiography. The failure by historians to consider the studio as an architectural space and material form speaks to the broader tendency to overlook material histories that are now being urgently recovered. This reconsideration of the material is especially important at a moment when, as Giuliana Bruno recently highlighted in *Surface: Matters of Aesthetics, Materiality, and Media*, the virtual has so come to define media experience and discourse.²¹ One of this volume’s goals, then, is to contribute to the widespread reconsideration of immaterialist accounts of today’s “new” media by foregrounding just how much film and media studies has to gain from the materialist turn in infrastructure studies and media archaeology, as well as from the broader emphasis on “new materialism” across humanities disciplines. At the same time, this book is not an indictment or dismissal of any existing approach. On the contrary, it seeks to open new analytic possibilities that can readily build on and be joined with the fruitful work being undertaken elsewhere, whether by scholars attentive to industry formations, those concerned with sites and spaces of exhibition, or those focused on texts and the work they do.

The essays that follow perform this epistemological opening through a cross-national and transhistorical examination of studio design and use. They take the

studio as a common point of comparison for understanding the heterogeneous contributions that materials and architectural forms have made to cinematic space and film form. Although filmmakers have long shared the need for controlled environments with regulated illumination and freedom from the contingencies of location shooting, architects have responded to those needs in a variety of place- and period-specific ways. Numerous historical, cultural, and regional contingencies have shaped studio forms, including architectural vernaculars, municipal building codes, available materials, infrastructural technologies, film production practices, the requirements of genres and subjects, and the limitations imposed by politics and economics. By turning our attention to such contextual factors, these chapters seek to open film and media history to new questions about the conditions that shape the construction of profilmic spaces and their products, as well as the kinds of archival materials needed to address them.

In turning to materials and questions more commonly associated with architectural history, the history of technology, and art history, the contributors offer both histories and approaches with intellectual purchase well beyond their specific studio subjects. By either bypassing film/media texts altogether or situating their formal features in broader discussions of the forms of physical spaces, some essays contribute to the displacement of the moving-image text from its onetime centrality as the discipline's privileged subject. While images were the ultimate product of studio production, these essays foreground the nontextual goals that drove studio design and use, goals such as controlled and comfortable architectural interiors, corporate prestige, efficient labor practices, patterns of workplace sociability, and control of employee behavior. Other essays highlight the value of applying textual analysis beyond the moving-image text to the studios themselves in order to examine media companies' various nonfilm forms of aesthetic production. Other essays use historical knowledge about media spaces and studio forms to rethink theoretical questions about the nature of cinematic space and the work of the apparatus. Finally, several essays contribute to work about cinema's contemporary transnational character by examining studios as physical nodes in the networks through which circulate the workers, materials, and commodities that make and define global cinema.

Existing studies of studio space, especially in art history and more rarely in film and media studies, suggest the historical and methodological contributions that such work offers.²² In *The Soundscape of Modernity: Architectural Acoustics and the Culture of Listening in America, 1900–1933*, architectural historian Emily Thompson demonstrates the value of situating the emergence of synchronized film sound within broader changes to the meaning of noise, the culture of listening, and the new architectural materials and building forms that defined the modern soundscape in early twentieth-century America. By putting film history in dialogue with the history of architectural materials, building practices, and the discourses they

defined, Thompson offers new ways of understanding not simply the early forms that film sound took but also why film's artificial studio-produced sound was so desirable in the first place. In *Hollywood Cinema and the Real Los Angeles*, Mark Shiel highlights the importance that film studios had in the material and urban development of a city literally shaped by film production.²³ And in *TV by Design: Modern Art and the Rise of Network Television*, Lynn Spigel uses the history of NBC's and CBS's respective "television cities"—a category on which she expands in this volume—to explore how televisual space and movement emerged not simply out of existing film aesthetics but within new modern architectural practices that TV executives employed with the aim of both enhancing their corporate prestige and establishing new production practices and aesthetic styles. Television studio architecture, Spigel shows, offers a multilayered form of product differentiation that cannot be understood by focusing only on the TV text.

Finally, in editing this collection, I have endeavored to push forward, expand, and challenge the arguments of my own work about early studios in the United States and France. In that work I situated the studio's formal character and its role in shaping the content and form of studio films in the architectural traditions that had defined theatrical stages, photography studios, factories and mills, greenhouses, and international exposition structures and in the development of building materials, including diverse forms of glass, iron, steel, Portland cement, and reinforced concrete. By positioning cinema in the developments of the Second Industrial Revolution that historians of technology have termed the "human-built world," I sought to define cinema as a technological system for the production of environments—or in more recently prominent terms, to use the studio to consider cinema's "anthropocentric" ontology. Studio cinema epitomized the broader worldbuilding ambitions that made cinema, from its earliest Western foundations, both a product of and critical contributor to the processes now associated with the so-called "Anthropocene."²⁴ This included the extrastudio logics whereby filmmakers looked on "natural" landscapes with studio eyes, reimagining what would come to be termed "locations" as potential sets that could be mined and extracted to generate cinema's human-built virtual worlds and with them a humancentric conception of nonhuman nature.²⁵

How, this collection asks, did such processes work elsewhere, both in other Western contexts and non-Western ones, and in later historical periods? How did different architectural and technological traditions define studios in places like Japan and Brazil? How did the differing patterns of industrial development condition studios from Mexico to the Middle East? How have cultural specificities and aesthetic norms, both of film and architecture, shaped studio designs and vice versa? How did world-renowned studios such as Cinecittà and Pinewood develop and become models in their own right? Are there aspects of studio design that transcend national and cultural lines? How do film, television, and new media

production spaces compare? And what is the studio's likely future in the digital age and beyond? While no volume could address all of these questions with complete satisfaction, one of my hopes in editing this book is that it will encourage further work along these lines. This is especially the case for analyses of studios in geographic locations that could not be included here, often owing to institutional pressures—one set of working practices that have shaped this work—that discourage scholars from publishing in edited volumes.

STUDIO APPROACHES: ENVIRONMENT-NODE-SYMBOL

Three general approaches to studios appear consistently in this volume's twelve chapters, suggesting both their utility and portability across geographic space and historical time. Without intending to suggest that these frameworks can be applied to or encompass any and all studios, in the remainder of this introduction I outline them with a view to creating a working methodological schematic that can be used to frame future analysis. Rather than writing standard chapter summaries, here I "introduce" each chapter in a patchwork of examples that illustrate methodological and thematic overlaps across the volume's wide-ranging contexts. If this book is successful, it will be in part because its chapters have so productively modeled these approaches in forms to which future studies can aspire.

Studios as Environments (Virtual + Material)

Reduced to the most essential definition, studios are spaces for the creation of spaces, worlds for worldmaking, and environments designed to generate other environments. As such, studios uniquely embody powerfully complex relationships of visual representation. From the modernity-defining blurring of reality and its image, or the framing of the world, to use Heidegger's lasting phrase, as a picture, to postmodernism's untethering of signifier from signified, the simulating work of the studio offers an unusually rich analytic opportunity to trace the precise means through which the real becomes virtual, the material becomes immaterial, the profilmic becomes diegetic. Studio environments have long structured and thereby exposed these strange, estranging transitions, as well as key theoretical discourses that emerged to explain them. Walter Benjamin famously used the studio's artificially generated "equipment-free aspect of reality"—in which reality itself has become the unattainable "'blue flower' in the land of technology"—to diagnose modernity's broader conditions of technological simulation and domination.²⁶ Siegfried Kracauer, writing about the sets at Ufa in 1927, similarly saw in the studio a profound encapsulation of human worldmaking ambitions and the process through which all of the world, as revealed in the studio's explicitly artificial one, was being manufactured in human-built form.²⁷

This volume's essays explore these conditions and the discourses about them beyond interwar and Western contexts, demonstrating, on the one hand, that such arguments were not unique and, on the other, that worldmaking ambitions—studio and nonstudio alike—were often as much aspiration as reality. As Diane Wei Lewis shows, for example, early Japanese studios contributed to a broader “ecological modernity” in which entertainment culture structured similar experiences of environmental simulation and control, from world's fair exhibits to popular aquariums and reconstructions of Mt. Fuji. Writing about studio rhetoric in 1920s Brazil, Rielle Navitski demonstrates that the desire for studio control also extended powerful political ideologies. There, the capacity to recreate reality in the studio represented modernity itself, both in the aspiration to reproduce Hollywood's industrialized production practices and in the erasure of indigenous populations whose image did not fit racist national imaginaries. As each of these chapters makes clear, however, such controls could not be guaranteed, whether, in the Japanese case, because flooding or typhoons disrupted the studio world, or, in the Brazilian case, again because of weather, in this case heat, or because of economic conditions that made ephemeral studio infrastructure more common than permanent, purpose-built constructions.

As Benjamin and Kracauer intuited, the changing conditions through which architects and designers fulfilled studios' worldmaking ambitions reveal a great deal about the underlying ideals that drove what the (film) world should be. For Brazil's white urban critics, as Navitski argues, both Brazil and, by extension, its cinema should be defined by a technologized, resource-fueled extractive economy, an ambition that could be only partially fulfilled in studio spaces. In midcentury Mexico, as Laura Serna shows, similar ambitions drove powerful stakeholders to invest new studio infrastructure with their aspirations for a national film industry, even if, in its ultimate form, that industry (and its studios) would bear the traces of Hollywood influence and transnational compromise. Meanwhile, across the ocean at Britain's iconic Pinewood Studios, economic determinations directed, in very different ways, British efforts to maintain studio production against Hollywood incursion. As Sarah Street describes in her analysis of the implementation of a midcentury technology known as the “Independent Frame” (IF), novel forms of studio world-creation made visible the complex entanglement of business imperatives, studio design and labor practices, and the changing forms of the textual worlds these conditions produced. A new technology and technique designed to streamline studio set design, the IF aimed, as Street puts it, for the “creation of a total, immersive world,” one that would put more of the onus on preproduction, thereby eliminating the contingencies of location shooting and allowing for a mode of “continuous production” that better fit a political economy of quotas.

By the late 1930s, the language of efficiency had become a staple of studio systems the world over, though the intended outcomes were by no means uniform. As

Robert Bird describes in his chapter about Aleksandr Medvedkin, in 1938 the Soviet studio Mosfilm implemented reforms designed to increase efficiency and reduce costs through IF-like practices of backdrop-heavy, modular set design. At stake in this shift, especially for Medvedkin, Bird argues, was the future of socialism and its competing “models of possible worlds.” Returning to a fixed studio after his short-lived experience leading a mobile studio on rails, Medvedkin faced the task of refining cinema’s power to create a metaphorical discursive environment for socialism in a new literal environment. In this sense studio practice was, for Medvedkin and others, a theoretical praxis through which film’s material worlds might create first virtual but eventually concrete political realities.

In his chapter about Charles and Ray Eames’s studio, Justus Nieland tracks a similar form of ideological dispersal as it radiated out from an unassuming low-rise at 901 West Washington Boulevard in Venice, California, across the circuits of midcentury American design thinking that linked the technology industry to the Hollywood studios, other sites of art practice, and the university. As Nieland argues, this ideology of “happy, creative living” both arose from and reinforced a studio form and practice of postindustrial flexibility for which 901 was the “heuristic environment.” As with the IF at Pinewood and socialist models of efficiency at Mosfilm, 901 was driven by modularity but in the cybernetic form and language of iteration, recombination, and feedback.

Across these contexts the question of how studio worlds could and *should* generate screen worlds reveals remarkable continuity but also distinct differences that richly illuminate differing conceptions of cinema as a medium—and more, too. In (re)conceptualizing their studio worlds, filmmakers and critics have consistently sought to enact broader visions for the social and political environments that films and their spaces, real and virtual alike, might be used to model. In short, the material studio environment has long encapsulated, reproduced, and thereby indexed discursive projects with stakes that go beyond the also important, sometimes related, question of how film’s material worlds become textual ones.

Studios as Nodes (Methodological, Material, Sociopolitical)

Just as they open onto broader discursive and political projects that have framed cinema, so analyses of studios offer methodological opportunities to look beyond cinema and film and media studies to broader historical relations that can enrich film and media histories. As new kinds of material environments, studios have roots in the broader transformations of nineteenth-century Western science, technology, and architecture. Across the twentieth and now twenty-first century, studios have continually been shaped by—and shaped—materials and working practices across these networks. Part of the studio’s heuristic value is to encourage film and media scholars to attend to such histories by investigating how studios, and cinema and television by extension, fit into historical systems that have not always

been part of film and media's historical narratives. For those strictly concerned with film or media themselves, studios allow these more broadly conceived analyses to remain centered, helping avoid simply, as Charles Musser has described in the context of studies of "pre-cinema," expanding and diluting into more general cultural history.²⁸ More important, when approached as network nodes, studios illuminate the convergence of forms of scientific and technical knowledge; technologies, resources, and raw materials; and groups of people as diverse in their expertise as their social backgrounds. To account for such convergence, studio histories encourage us to reach beyond traditional methods, often using nontraditional archives, and thereby to open new epistemological routes for media analysis.

This volume's chapters explore studios' shifting positions in networks of technologies, aesthetic styles, cultural influences, financial flows, politics, and laboring peoples. In some cases these histories track new historical connections across familiar sites. In her chapter about early interwar television, for instance, Anne-Katrin Weber examines model television studios built at exhibitions and trade fairs, signaling the still-new medium's place in the celebratory narratives of novelty, technological spectacle, and virtual experience that world's fairs consolidated in the nineteenth century. Weber traces this influence to the first permanent TV studios, including the 1851 Crystal Palace itself, which after being relocated to South London became home to John Logie Baird's television company. As Lewis notes in her chapter, Japan's first glass studio took its name from the same Crystal Palace, just one example of the importance the fairs had for Japan's (and its cinema's) relationship to Western modernity.

Other chapters demonstrate the important links between studio technologies and the infrastructural networks that supported the emergence and industrialization of cinema and television. As Navitski notes, Brazilian studio development was in part a question of infrastructural development, with telling links such as the use of trolley-car tracks as an intermittent source of power for ephemeral studio lighting. In both practical and more conceptual ways, Medvedkin's film train, as Bird describes, drew on rail, telephone, and electrical networks while also being imagined as a force akin to electricity itself, flowing across Soviet infrastructure to connect and power, like the resources being filmed, Soviet ideology.

In political economic terms studio histories illuminate critical forms through which economic policies and cultural practices have shaped the movements of resources, commodities, and workers across an expanding and shifting network of production sites. As Serna argues, the history of Churubusco illustrates broader tensions within Mexican and American film histories over how much involvement American companies and investors would have in an industry that risked becoming a Hollywood vassal but also benefited from its financial inputs. Noa Steimatsky's chapter about the fate of Cinecittà during the 1940s—a newly expanded version of the story she has told previously about its use as a refugee camp during

World War II—examines the darkest version both of this kind of subordination and of just what studios' controlled environments could, in all of their modularity, become.²⁹ As a site both for containing prisoners and producing fascist cinema, Cinecittà, Steimatsky shows, played host to “the interlacing of the spaces and circumstances of film production with those of war” in ways that put unique pressure on “our conception of these histories and how they might be told.”

Steimatsky's analysis of the forced movement of Cinecittà's unlikely labor force may represent a limit case, but it speaks no less to the kind of social history that studios, as network nodes, make visible in their more banal typicality. The Independent Frame, for example, was designed precisely to marshal studio infrastructure to reduce working hours, threatening workers with the mechanization of their art and labor. Today, such efficiency involves a complex ebb and flow of production teams moving through a global network of competing production sites defined by infrastructure, legal frameworks, and local labor forces. In their respective chapters about Lucasfilm and Dubai's Studio City, J. D. Connor and Kay Dickinson illuminate the complex movements of workers—following resources and capital—through these systems, which become particularly visible from studio nodes. As Dickinson argues, tracing such networks outward and “grappling with how [the film studio] instrumentalizes the current vicissitudes of both the global supply chain and the international property market [allows us] to get closer to the impact of capital's harmfully mercurial character.” As Connor demonstrates, that character also surfaces in the work of planning and publicity through which media firms implement their studio infrastructures and thereby define their corporate identities.

The post-World War II American university's important place in these networks comes into focus in Jeff Menne's chapter about the Digital Arts Laboratory (DAL) at SUNY Buffalo, site of what might be considered the first “new media” studio. As Menne shows, the DAL, created in the late 1970s by Gerald O'Grady and Hollis Frampton, emerged from the rich convergence of aesthetic influences, technological developments, and capital flows that linked New York City's art world and experimental film scene with the State of New York's public funding for education and the arts with upstate technology hubs and rural culture. O'Grady and Frampton leveraged university and federal government wagers on the value of educational technology infrastructure to fuse such networks into a physical location for education and creation. Like the Eames studio at 901, the DAL combined and consolidated the intermedial artistic visions and worldviews that have shaped visual culture since the mid-twentieth century.

Such views become visible, as Menne states most explicitly, when we consider the studio, in its straightforward economic sense, as a cost, whether of art making or doing business. In justifying and implementing that cost, whether in the university, at Lucasfilm, in Venice Beach, or in the Dubai free zone, artists and institutions reveal both their approaches to film practice and their broader understand-

ings of economic and legal policies and cultural and social politics. As Nieland demonstrates particularly well in his analysis of the Eames practice at 901, reading centrifugally from studio nodes out across networks of aesthetic influence and economic and political relations has tremendous intellectual purchase for scholars interested in how visual cultural practice intersects with broader social, cultural, and political histories. These chapters are all, to varying degrees, examples of this method applied to distinctive contexts.

Studios as Symbols

Finally, for all of their value as indexes into broader histories and methods that encourage us to read out from their nodal fixity, studios themselves have long functioned as powerful symbols that may offer as much, as objects of visual analysis, as the texts they produce. In early Hollywood, for example, studio architecture offered the new film industry one way to project visual messages about what it would mean for the city, whether by insisting on its continuity with local traditions, typically by appropriating the Spanish Colonial style, or by using neoclassical motifs as symbolic markers of strength and stability.³⁰ The image of Alice Guy Blaché (fig. 0.2), posing in front of her first Solax studio in Flushing, New York, captures further dimensions of the symbolic power studios have long held. Positioned, like the studio itself, in profile, Guy aligns herself and her power with her new infrastructure, the world created for her increasingly independent creations. Distanced from Gaumont's Paris headquarters, Guy, the only person in the photo, stands as the powerful controlling center of a new world whose productive chaos rests blurrily just beyond her knowing gaze, emerging along a diagonal that expands as if directly from her creative mind.

Though studios require no such visual splendor for their basic functionality, and thus might just as well—and at times do—disappear into the anonymous sameness of industrial warehouse design, film companies continue to use studio style to cultivate corporate identity. Highlighting the power of studio visibility, the chapters in this volume offer numerous examples of active identity-making, as well as efforts to keep the studio and its practices out of view. As Lewis describes, the image of Japan's "Crystal Palace" studio, imbued with the aura of its namesake, became a powerful symbol of the film industry and modernity more generally. The BBC's first studio in Alexandra Palace, as Weber explains, served similar symbolic purposes for early British television broadcasting at a time when programs themselves may not have been enough. Even Studio City Dubai, which otherwise, as Dickinson describes, blends into its local warehouse surroundings, employs overt cinematic symbolism—a kitschy filmstrip bridge (see fig. 12.3)—to evoke the site's ideals of creative connectivity and fluid circulation. In contrast, Lucasfilm, as Connor explains, has worked hard to limit its visibility, not only by distancing itself from Hollywood but also by actively concealing infrastructure at the Skywalker Ranch.