

Still, Church's investment in reception cultures renders *Post-Horror* even more valuable as a pedagogical resource. The later chapters' organization around key titles in the post-horror cycle makes them easy to assign for genre courses, while the chapter on naming the post-horror cycle will also be useful for discussions of media cultures and shifting valuations of fan knowledges. *Post-Horror* further affirms that the past decade—an epoch of horrors—has provided a fertile opportunity for filmmakers of various marginalized backgrounds to rethink what it means to be horrified. While one might wish for more focus on their work in the present volume, it does lay the groundwork for further studies by articulating the critical ethos of the cycle. The *Post-* of *Post-Horror* is thus a promise of continuity rather than a gesture of finitude.

BOOK DATA David Church, *Post-Horror: Art, Genre and Cultural Evolution*. Edinburgh: Edinburgh University Press, 2021. \$105.00 cloth, \$105.00 e-book. 280 pages.

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## MIKKI KRESSBACH

### ***Molecular Capture: The Animation of Biology*, by Adam Nocek**

Adam Nocek's *Molecular Capture: The Animation of Biology* begins with a viral video posted to Facebook: a beautifully animated microscopic protein comes to life, showcasing molecular processes in stunning 3D. The sleek digital animation, complete with score and sweeping cinematography, documents a biological process that remains inscrutable for nonexperts and prompts Nocek to ask: is this video a scientific document or mere entertainment?

*Molecular Capture* uses this question as a launching point from which to explore histories and theories of perception in popular culture and the biological sciences. Nocek argues that molecular animation cannot be confined to a particular category—science or entertainment—but instead that these seemingly contradictory discourses share a “logic of vision.” Inspired by the speculative philosophy of Alfred North Whitehead, Nocek's ambitious project takes the reader through a series of problems that never result in a conclusion, but instead provoke new responses and adjustments. This ambitious “speculative flight” traverses the heterogenous and asymmetrical histories of cinema and the biological sciences, as well as philosophies of power and

visuality, to theorize the epistemology of vision in the twentieth century.

By moving forward and backward in twentieth-century history and drawing connections between the philosophical works of Whitehead and Michel Foucault, Nocek argues that molecular animation is the product and perpetuator of (neoliberal) governmentality. This claim emerges from his historical and philosophical account of vision in science and cinema. Rather than focusing on the technological development of molecular animation—its algorithms, modeling practices, and tools—that have made contemporary 3D animation possible, Nocek is more concerned with the practices of visualization across biology and media, and how these reflect a broader epistemology of vision. As a result, the book examines histories of science and media ranging from twentieth-century microcinematography to early images of the human genome. With a focus on how scientists and creatives alike understood the role of vision, Nocek traces how molecular animation inherits a visual logic that traverses science and entertainment.

Whitehead's philosophical methods inform the structure of the book itself. Nocek divides his project into three parts, each building on the previous one, but simultaneously invites a rereading upon discovering new questions or philosophical frameworks in the later chapters. Nocek encourages readers to move linearly through the book but to then return to earlier chapters informed by new philosophical frameworks and theoretical questions. Part 1 (chapters 1–3) is focused on histories of science and cinema, part 2 (chapters 4 and 5) uses Whitehead and Foucault to theorize contemporary modes of perception and vision, and part 3 (chapters 6 and 7) reexamines the histories of part 1 through the philosophical lens of part 2.

Each chapter incorporates a new set of disciplinary texts, moving from histories of digital cinema and animation to the development of genomics, mathematical modeling in biology, ecological media theory, genealogies of twentieth-century power, “new apparatus theory,” and speculative design. This impressive array of materials makes for a complex and creative approach to a philosophy of perception, effectively collapsing disciplinary boundaries that have perhaps restricted theoretical accounts by scholars in distinct and nonoverlapping fields. This merger makes it challenging for readers grounded in specific disciplines to follow sections of Nocek's argument. His detailed knowledge of biological modeling practices may be lost on film historians, while readers in the field of genomics may struggle to follow accounts of digital cinema and apparatus theory.

*Molecular Capture* attempts to mitigate this issue by frequently recounting arguments, reminding readers how the argument has developed and where it is headed, while his introduction includes a helpful guide for readers based on discipline, recommending pathways for each respective field. Although I think many scholars will find sections of this book useful, the emphasis on perception and visibility makes the central thrust and focus of the book best suited for media theorists who have preexisting knowledge of continental philosophy's approach to technology and vision.

Part 1 turns to histories of molecular animation within the disciplines of both film and media studies and science and technology studies (STS) to show the apparent contradiction between the ontology of animation and the objectivity of scientific evidence. Nocek begins, in chapter 1, by examining molecular animation as entertainment through close readings of two popular videos created for the general public, *The Inner Life of a Cell* and *Protein Packing*, which employ the techniques of Hollywood cinematography to dramatize the microscopic world. Nocek uses these videos to explore theories of the computer-generated image and animation in film and media studies, showing how an emphasis on cinematic techniques such as camera movement fails to uphold scientific standards of objectivity, and thus may “express a mode of visual organization whose genealogy seems closer aligned to popular entertainment culture than to bioscientific research” (72).

In chapter 2, Nocek looks at how genomics position visibility and objectivity. The chapter combines philosophies of science with historical work in STS to examine how visualization emerged as the dominant paradigm for knowledge production over the course of the nineteenth and twentieth centuries. Drawing upon Giles Deleuze's theories of the virtual, Nocek argues that the invisibility of the gene in the early years of its exploration functioned as an invisible “excess” that makes visualization possible, that “the virtual and actual reciprocally determine each other” (91). This excess remains present in contemporary biological research, which fails to offer temporal visualizations of the genome; it is an excess that can be contained through animation. Chapter 3 picks up on this idea by examining recent research projects that use molecular animation as an experimental practice. Nocek contextualizes this work in mathematical modeling—a field that combines theoretical speculation with experimental verification. Through the analysis of the two recent research projects, he argues that molecular animation may be able to imagine spatiotemporal biological processes or concepts that can then be experimentally verified.

Whereas part 1 traces the heterogeneous histories of animation and visualization, Nocek argues that a disciplinary approach to history ultimately reinforces a narrative in which molecular animation appears “to be an outgrowth of two very different visual cultures.” Unsatisfied with this account, Nocek in part 2 turns to philosophy in order to “develop a general theory of media capable of responding to this problem” (20). Here, scientific and popular uses of molecular animation appear to share values, including an emphasis on the visual mastery of the surrounding world. However, following Whitehead, values are meaningful only when located in a broader social system or environment. Thus, in chapter 5, Nocek turns to Foucault to understand how a Whiteheadian approach to organizational systems is related to the organization of power. He argues that both Foucault and Whitehead are “trying to uncover how heterogeneous actions are coordinated to reproduce specific forms of order” (193). In Foucault's theory of governmentality, for example, diversity and discord do not undermine the social order but instead are essential to upholding it: power relies on resistance to power. Nocek advances Whitehead's concept of infection as a way to think about how to escape a Foucaultian power structure, to imagine ways to interrupt power and governance.

With an understanding of how a focus on shared values can be tied to broader system of power and governmentality, part 3 brings the philosophical and theoretical frameworks of the previous sections to theorize the visual epistemology of molecular animation. Returning to debates in media theory, chapter 6 moves into “new apparatus theory” to argue that molecular animation exposes a broader constellation of “screen-media dispositifs” that “expand and intensify neoliberal rationality” (224). Drawing from parts 1 and 2, he shows how molecular animation brings heterogeneous visual logics and cultures together “for the purposes of generating new forms of political-economic value” (264).

With an understanding of molecular animation in place, chapter 7 locates these epistemic practices in a broader genealogy of twentieth-century art and science. Drawing on histories of microcinematography and mid-twentieth-century design, he argues that molecular animation reveals a broader epistemological transformation that occurred over the twentieth century—one that Nocek calls the “cinematization of biological knowledge,” marking the convergence of “biological modes of knowing” with “popular forms of consuming” (295). This epistemological shift has helped “prime the sensorium for the neoliberalization of perceptual practices” that emphasize spatiotemporal mastery and dominance (295).

*Molecular Capture* ends by asking whether molecular animation has the possibility to disrupt the expansion of governmentality through design methods and theory. The final pages ground the philosophical work of the book in close readings of the films of Jean Painlevé. Here, Nocek offers perhaps the clearest articulation of what it would mean to create perceptual experiences that can intervene in the visual logic of dominance: an experience full of “distance, hesitation, interruption, and disorientation” that resists classification (329). This viscosity creates a condition where spectators can feel their relationship to the biological world without subjecting it to neoliberal systems of rationalization, a “perceptual relation where there is no possibility for visual conquest” (329). The question remains: can molecular animation, as part of this genealogy, redesign the future of vision and epistemology in the life sciences? Nocek encourages another flight into speculation and imagination to pursue answers.

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## BRIAN HU

### ***Whitewashing the Movies: Asian Erasure and White Subjectivity in U.S. Film Culture*, by David C. Oh**

In the late aughts, energized by the announcement of M. Night Shyamalan’s live-action adaptation of the animated series *Avatar: The Last Airbender*, popular Asian American media criticism took a noticeable turn away from the positive/negative-stereotype debates that had surrounded films like *Better Luck Tomorrow* (Justin Lin, 2003), and toward a critique of whitewashing. Shyamalan’s 2010 adaptation cast white actors in roles that fans had always read as mythologically Asian or Inuit, leading to an outcry and protests well documented in Lori Kido Lopez’s earlier *Asian American Media Activism*. This increasingly vocal strand of media criticism acknowledged that analyzing Asian stereotypes on-screen wasn’t even possible when Asian characters were themselves rendered invisible or replaced by white images altogether. Critics, including those organizing online through the “racebending” movement, expanded their object of analysis from cinematic and televisual texts to such industry practices as casting and public relations.

Given the crowded clamor of audiences, critics, and fans over whitewashing, and the rapid proliferation of think pieces online, is an entire book of case studies really needed? David C. Oh’s *Whitewashing the Movies: Asian Erasure and White Subjectivity in U.S. Film Culture* makes a strong case that these are still relevant approaches for scholars and critics seeking to make sense of Hollywood’s continued displacement of Asian characters on-screen, even when box-office analysis confirms over and over that stories about nonwhite characters reap significant financial returns. Oh shows how textual analysis is still possible by analyzing Asian images in absentia or through their white masks. In perhaps his most original rhetorical move, Oh tackles the question of casting not as industrial practice, but as an act of speculation, concluding each case study not by studying the film’s casting but by recasting the films himself to consider the political implications of simply changing a character’s race from white to Asian.

In addition to providing methods (such as character and narrative analysis) for studying whitewashing, Oh also usefully lays out working definitions and categorizations. In the introduction to the book, Oh distinguishes between three types of whitewashing: casting white actors to play Asian characters, or “yellowface”; outright replacing Asian characters with white ones to justify casting white actors; and centering whiteness in stories set in Asia or based in Asian mythology or culture. Each typology requires different approaches for media activism, but at the same time, all three can be attributed to the same ideologies of white supremacy and postracism.

To underscore the insidious, underacknowledged pervasiveness of Hollywood whitewashing, Oh focuses on case studies that, compared with the grotesque yellowfacing in earlier examples—like Mickey Rooney in *Breakfast at Tiffany’s* (Blake Edwards, 1961)—might appear downright liminal. For instance, is it yellowfacing if the characters are multiracial, as with Cameron Crowe’s *Aloha* (2015), discussed in chapter 1, or Carl Rinsch’s *47 Ronin* (2013), discussed in chapter 3? What if the film is an adaptation of anime that is presumably “raceless” or “culturally odorless,” as discussed in chapter 6? How does genre, specifically satire, complicate perceptions of whitewashing, as in *The Interview* (Seth Rogan and Evan Goldberg, 2014), analyzed in chapter 4?

And then there’s the question of authorship. Chapter 2 looks at films starring Asian Americans and directed by Chinese Americans, while chapter 7 considers Western coproductions with Chinese studios. In cases of mixed or “authentic” authorship, is whitewashing possible?

Oh’s answer to these questions is consistently and, perhaps predictably, “yes”: these texts, no matter the ambiguity