BOOKS

PLAYBACK: A GENEALOGY OF 1980s BRITISH VIDEOGAMES
Reviewed by James Sweeting. Email: <James.Sweeting@Plymouth.ac.uk>. doi:10.1162/LEON_r_01587

Videogames have a problem—not the kind brought up as part of a moral panic—rather one where the understanding of their own history is distorted by a North American account (even with Japan’s influence upon the medium). For many currently involved with videogames in some capacity, the calendar seems to start at 1983, after the North American videogame market crash. There is, of course, a tacit recognition of what existed prior to the crash, but this is viewed as a sort of “prehistory”; one that does not fit with the strict linear chronology that has helped define the way the medium has been understood since.

In Playback: A Genealogy of 1980s British Videogames, Alex Wade attempts to provide an alternative to an approach that he considers having overlooked the less evident influences of videogames: from the United Kingdom and internationally. Wade largely succeeds in this aim, but to an extent less than the title of the book would suggest. Yet, the book is the better for it, for it is not meant to be a history of British videogames, nor is it solely focused on the 1980s. If it were, it would be hypocritical, for then it would be providing the very linear chronology that he is arguing against. Furthermore, while the focus is on the United Kingdom, it is not exclusively so, as the videogames medium is a truly global one, albeit with centers of influence.

The relationship between videogames and technology is a running theme throughout, and one that Wade acknowledges has an intricate dichotomy. The model of supersession and obsolescence is at the core of the industry, but it occurs on the manufacturers’ terms and not purely in response to technological advancement. Wade states that they give the appearance of innovating, but “only in the context of the past,” implying that a new videogame console is not necessarily the best it can be, merely that is better than the previous one, and that the previous console is now unable to play newly developed videogames. This process of obsolescence has resulted in hardware platforms that “refuse to die” despite being replaced by superior technology and game design, which James Newman argues defies “the logic of upgrade.”

There is a fitting example that highlights the difficulty that the videogames medium faces in terms of archiving, as well as engaging with and understanding its past. Wade posits that “kids on the bus are aware of Sega’s existence as a hardware manufacturer [Sega stopped manufacturing videogame consoles in 2001 and became a third-party publisher/developer], but unsure as to why the definitive version of Sega Rally runs on a console that wasn’t built for 3D.” Emulation might enable videogames of the past to run on newer hardware. But despite efforts to make this an easier process, it remains uneven, and often the videogames do not function in the same way as they would on the original hardware. This distinction between awareness of the medium’s past and firsthand knowledge results in Game Studies adopting its equivalent to Latin: serving the purpose of describing events of the past but struggling to translate to the current time.

Equally Game and Film Studies are influenced by their relationship to older, more “mature,” media forms that are deemed to inherently carry greater critical weight, resulting in a hauntology. This hauntology could also be seen to exist within the videogames medium itself. Wade expeditiously notes that “today’s ‘hardcore’ gamers are able to express their dissatisfaction with the current state of the industry on NeoGAF [an online videogame forum] and then crowdfund a new game which fits with their profile of what a game should...
be and how it should play.” Recently there have been notable examples of videogame releases that were the result of crowdfunding campaigns based on nostalgic desires for past franchises. Upon delivery of said promised game, however, gamers discovered that gameplay mechanics they were so fond of in the past were no longer relevant or enjoyable. These are no simulacra either, for they are better games, running on new, more powerful hardware with higher-fidelity graphics, but dragging up the past does not work, nor do “hardcore gamers” actually know what it is they want.

One such nostalgic throwback has been the 3D platformer, relevant in this instance due to its ties to British developer Rare (formerly known as RareWare). During the 1990s Rare was one of the British firms that Japanese console platform manufacturers, such as Nintendo and Sony, went to for their coding expertise. The attractiveness of Britain’s videogame developers during the 1990s is a result of a shift in technological habitus that took place in the country during the 1980s. During that decade, computers moved into the homes of British families and from there into the bedrooms of the next generation of coders. It is this distinction where the heart of the book lies. For it highlights the source of Britain’s relationship with videogames but also suggests how the medium ultimately went in the direction that it did. Earlier home consoles were a family device, placed next to the TV in the living room/lounge; different familial members would play against one another in simplistic competitive games. But, the move into bedrooms, and more often boys’ bedrooms, had the unfortunate counter-effect of turning videogames into a more individualistic pursuit as well as instilling the gender separation and negative stereotypes that haunt the medium to this day. Nintendo did attempt to revive the notion of the whole family playing together as part of its strategy surrounding its Wii console but did not find lasting success and has since adopted a more general “gamer” approach seen by Sony and Microsoft once again.

The move into bedrooms, of course, was not universal, as consoles remained next to the communal TV in many households, but the relationship with videogames in the U.K. was not the same as found in Japan or even North America. Videogame arcade units were found across the United States, and the country also contained a large quantity of dedicated arcade venues. The same was not the case with the U.K. There might have been arcade units dotted across the country, but they were rarely confined to a dedicated space. Instead, they were guests within wider establishments, typically where food was served and videogames provided a distraction before the food arrived—although that was not the sole clientele, as countless people would go to these establishments with the primary intention to play and maybe get a beverage, as Wade notes from one of the multiple interviews that populate the latter half of the book. Eating establishments were not the only place to find arcade units. One of the more common locations was alongside beaches throughout British seaside towns, such as Southend-on-Sea and Newquay. Often these towns would provide the closest equivalent to the arcades found in the US, but these primarily served the purpose of acquiring more money from tourists visiting the town rather than providing the locals with the latest games. Therefore, the memory of British videogame players does not assign arcade games with the same prestige as those across the pond. Their memories are instead entwined with that of the holiday they were on, the people they were with and how the weather was. That does not devalue the videogames played, but they are interacted with in a very different context; therefore, the British habitus toward videogames has an inherently different genealogy.

Toward the end of the book Wade starts to more directly address the impact of British politics upon videogames from the country. In doing so he highlights the role of satire in the medium. This is not purely in the sense of humor—although it can be a notable feature—but via exaggerated real-world circumstances through the videogames medium to highlight and address the problems that exist. Wade suggests a dissatisfaction with the lack of significant satire found within the medium as it has aged. He notes that 1984’s Seaside Special was a clear piece of interactive media that used the nature of videogames as a means for its developer to demonstrate their objections to Margaret Thatcher’s Tory government in which the game provided players with the opportunity to “defeat” Thatcher herself and thereby complete the game. Satire has by no means disappeared from contemporary videogames, and it is the British-developed Grand Theft Auto (GTA) series (notably Rockstar North’s Grand Theft Auto V [2013]) that has been providing a critique of American culture and Western capitalism. Wade notes GTA as challenging the status quo, but also asks why more videogames are not doing so. GTA is not the only videogame series to provide satire, but Wade only lists a couple of overt examples. There is presently cutting commentary on contemporary society appearing in the medium such as in Nier: Automata (2017) or of the ramifications of foreign intervention as wit-
nessed in Spec Ops: The Line (2012), both of which also provide critique of the videogames medium, be it genre tropes or the very complicity of player interaction. Wade, however, is not wrong in calling for more satire, as the videogames medium can do more, but it is the less-overt games that are doing so in more interesting ways that potentially will provide a longer-lasting commentary.

Throughout the book, Wade sporadically mentions the appalling abuses that took place in the U.K. during the 1980s (and date back further) that have been recently examined, with many either prosecuted or under investigation. While these events should not be ignored, their presence in this book always seemed out of place; the connection to the videogames of the time and into today never became clear. The connection between politics and serious real-world events is certainly warranted, which Wade succeeds with briefly elsewhere in the book. But aside from helping to portray the 1980s as one example of a poor time in recent British history and questioning how “individuals could avert their gazes” from these events, it fails to address how this can be understood today. If there is a conceptual criticism to be acknowledged with this book, it would be this. Whether this was intended to play a bigger role in the book is not clear, but if it were, then that could explain its repeated mentions throughout.

Through Playback: A Genealogy of 1980s British Videogames, Alex Wade attempts to show that there can be a genealogical approach to videogames, one that does not have to specify a time and place as its position, instead, as part of a “continuum between past, present, and future.” Ironically, at times, the book forges that the focus is seemingly on 1980s U.K. videogames, as significant attention is given to videogames from outside the U.K. and from different decades. Yet this does strengthen the book, as the examples are given the space to support the argument at that given time, instead of being cut short due to their geographical and chronological otherness. The key to this book is supporting a genealogy of videogames as a whole, with Britain’s role in videogames providing a backbone to rein in the narrative journey. Videogames are not exclusive to a single country, hemisphere or epoch. Wade might have set out to provide a greater insight into the relevance of British videogames but has instead succeeded at calling for a spatially diverse investigation of videogames, and that time is now.

**ACROSS & BEYOND: A TRANSMEDIALE READER ON POST-DIGITAL PRACTICES, CONCEPTS, AND INSTITUTIONS**


Reviewed by Gabriela Galatti. Email: <info@ec-centric.eu>.

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Across & Beyond is a collection of theoretical articles and artistic projects that stem from the transmediale festival in relation, mainly, to the topic of the postdigital, as the title suggests, but that exceed the topic and the activities of the festival itself. The ensemble of articles is a relevant contribution to the current discussions unfolding in the blurry terrains of media theory and postdigital practices. In their Introduction, the editors define the postdigital, together with post-Internet, as terms that “are associated with an artistic engagement with technology that is not necessarily preoccupied with the digital as such, but with life after and in the digital, working across old and new, digital and analog” (p. 11). In fact, in the book are several different concepts of what the postdigital suggests; at the same time, there can be identified a series of recurring topics, among them: time and nonlinearity, the use of language for creating reality and/or its perception, materiality, infrastructures, the posthuman, and Claire Bishop’s by now infamously famous “digital divide” [1].

The contributions are organized along three main axes: Imaginaries, Interventions and Ecologies. Through a media archaeological and genealogical methodology, the works in the Imaginaries section tackle questions such as “what are media, when are media, and how they mediate the production of reality? What is the relationship between speculation and design? Can alternative realities really be conjured into being—or is imagination itself a product of cultural, historical, and mediological context?” (p. 26). “Collective, political, and activist uses of technology are foregrounded” in Interventions (p. 148), a section under which is discussed the relevance of interventionist creative practices. Then the Ecologies section groups a series of contributions that address the ecologies of infrastructure, examining “the ethics of how media materialize and interact—with each other, with humans and nonhumans” (p. 250).

In the Imaginaries section, Dieter Daniels summarizes the history of “what has come to be labelled media art” (p. 48), starting from its (apparent) crisis in the previous decade to ask how to define media art today. In parallel, he analyzes the processes of institutionalization (1960s/’70s) and of the growing connection between media art and media theory (1980s). Having quoted Bishop’s digital divide argument in the first page of the article to dismiss its grounding, the author, however, returns to the topic of “a cultural separation between ‘high art’ and media innovation” (p. 57) at the end, rightly wishing for an integration between media art research institutions and art history to be able to develop a comprehensive cultural theory able to address the complexity of the field from different angles.

Instead of considering the imaginary in the context of psychological or sociological frameworks as a sort of tool to model reality, Jussi Parikka proposes to follow Michel Foucault and to consider the imaginary as a technique (p. 76). In this way, the author is able to explain how the laboratory takes over the studio in the contemporary imaginary as a located space of knowledge creation.
The question he poses is: “How do we engage in practices of speculation in media and design labs, which are contemporary places of recreation, imagination, technological practice and activism?” (p. 77). Thus the two main axes explored in relation to the lab in the article are time and space: the lab considered as a situated place of research, and a speculative dimension that is a characteristic of the lab practice, that of inventing the past (p. 78). Parikka proposes to consider the lab as an alternative location of the imaginary to switch speculative practices from the future to the past (p. 81). The idea of a speculative past has undeniable power, linked as it is with a politics of time within post-digital culture (p. 78).

Florian Cramer’s article addresses how the separation between art and technology came about (in fact, in this text, Claire Bishop’s name is part of the title; p. 122) and how it was discussed in the first place in the context of media theory (p. 123). Cramer’s point is that it is not contemporary mainstream art that has to catch up with technology (the deterministic perspective according to which technological progress comes first and influences all the other spheres of culture), but on the contrary, that technology has been feeding on previous artistic strategies, which in many cases anticipated what was about to happen in the tech industry. A key point in the author’s argument is his analysis on how in the context of the tech industry words create their own reality (pp. 126–128); that is to say, how metaphors for naming certain technologies begin to be considered literally, or, as in the case of artificial intelligence, how “research coined its existence for social cooperation in networked digital media” (p. 216). In this context, network digital technologies and communicational competences can help build an alternative model based on cooperation, which will also, it is hoped, enable the “production of new knowledge and values” (p. 217) coherent with this alternative model.

Cornelia Sollfrank revisits some cyberfeminist conceptualizations of the 1990s to think of their currentness in the 21st century. The conclusion is that the salience of rethinking gender relations is still current today, and possibly more urgent than ever. In addition to this, her conclusion is that the most impelling update contemporary techno-feminism needs to operate now is “to open up and include rethinking technology in terms of its dependency on capitalist logic” (p. 245).

In the section Interventions, Daphne Dragona argues that current artistic strategies and methods of subversion might be "soft" (p. 184), in opposition to other "harder" or more direct approaches. In this context, she proposes Obfuscation, Overidentification and Estrangement as possible soft strategies of artistic subversion to be explored and practiced with students and workshop participants.

Tiziana Terranova addresses the relationship between algorithms and capital, and what could be the possibilities of emancipation of networked digital media from capital (p. 202). So the author proposes to use the concept of the common to overcome dichotomist oppositions such as state/market, or public/private (p. 203), stating: “the concept of the common is used here as way to instigate the thought and practice of a possible postcapitalist mode of existence for social cooperation in networked digital media” (p. 203). Terranova’s point is that algorithms are not only instruments of capital but are simultaneously constructing future possibilities for postcapitalist modes of government and production (p. 216). In this context, network digital technologies and communicational competences can help build an alternative model based on cooperation, which will also, it is hoped, enable the “production of new knowledge and values” (p. 217) coherent with this alternative model.
versational bots such as Siri, Alexa or Cortana are at the same time becoming the interface between humans and most informational systems and also that they are “learning” from the user, one question Bratton poses is if users will learn in time to talk to each other as they talk to bots (p. 307). Related to this is the question of bots’ personalities: Will they internalize social dynamics of domination, for instance? (p. 306) Then, his analysis focuses on programming and interaction as two different ways of embedding cognition in the system (pp. 308–309): According to Bratton, “from the machine perspective” interface manipulation is a way of programming (p. 309). The relevance of this assumption is that it puts the user, especially the great majority of users who are not familiar with coding, in a less passive position: “In this artificial context, speech is also a means of writing, inscribing, and trace-making in that it is also a form of (intentional or unintentional) AI programming” (p. 312)—an important change in the consideration of the user that Olga Goriunova also underlines in the following and last article of the book. The point is that the more legible an interface is from the human perspective, the more hidden its algorithmic logic. Thus one of the salient questions the article opens is why couldn’t Siri (or any conversational bot) be more self-revealing about its own algorithmic logic, instead of mimicking a human personality better each time? (p. 316)

It’s also worth spending some words on the sleek and sophisticated design of the volume, which is consistent with a clear readable logic, as well as with a good display of the artistic projects. It needs to be said, though, that such an excellent publication would have benefited from a more careful proofreading.

Across & Beyond is absolutely recommended reading for scholars and practitioners searching not only for deep critical insight on several of the main topics currently at stake in media art and theory but also for solid and creative research on alternative paths for thinking on and practicing with technology, a context in which postcapitalist logic is still dominant.

References
2. The article has been reprinted together with a new article on the discussion by Bishop in L. Cornell and E. Halter, Mass Effect: Art and the Internet in the Twenty-First Century (Cambridge, MA: MIT Press, 2015).

SCREEN ECOLOGIES: ART, MEDIA, AND THE ENVIRONMENT IN THE ASIA-PACIFIC REGION
Reviewed by Mike Leggett, C & C Studios, University of Technology Sydney. Email: <legart@ozemail.com.au>

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The Introduction is a topography to this very complex field of study, where artists, enthusiasts, inventors, activists, technologists, hackers, ecologists and scientists are all simultaneously responding to the climate changes of the technology industries and the environmental marketplace of human interactions. For some, this section will be sufficient. The complexities hinted at are unraveled in eight chapters, taking cuts through the data and enabling the reader to experience from the inside the magnitude of our mediated effect on each other and the planet we call home.

Although it is the work of four authors (faculty members in the same institution in Melbourne, an omniscient “we”), who have been published individually over the last decade, the writing style and presentation is curiously homogenized. Collaborations with other writers within the region are evidenced, but not directly in this volume. Australian
new media artists were extremely active into the 2000s and so do not receive favored attention from the mid-decade onward covered here; the authors have traveled widely in the southeast Asian region and mainly reference the artists they encountered, local and visiting. The multidisciplinary practices evidenced are a valuable record of the energy and vigor of groups and individuals working with often limited resources. Mobility is key to images and messages circulated on phone networks, including those of disasters engendered by humans and delivered by the elements.

Several optimistic ways forward from the contradictions of technology usage and the impasse in the politics of climate are suggested as discussion points within media studies. The substantial gathering of material from the regions encompassing often conflicting histories and traditions illuminate directions taken by artists in experiencing global impacts of various kinds. The necessarily rhetorical tone gently implicates media artists, cultural producers and consumers in general in the exacerbation of changes in global climate patterns. Given a supportive context in the seminar room and the laboratory, the identifying or creating of new directions, sites of practice and emergences will be aided by this evenly balanced volume.

Electronic gaming environments on various platforms are central to several of the discussions, including an amusing account of the Tokyo gamer who was deeply immersed in a digital earthquake when the real one happened all around him. Maintaining the present moment is a problem for studies in media of the kind encompassed here, and perhaps a hypertext version would deliver more effectively by being linked directly to the studios and exhibition spaces referenced in these pages. This is a more general observation for titles in this series, whereby analysis and discussion would gain a less-cluttered writing space and thereby avoid the tendency of becoming an archival reserve.

**BETWEEN FILM, VIDEO, AND THE DIGITAL: HYBRID MOVING IMAGES IN THE POST-MEDIA AGE**


**Reviewed by Will Luers, The Creative Media & Digital Culture Program, Washington State University Vancouver. Email: <wluers@gmail.com>. doi:10.1162/LEON_r_01590**

We watch YouTube clips from different periods in cinema and television history and note how distinct material changes in moving image technologies affect expressive forms. And we do this on a digital platform that both preserves and annihilates these distinctions. It is this paradox of having access to a vast archive of media-specificity (silent films, TV sitcoms, video blogs, remix video art) within a rapidly evolving hybridity (digital convergence) that makes for complications and misunderstandings in the field of media.

In Between Film, Video, and the Digital, Jihoon Kim brings a needed clarity to this postdigital and post-media age, not by defining more precisely the boundaries between moving image technologies but by providing the conceptual tools for understanding their complex hybridization. Kim “theorizes the reconfiguration of an artistic medium and its specificity in the context of postmedia conditions that enable hybridizations of film, video and the digital.”

The introduction to the book provides an invaluable historical context to the debate between theories of medium-specificity, intermediality and postmedium and postmedia hybridity. The major theorists on the topic—Krauss, Carroll, Caivel, Doane, Bellour, Rancière, Manovich and Rodowick—are all given voice. Cinema’s medium-specificity, according to Caivel and Doane, is the camera’s analogue recording of light and movement, its access to contingency and chance in the world. Arguing for hybridity over any limiting medium-specificity, film theorist Noel Carroll introduced the term “moving image” for works on film, such as scratch-on or flicker films, that don’t engage with Cavell and Doane’s indexicality. Carroll writes, “film is not one medium, but many media,” with the potential for many expressive forms and applications. Rodowick, in response, proposes “a dialectic of medium specificity and hybridity with regard to a medium’s internal differential and its possibilities for being aligned with what is outside it.” In the “new media camp,” Manovich argues that cinema is “a particular case of animation that uses live-action footage as one of its elements.” Indexicality is an optional feature. In the digital domain, cinema joins evolving hybrids of animation, text, sound, graphics, photography and computation.

Acknowledging the important arguments on all sides, Kim takes as a practical point of departure Rodowick’s dialectical approach. Kim writes, “Hybrid moving images demonstrate that it is more productive to identify different moving images grounded in the variability of a single medium or the differing combinations of more than two media, rather than insisting on a moving image category.” Kim formulates two classes of hybridization. *Diachronic hybridization*, where two or more moving image technologies are coexistent, is a “transition from old media (photography, film and analogue video) to digital technologies.” *Synchronic hybridization* is the sum interrelation of different media, their histories and technical operations that
“reposition the components . . . and call into question, traverse, and redraw their formal and generic boundaries.” The book’s chapters go on to discuss these forms of hybridization, not by labeling particular works this or that, but rather by seeking to illuminate each work through “an ontology of coexistence and interrelation” in the various media components. The chapters focus on five categories “as conceptual tools”: videographic moving images, hybrid abstraction, transitional found footage practice, intermedial essay film, and cinematic video installment. In each chapter, Kim brings together an array of known and some lesser-known artists working with hybrid moving images: Taylor-Jonson, Viola, Tan, Steyerl, Sachs, Marker, Farocki, Aitken, Ahtila, Douglas, Gordon and many more.

Between Film, Video, and the Digital provides the reader with an essential theoretical framework for understanding postmedia art. The dialectic of coexistence and interrelation treats media as evolving hybrids made of distinct “material substrates” and “aesthetic constellations.” The book is also an insightful guide through the rich variety of moving image art through the 20th century and into the 21st. Ultimately, according to Kim, the work is “concerned with a host of concepts that the rich traditions of cinema and media studies have pursued in theorizing: indexicality, movement, duration, materiality, archive, historicity, memory and apparatus.”

THE AGE OF LOVECRAFT


Reviewed by Anthony Enns, Department of English, Dalhousie University. Email: anthony.enns@dal.ca.

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In the 1920s and 1930s H.P. Lovecraft’s horror stories appeared regularly in pulp magazines like Weird Tales and Astounding Stories, yet they gradually fell into obscurity following the death of the author and the decline of the pulp market. It wasn’t until the 1980s that S.T. Joshi began to edit a series of scholarly journals (Lovecraft Studies, Lovecraft Annual, Studies in Weird Fiction, and Weird Fiction Review) that brought Lovecraft’s work to the attention of literary critics. His stories have since reached a wider readership through numerous reprint editions, and in 2005 his work was even included in the prestigious Library of America series, which presented him as the modern successor to Edgar Allan Poe. In recent years the popularity of his work has grown even more thanks to comic, radio, film and television adaptations as well as games and popular music, which have made Lovecraft’s name a household word—even among people who never read him.

If we are now living in the “age of Lovecraft,” as Carl H. Sederholm and Jeffrey Andrew Weinstock argue in their new anthology, then this is due not only to his tremendous popularity but also to the surge of interest in his work among contemporary theorists and philosophers—particularly in the field of posthumanist studies, where his work has been embraced for its antihumanism or postanthropocentrism. This aspect of his work was first recognized by French philosophers Gilles Deleuze and Félix Guattari, whose 1980 book A Thousand Plateaus praised Lovecraft for illustrating the “process of being as becoming—becoming animal, becoming monster, becoming other than a fixed and finished human subject” (p. 7). However, the contributors to Sederholm and Weinstock’s anthology appear to have been more directly inspired by Graham Harman’s 2012 book Weird Realism: Lovecraft and Philosophy, which described Lovecraft as the progenitor of object-oriented ontology—a philosophical view that “posits a universe in which there is something in objects that always escapes knowing and in which human beings exist equally with other things” (p. 5). Many of the essays support and extend Harman’s argument, such as Weinstock’s “Lovecraft’s Things: Sinister Souvenirs from Other Worlds,” which argues that Lovecraft’s fiction is set in an “enchanted world . . . in which the line between subject and object becomes muddled and obscured” (p. 63). This results in a confusion of ontological states, as people “are treated like or become things” (p. 63) and objects “exhibit agency, they intermesh with the human, they prompt reconsiderations of where the line between human and nonhuman actually falls, and compel a reconsideration of the place of human beings in the universe” (p. 76). Brian Johnson’s “Prehistories of Posthumanism: Cosmic Indifferentism, Alien Genesis, and Ecology from H.P. Lovecraft to Ridley Scott” makes a similar argument by comparing Lovecraft’s stories to the Alien film series, which both illustrate “the breakdown of human exceptionalism” (p. 104) by depicting a “cosmos that was at once indifferent and (for that very reason) menacing” (p. 109).

Perhaps the most troubling and controversial aspect of Lovecraft’s work is its explicit and often extreme racism. Lovecraft’s biographers confirm that he was extremely disturbed by the influx of immigrants coming to America, and many of his stories reflect his fear that racial miscegenation was contributing to the degeneration of the Anglo-Saxon race. While early critics attempted to either ignore Lovecraft’s racism or dismiss it as simply a product of his time, French writer Michel Houellebecq’s 1991 book H. P. Lovecraft: Against the World, Against Life famously argued that his work was inextricably linked to his racist worldview, and an understanding of the former was impossible without a consideration of the latter. Several of the essays in Sederholm and Weinstock’s anthology attempt to address this issue by arguing that Lovecraft’s antihumanism undermines his racist agenda. For example, Jed Mayer’s “Race, Species, and Others: H. P. Lovecraft and the Animal” argues that Lovecraft’s stories often “subvert the hierarchies separating humans from other beings” (p. 130) by depicting the transformation of humans into animals, monsters, or hybrids. According to Mayer, however, these
transformations do not necessarily reinforce Lovecraft’s fears of miscegenation and degeneration, as they paradoxically become “the means by which his stories achieve intimate contact with the feared other” (p. 131). Patricia MacCormack’s “Lovecraft’s Cosmic Ethics” similarly argues that Lovecraft “opens up the very possibilities of ethical alterity and encounters premised on the destruction of the privileged subject of the white male that are necessary in order to lead to liberation of all lives as unique emergences” (p. 204). She thus claims that Lovecraft’s work promotes not racial exclusion but rather the “total inclusion of the overwhelming foreignness of the Universe, from the most intimately proximate to the most imperceptibly distant” (p. 205).

The anthology concludes with an interview with English writer China Miéville, whose work is associated with a literary subgenre known as “New Weird,” which is often seen as inspired or influenced by Lovecraft. Miéville’s interview not only highlights the main themes of the anthology, but it also casts these themes in a new light. For example, he attempts to explain the current popularity of Lovecraft by arguing that it is related to “the relative bleakness of the past few years,” which has encouraged critical interest in “the impossibility of human agency” (p. 236). Miéville thus reinforces the idea that Lovecraft’s anthropitan tendencies make his work particularly relevant today, yet he also challenges the idea that these tendencies can be deployed against Lovecraft’s racism by arguing that “the anthropitanism one finds so bracing in [Lovecraft] is an anthropitanism predicated on murderous race hatred,” so “you don’t get to escape it by saying ‘well, we’re not really talking about humans’” (p. 241). Miéville thus implies that the posthumanist trend in contemporary Lovecraft criticism—of which this anthology is the latest example—may represent an attempt to downplay the significance of Lovecraft’s racism by interpreting his work as blurring the boundaries between self and other or native and foreigner. Miéville also predicts that such attempts are doomed to fail, as “race hatred” will always remain an inherent part of Lovecraft’s philosophy. If we are currently living in the “age of Lovecraft,” as this anthology claims, then perhaps this is partly due to the increased visibility of racial hatred and immigration paranoia, which makes Lovecraft’s work relevant in ways that the contributors to this anthology clearly did not intend.

MAKING TROUBLE: SURREALISM AND THE HUMAN SCIENCES


Reviewed by Jan Baetens. Email: <Jan.Baetens@arts.kuleuven.ac.be>. doi:10.1162/LEON_r_01616

This could have been a book by an angry young man, but the author, emeritus professor at the University of Alberta, is more or less about to leave the profession. This book is however less a testament than a wake-up call, and as such it addresses a much larger audience than the specialist of social theory and cultural studies, the two domains in which Derek Sayer was professionally involved. A historian of French Surrealism outside France (see my Leonardo review of his previous book, Prague, Capital of the Twentieth Century: A Surrealist History, Princeton University Press, 2013, <www.leonardo.info/reviews_article/july2013/sayer-baetens_.php>), Derek Sayer opens this pamphlet book with a timely attack on the managerial streamlining of research in the humanities as well as the social sciences. And by the way, the very fact that more and more funding bodies and university administrators have ceased to distinguish between both fields is one of the most direct and hard-hitting consequences of this streamlining, although much more for the humanities than for the social sciences, apparently less vulnerable in this regard. Sayer quotes at length from the instructions from the the Economic and Social Research Council of the United Kingdom (ESRC), a document that we should avoid calling “Surrealist,” for this is exactly what these instructions are not, the author argues.

As all researchers know, the bureaucratic newspaper of application forms and research tips has nothing to do with the spirit of critical inquiry, question-making (instead of problem-solving) and opening new ground that should be the core business of all scientific investigation in the human and social sciences. The depressing insignificance of the now commonly accepted definition of research as the self-fulfilling prophecy of riskless methods and total lack of theory is counterbalanced in this book by a vibrant plea for another way of doing research, with room for serendipity, much trial and even more error, in short anarchy (the opening chapter logically ends with a quotation of Paul Feyerabend). That Surrealism—which in France was the direct continuation of Dada—can be considered a form of intellectual and political anarchy is beyond doubt, at least in its purest and most radical forms of the 1920s (things will become somewhat muddled in later years and Derek Sayer is certainly not trying to mask the loss of bite of the movement in many other moments of its history). The question remains however whether this family resemblance between Surrealism and anarchy suffices to inspire new and liberating forms of doing scientifically acceptable research. Sayer’s answer
to this question is an unconditional yes, and the original French way of seeing or rather doing Surrealism, not as a form of art or a new aesthetics but as a pathway to the discovery of oneself and society, makes this claim extremely plausible.

Sayer develops his argument in two ways, which one might call internal and external. First of all, he presents the various techniques and experiments invented or activated by the Surrealists in their quest for a truth not only hidden but simply never questioned due to the crippling power of social habits, political taboos and day-to-day pragmatism. All of these techniques have in common to shake up the normal, putting between brackets if not utterly destroying our usual ways of thinking, experiencing and expressing that prevent us from accessing the real. Surrealism is thus not, contrary to what is often argued in art-historical traditions, a kind of belated Romanticism, a flight away from society and evasion to the safe and ethereal world of some sublime self, but a profoundly realist movement, an attempt to produce hard facts. From automatic writing to the use of drugs, from the photographic reproduction of the optical unconscious to the pre-Situationist bewilderment of urban dérive, Sayer gives a very clear and useful mapping of Surrealist devices and practices not as tricks or gimmicks but as truly scientific methods.

Second, Making Trouble also discusses a wide range of author and methodological developments—mainly in anthropology, history and sociology, that is in social as well as in human sciences—that have implemented the spirit of Surrealism in their work and managed to produce radically new insights by breaking all known rules of scientific theory, methodology and best practices (which have remained, Sayer argues, more or less unchallenged since more than a century). The discussion of the British “Mass Observation” project in the 1930s is used here as a key example, yet Sayer’s set of examples and models are taken from many other disciplines, including literature (Galeano) and house design (Walpole).

Making Trouble is a necessary publication. At the same time, it also repeats—although in much smarter and seductive ways than I could—what is now no longer a secret. It is written in the stars that the human and social sciences will soon be forced to (partially) abandon the methodological straitjackets of empirical and quantitative research they all too easily accepted to follow. Real innovation can only come from those who do more than measure and count.

**INSTITUTIONAL CRITIQUE TO HOSPITALITY: BIO ART PRACTICE NOW**


**CIENCIA ABIERTA: SINGULARIDAD E IRRUPCIÓN EN LAS FRONTERAS DE LA PRÁCTICA ARTÍSTICA/Open Science: Singularity and Emergence on the Boundary of Artistic Practice**


Reviewed by Charissa N. Terranova. Email: <terranova@utdallas.edu>. doi:10.1162/LEON_r_01589

Artists, critics and historians affiliated with the field of bioart embrace the fact that its identity is in flux, always in process. The becoming-nature of bioart is testament to its fundamental connection to cutting-edge science and technology, the performativity of its contents (think here living matter), and its avant-garde position as critic, midwife and transformer on the edge of the precipice of the new, even when recycling the histories of art, science or technology. Two recent books, editor Assimina Kaniari’s *Institutional Critique to Hospitality: Bio Art Practice Now* and Ignacio Nieto and Marcelo Velasco’s *Open Science: Singularity and Emergence on the Boundary of Artistic Practice*, grapple with the field’s general sense of self. At base, the two texts are strong evidence of the international character of bioart’s identity, with Kaniari’s published by the Greek house Publicaciones Grigori and Nieto and Velasco’s by the Chilean Adrede Editora.

If the essays in Kaniari’s anthology query bioart’s placement within art history, looking in particular to its connection to institutional critique, then Nieto and Velasco’s monograph gives the field ballast by at once historicizing it within the deep temporal trajectory of scientific discovery and analyzing it according to a scientific pragmatics of artists in comparison. While one book seeks to hew bioart closer to art history and the other to the history of science, both end up revealing bioart to be a hybrid species that is something always and altogether new: a field with guy ropes in conceptual art and the history of science that brings fresh problem-solving design tactics and big science criticism to the field of contemporary art. Rooted in what I have identified as “morphogenic modernism,” the formal-cum-logical engine of bioart generates that which is largely unpredictable, namely the ongoing process of time-based emergence itself. Form gives way not so much to formlessness but a profundity of protean shapes, tools, design strategies and site-specific performances. In Kaniari’s anthology, New York bioartist Suzanne Anker says this in plain, unruffled terms, shifting the focus of art from static subject-object...
concerning origins—those of bioart—emerges in Kaniari’s Introduction, where she evaluates bioart’s relationship to the objects held within the late-sixteenth-century Kunstkammer and Wunderkammer. In making this connection, Kaniari does not simply expand institutional critique, but breathes new life into the old tactic of shredding hoary institutions for the sake of making new art. She shows how bioart’s deployment of science, both its artifacts and current tools, is generative of a strain of institutional critique that encompasses far more than simply Art with a capital “A.” It can also cast doubts about and produce nuanced knowledge systems concerning the greater field of Science with a capital “S,” a tactic that can be both scintillating and misguided in its educational capacities.

Section 1 of the book is devoted to artists’ practice-based statements. There, Kaniari’s interview with Suzanne Anker about “Water Babies,” Anker’s 2004 series of photographs of old medical specimens from the Vrolik Museum in Amsterdam, lays bare this creative tension. The artist makes explicit that this body of work is rooted in science and its potential for awe, and not the contemporary art practice of institutional critique. “These pieces are not intended to be an institutional critique,” Anker states, “but rather one in which the public is invited to gaze upon the unknown, even the marvelous” (p. 38). In addition to the dialogue between Kaniari and Anker, there are seven other contributions from artists in this section. Kathy High writes of her work with living matter, linking the swarming of bees in and around her densely packed hives to the overpopulation of microbiota in her gut. Marta de Menezes develops an idea of “presentation,” as opposed to “representation,” that befits bioart in its ability to connect the otherwise disparate binary of stasis and change. Pascale Pollier and Aggelos Antonopoulos report on Fábrica Vida, a traveling bioart exhibition of 2014 about the “fabric of life” inspired by sixteenth-century anatomist Andreas Vesalius. Ellen K. Levy elaborates an “aesthetics of emergence” based on generative art forms and specific rules capitulating “moment-by-moment choices that unfold” (p. 74). Adam Zaretsky develops a Sadeian “philosophy of the biological bedroom,” which brings together Inherited Genetic Modification Orgiastics and transgenic humans. And an interview between artists Ioannis Melanitis and Eduardo Kac yields this robust nugget from the latter:

The idea of the artist laboring in isolation in his studio crafting an individual ornate object for detatched contemplation is as anachronistic as the idea of the scientist sitting under a tree and being hit by an apple. The artist is not a decorator. The artist is a philosopher (not with a hammer, but with a wireless computer and a cloning toolkit). I feel that art must overcome the anesthetic condition and the state of inertia we live in, and awake our cognition and sensoriality. Why? While other fields have similar goals (literary philosophy, for example), art can reach out to a larger audience and accomplish this goal. Art is philosophy in the wild.

(P. 110, EMPHASIS ADDED)

Kac’s words adumbrate the fact that bioart is, while built in part on the world-changing critical tactics of conceptual art and institutional critique, something altogether different—a space, an opening, a point of view, a hybrid knowledge base that makes polymathy not an unusual singularity of the lucky few but an aspiration and practice of the tough, hard-worn many.

The second half of Kaniari’s collection is devoted to bioart within the history of art. There, Robert Zwijnenberg writes brilliantly about “xenotransfusion and art,” connecting the exchange of blood within the equine performance art of the French artists of Art Orienté Objet (Marion Laval-Jeantet and Benoît Mangin) and famous painted depictions of medical procedures, including Jules Adler’s Transfusion of...
Leonardo Reviews

Goat’s Blood (1892) and Rembrandt’s Anatomy Lesson of Dr. Nicolaes Tulp (1632) and The Anatomy Lesson of Dr. Joan Dyeman (1656). Martin Kemp evaluates the pros and cons of the laboratory work of Oron Catts & Ionat Zurr, Stelarc, and Eduardo Kac. Kaniari contributes a long and lyrical analysis of biology in the form of rolling natural waters in the work of Leonardo da Vinci. Guna Nadarajan brings a Derridean reading of the “hauntology” and “carnaphallogocentrism” at work in Eduardo Kac’s transgenic animals. And the question of “hospitality” is beautifully (if not finally) addressed by Irina Aristarkhova in the concluding chapter, with an essay coming full circle in that it takes a deep interpretative dive into Kathy High’s projects with transgenic lab rats.

Published in both Spanish and English, Nieto and Velasco’s Open Science is a bit more discursive than Kaniari’s anthology. Its overarching thesis is determinable by the title. It is the idea that art and science practiced together “open science” to an otherness of fathomless possibilities. This otherness bestows on art new opportunities of critique, form and contents, while within science, art reinforces the role of aesthetic deliberation. After a rambling introductory essay and interview between the authors and Diego Gómez, Professor at the School of Design, University of Chile, the most poignant parts of this book coalesce around descriptions, analyses and lengthy quotes from an excellent group of international artists working with biology in some capacity. This group includes the Russians Dmitry Balatov and Alexy Chebykin, Mexican Gilberto Esparza, American Rachel Mayeri, Australian Perdita Phillips and Portuguese Susan Soares. It is a collection of talent that once again reinforces the international nature of bioart. Several very useful tables at the center of the book list, enumerate and compare projects by the artists. The concluding portion of the book focuses on the voice of the artists, registering candid responses from each figure on topics such as “Science Criticism,” “Using a Scientific Method,” “Use of Results” and “Scientific Cooperation in the Production of Art.”

Generally, both books do solid, important work bracing and constituting the field, in particular in how they serve as ledgers of the names of current artists practicing within bioart and historians and critics specializing in the medical humanities and the history of biology within art. On a less halcyon note, both books could use a thorough editing to clean up typos and untangle general problems with syntax. The latter is especially problematic in the English translation of the text of Open Science. But this, the decline of the editing staff at publishing houses as a result of e-readers, online publishing and the Internet writ large, would be the subject of another, different article. The books go to great lengths to work through what makes bioart unique, namely its condition as exploratory, discovery-driven and pioneering creator of a new field of studies and action. Kaniari’s anthology is an especially important contribution to the dialogue insomuch as it broaches the question of bioart’s place within conceptual art. While bioart originates out of the history, tools and laboratory protocols of science, it would not exist without conceptual art as a form–life- and space-giving precedent. And this statement of fact deserves much more probing.

THE APPARENTLY MARGINAL ACTIVITIES OF MARCEL DUCHAMP


Reviewed by Giovanna Costantini. Email: costantini.giovanna.l@gmail.com.

As 2017 marks the centennial of Marcel Duchamp’s provocative submission of Fountain, a urinal, to the New York Society of Independent Artists, thereby originating “readymades,” art objects arbitrarily consecrated by “choice” and not by “making,” Elena Filipovic offers an incisive study of Duchamp’s broader artlife production of quantifiable items and administrative activity beyond the scope of object- and masterpiece-focused scholarship penned by such authors as Robert Lebel, Calvin Tomkins, Dawn Ades, Linda Dalrymple Henderson and Francis M. Naumann. Her inventory includes boxes of scribbled notes, suitcases filled with miniature reproductions, records of ephemeral exhibitions and activities in New York related to art curation, art collection, archiving and presentation—each component meticulously documented by the author, illustrated, biographically contextualized and theoretically expounded. Though “undeclared as art,” Filipovic defines such marginalia as integral to thought processes that not only informed Duchamp’s material output but constitute the theorization of an anti-authorial, anti-institutional, anti-aesthetic totality. “Meaning derives,” writes Filipovic, “just as much from what is outside and around the artwork as from the subject, technique and presumed content within the neat contours of the frame or atop the pedestal” (p. 8).

Interweaving curatorial ventures from 1917 to 1961, particularly Surrealist installations conceived by Duchamp, with process-driven projects known to historians as The Box of 1914, The Green Box (1914), La Boîte en Valise (1938–1942) and the États donnés (1946–1966), Filipovic explores a matrix of ideas that contributed to subsequent movements such as Neo-Dada, pop, conceptual and minimal art. These include questions of authorship, uniqueness and originality voiced by such critics as Rosalind Krauss (“The Originality of the Avant-Garde,” 1986); the death of painting and the demise of handcraft, particularly the conflicted relationship between painting and photography articulated by Walter Benjamin in his essay “The Work of Art in the Age of Mechanical Reproduction” (1936); Duchamp’s fabrication of facsimiles and boxes of replicated notes, plans, drawings and art reproductions in repeatable and imitable forms (Jacques Derrida,
“Signature Event Context,” 1982); and his nonauratic involvement with mass production through combinations of labor-intensive processes with photomechanical reproduction in the manufacture of optical contraptions and ambivalent, disengaged simulacra (Benjamin, op. cit.).

The protracted creation and posthumous installation of Duchamp’s last major artwork, Étants donnés (1969), a tableau visible through the peepholes of a wooden door concealed in an angle of the Philadelphia Museum of Art, provides Filipovic’s text with a centerfold for issues surrounding the profanation of art and institutional critique. Invoking the political topology of Jean-François Lyotard’s Trans/formations (1977) together with Benjamin Buchloh’s critique of historiography, artefactual museum praxis and hegemonic art criticism in his writings on conceptual art (1990), Filipovic points at the Étants donnés’ challenge to the museum’s imprimitur of cultural value and empirical truth against Duchamp’s position that the history of art is what remains of an epoch enounced in a museum. It is a narrative signified in the Étants donnés by the artwork’s destabilized obscurity, its glimpse of the body of a defiled mannequin, and the antimonumental commodities that surround it.

Implicit in Duchamp’s ephemera is the presentiment of a postmodern condition characterized by the loss of a “fixed historical reference” (Jürgen Habermas) and aesthetic framework forged of an “inner logic” (Hal Foster) that would come to the fore in the aftermath of World War II. It is in such an atmosphere of absence and decomposition that we are forced to confront an accumulation of inutile boxes and suitcases filled with scraps of paper that once held out ideas, piecemeal scrawls and commercial images that Duchamp “spent the rest of his life returning to and replicating with painstaking precision” (p. 7) in what now seems a sustained performance of frustrated desire, an anti-thetical summa of partiality, enclosure and fragmentation.

MEMORY IN MOTION: ARCHIVES, TECHNOLOGY AND THE SOCIAL

Reviewed by Jan Baetens. Email: <Jan.Baetens@arts.kuleuven.ac.be>. doi:10.1162/LEON_r_01589

Memory studies in general and archive studies in particular are an overcrowded section in recent scholarship on culture and cultural heritage. In the wake of Maurice Halbwachs’s first reflections on collective memory (1925), the landmark book series of Pierre Nora (1984–1992) on the lieux de mémoire (sites of memory), a shortcut for the collective effort to compensate for the loss of traditional, embodied memory and cultural transmission in what he called milieux de mémoire (communities and practices of memory) has foregrounded the constructivist dimension of memory (the idea that traditions can be invented has now become commonplace). Since the breakthrough interventions of authors such as Allan Sekula and John Tagg in the 1980s, much attention has been given to the political and ideological biases that structure all archives, a key example of a site of memory. The work of such philosophers as Jacques Derrida, media archeologists such as Friedrich Kittler and media theoreticians such as Wolfgang Ernst or Bernard Stiegler has further contributed to challenging the still widespread vision of memory as collection of the past and the archive as one of the privileged instruments of this effort by either individuals or groups. What has come to the fore in their work is not only the importance of technological mediation but also the productive and performative aspects of the archive, which has achieved real agency in memory processes, now often framed in the context of actor-network approaches.

The editors of this collection, all affiliated with Scandinavian research centers on memory and archive studies, clearly aim at building on these insights while also opening new ground for theories on collective memory (it is tacitly assumed by all other contributors to this book that the difference between individual and collective memory is currently not very interesting to study). The conceptual shift they defend is based as much on theoretical discussions (throughout the book the work of Wolfgang Ernst is used as the primary beacon) as on the analysis of contemporary practices that exemplify the new take of memory “in motion.”

This idea of motion is elaborated in mainly two directions. On the one hand, all studies in this book reject the idea of the archive as a passive repository, insisting instead on the fact that contemporary—that is, digitally structured—archives are open environments that permanently change under the influence of many convergent or conflicting impulses: the data input itself can change the archive, and so can (and will) the transformations of software and hardware or the interaction with users and user groups, who do much more than just retrieve or check data, for instance. On the other hand, and this is the most challenging claim of the book, memory in motion not only relies upon data, memories and archives that are themselves changing all the time; it has also become an instance that changes the very object
that it is supposed to represent, namely social memory, social life, if not the social fabric as a (heterogeneous and ever-shifting) whole. To summarize it in very naïve terms: Once the technology of collective memory changes, it is no longer possible to stick to classic conceptions of society and sociality.

Memory in Motion scrutinizes these changes in two ways. First of all, it offers a well-balanced mix of strictly theoretical approaches (the introduction by the editors, the opening chapter by Wolfgang Ernst, the closing chapter by Yuk Hui) and more practice-oriented readings of more or less recent case studies. In all chapters, however, there is a strong historical and theoretical awareness, so that even the most sophisticated and detailed technical readings (and there are some chapters that are not always easy to follow for readers having no more than an elementary knowledge of digital culture) do not lose sight of the bigger picture. Second, the book has also chosen a truly interdisciplinary approach. Not at the level of the theoretical approaches (as already stated, the general framework is definitely that of media archaeology, in the most radical and materialist sense—a wise decision, which provides the collection with a minimum of theoretical cohesion), but at the level of the objects that are studied, as reflected in the organization of the table of contents along five major lines: *oralities* (the issues raised by the digitizing of sounds and voices), *softwares* (the evolution toward the digital postarchive), *lives* (the impact of digital memories on telling, experiencing, reinventing the relationship of past, present and future), *images* (old and new approaches of image archives that exceed the simple idea of visual repositories), and *socialities* (theoretical rereadings of social memory and social memory production).

Memory in Motion is certainly not an easy book to read. It mobilizes a wide range of disciplinary concepts and debates on collective memory, but the effort to avoid mere juxtaposition compensates for the often-dizzying diversity of the theoretical references. It also challenges the reader with the technicality of some of its close readings, but here as well one feels the strong editorial hand that helps understand the larger scope and stake of these analyses. As such, it is a highly valuable contribution to the increasing exchanges between memory studies, cultural studies, digital humanities and media archaeology.


Reviewed by Mike Mosher. Email: <mosher@svsu.edu>.
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In 1956, International Business Machines (IBM) hired industrial designer and architect Eliot F. Noyes (1910–1977) to reinvent its corporate image. Noyes found the corporate headquarters fusty, full of old-fashioned furniture and rugs and inspirational messages about trade leading to peace that reflected the generation and aesthetic of the corporation’s founder Thomas Watson, not the “information explosion” world of his son and successor Thomas Watson Jr.

Noyes perceived IBM as not merely business machines, but a force “to help man extend his control over his environment,” so it was necessary that it project clarity. As a student at Harvard of Bauhaus exiles Walter Gropius and Marcel Breuer, he promoted International Style buildings, hired Paul Rand (not to be confused with US Senator Rand Paul) to redesign the company’s logo and gave attention to all aspects of the industrial design of the products. Noyes had served as curator of Industrial Design at the Museum of Modern Art, and, as the housing of electric typewriters, computers, and other devices simplified, attention was paid to the human interface, the controls and displays the operator encountered.

As Watson Jr. sought to reorganize the company, his “consultant director of design” Noyes went from designing IBM typewriters (at first as part of Norman Bel Geddes’s office) and computers to its laboratory and administration buildings, as well as the stationery and curtains within them. Paul Rand came up with a new corporate logo in 1960 and then redesigned it with blue stripes a decade later. IBM Design Guidelines were issued to guide all work within the company. There follows an illustrated history of IBM computers in this era, preceding the IBM PC personal computer, and the design thinking behind them. Edgar Kaufmann Jr. described a computer as a “parlor” for the operator’s benefit and ideally, comfort, and then a hidden “coal cellar” of components where the computing operations actually took place (“under the hood” might be an applicable automotive analogy, too).

Eliot Noyes and Associates were the architects of several new buildings, but his program saw to it that other notable architects were commissioned for its various edifices around the world. Several new IBM facilities were strategically placed outside of New York city in case of—a concern in the 1950s and early 1960s—atomic attack. Skidmore, Owings, and Merrill designed in Armonk, NY, IBM’s Corporate Headquarters, which contained “Garden of the Past,” a courtyard designed by Isamu Noguchi. Paul Rudolph designed the IBM Manufacturing and Administration Building in East Fishkill, NY. Eero Saarinen and Associates
designed the IBM Manufacturing and Administration Building in Rochester, MN, as well as the Thomas J. Watson IBM Research and Development Laboratory in Yorktown Heights, NY. A good photo album of Saarinen’s office in this era is Saarinen’s Quest: A Memoir of a Photographer by Richard Knight (2007).

Overseas, Marcel Breuer and project architect Robert Gatje designed IBM France Research and Development Laboratory in La Gaude. IBM developed a Real Estate and Construction Division to manage all this growth. IBM was a part of the nascent Silicon Valley, establishing a research lab in a rented property in San Jose, CA, in 1952 and constructing its own 190-acre campus of buildings in 1956. A later counterpart to Yorktown Heights, the IBM Almaden Research Center was constructed in Silicon Valley in 1986, outside the scope of this history. High atop a mountain south of San Jose, Almaden evokes a James Bond villain’s secret fortress, protected by berms from any prying eyes below. I consulted there in 1994, prototyping O/S2 online help at IBM Almaden Research Center in Ted Selker’s USER lab.

To further project a public image and naturalize the increasing role of computers in daily life, the Eames Office, Charles and Ray Eames and staff, created interactive hands-on exhibits for the delight of children and other visitors, including multi-image spectacles. These exhibits were installed at various IBM and noncorporate locales, including suburban Detroit’s Cranbrook Institute where Eames and Saarinen had taught, in buildings Saarinen’s father had designed. The Eameses created purposefully decentering architectures of jolly carnival confusion at the 1964 World’s Fair, and their fast-moving, multi-image attempts to show computers’ cognate to the mind’s own complexities perhaps mystified rather than clarified . . . but this was the media-saturated ’60s, so it was OK.

Noyes worked for other corporations, including Westinghouse (which he discovered employed double the workforce but enjoyed half the sales of IBM) and Mobil, and his work and his associates had a major impact on corporate design for two decades or more. IBM designers Noyes, Charles Eames, Paul Rand, George Nelson and Edgar Kaufmann Jr. contributed to the integration of design and computer science—the look and feel of both its products and its corporate culture.

One part of the book lists author Harwood as faculty at Oberlin College; another part lists him at the University of Toronto. Wherever he resides, he has authored a richly focused design history, published as an elegant book sponsored by the Quadrant Design, Architecture and Culture group at the University of Minnesota’s College of Design. The copyright of 2011 perhaps indicates publication was held up for five years.

The book ends with a single-sentence swipe at “virtual reality,” an engaging 1990s concept the technology of which since 2015 has caught up with consumer purposes; I’ll Google to see if Harwood has further explicated this distaste. Perhaps he expressed it because, to date, virtual worlds’ designers have not thought through the big issues towards coherence of technology, environment and its details that characterized Noyes’s work for IBM.