Bernd Herzogenrath introduces *Film as Philosophy* with a quote from Nietzsche: “Our writing equipment takes part in the forming of our thoughts.” The question that runs through this collection of essays is: What kind of thinking is possible using the equipment of film? The philosophy in question is not the institutionalized academic kind but the inventive philosophy of Deleuze and Guattari—philosophy as the creation of concepts and assemblages rather than rational propositions. Herzogenrath’s goal is create dialogue between film studies and philosophy “without assigning the role of dominant and all-encompassing referee to one of these disciplines.” Unlike other notable books on the subject of film philosophy, this one is focused on film as a mode of thinking rather than on philosophy around the subject of film. With each essay, a post-cinema scholar explores a twentieth-century thinker who witnessed and contributed to cinema as an expressive medium. Eisenstein, Epstein, Artaud, Balázs, Bazin, Bergson, Deleuze, Cavell are all presented, along with more contemporary theorists and filmmakers. The essays are accessible, relevant, relatively jargon-free and, as a whole, provide a comprehensive overview of some of the most creative thinking about what film is and does.

Film offers a unique set of instruments—camera, microphone and editing tools—for thinking outside the net of language and mental representations. To point the camera at what is interesting in one’s field of vision is a language-like process of selection, articulation and juxtaposition. But the light, movement and sound captured is prelinguistic and outside human intention. The world harnessed by film technology is, in Deleuze’s terms, a “machinic assemblage.” While the thinkers explored in the various essays offer “multiple logics, approaches and perspectives,” there seems to be a consensus that film generates rather than represents thought. John Ó Maoilearca finds in Bergson an understanding that the brain “does not represent (an idea or picture); rather, it performs its images through its own equivalent of an actor’s gestures.” Cinema, like Bergsonian thinking, gestures toward intuitions and meaning. Gregory Flaxman explores the philosophical implications of Antonin Artaud’s automaton theory of cinema, a cinema of vibrations and shocks that “displaces the spectators’ natural perception with a machinic perception.” Along with the gestural and machinic nature of film, there is the corporeal aspect to film-thinking. A filmmaker is engaged with the physical world with bodies, movement, matter, gravity, light and atmosphere. Christophe Wall-Roman’s essay examines the complexity behind Jean Epstein’s notion of “photogeny,” a dimension of the film image beyond the simulacra or copy of the real, “a new type of relation between embodied thinking and the machine.” For Epstein this idea of the nonhuman introduced into the human leads to a position of film as...
anti-philosophy, a technological corrective to human solipsism.

Despite the multiplicity of ideas and positions in the book, many of the essays suggest that film is an instrument that stimulates us out of habitual thinking and that this raises profound questions for philosophy and for film as an expressive medium. Can philosophy help reinvigorate concepts of film art as a process of encounter and discovery? Can film change philosophy as a scholarly practice? Can we teach film as a thinking/writing rather than as a purely representational system? Film as Philosophy offers the reader a productive set of ideas for navigating today’s post-everything landscape.

**GALLERY SOUND**


Reviewed by John F. Barber, The Creative Media & Digital Culture Program, Washington State University Vancouver. Email: jfbarber@eaze.net.

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*Gallery Sound*, a new book by Australian curator Caleb Kelly, hinges on a simple but provocative theme: contemporary art and its public exhibition have changed. Following “readymades” championed by Marcel Duchamp, anything/everything is art. No longer strictly visual, contemporary art is multimodal.

Contemporary art galleries are no longer hallowed spaces for quiet contemplation of art. Instead, galleries, especially those that seek economic success, increasingly cater to art tourists and families looking for packaged infotainment experiences. As a result, galleries have increasingly become noisy spaces. Normally, one might expect to hear footsteps as gallery visitors move through the exhibition spaces, along with their breathing, coughing and talking. Sounds of the heating and ventilation systems are also expected. Less so, but still accepted, is the sound of street traffic outside the gallery. Now guided group tours, artist floor talks, exhibition openings, busy cafes and gift shops, even musical performances add to the noise levels in galleries.

What are artists and curators to do? *Gallery Sound* takes the stance that sound is a continual undercurrent in contemporary gallery spaces. Artists more frequently employ sound as part of their work(s), and often utilize galleries as productive spaces. Artists and curators and galleries all use exhibition spaces as sites for considering art as a multisensory experience.

*Gallery Sound* considers sounds and sound-making practices found in spaces normally intended for the exhibition of, primarily, visual art.

The book itself is small but rich with details and examples of artists who are using contemporary galleries for sound-based art, even music-making/performances. *Gallery Sound* is composed of three chapters, each divided into several subsections. Chapter 1, “The Empty-Sounding Gallery,” describes several experiments during or around 1969 where artists working with sound explored galleries, not as white-cube voids, but as sites for sound-based, experiential artworks. Kelly discusses works by John Cage, Robert Irwin, James Turrell, Michael Asher, Bruce Nauman, La Monte Young and Alvin Lucier, all who helped draw attention to the ubiquity of sound and its role in our experience of the world.

Chapter 2, “Noises in the Gallery,” considers how sounds normally considered noise have been exploited by artists as commentary about sounds in gallery spaces. For example, readers familiar with the Turbine Hall at the Tate Modern in London will know this is not a space for quiet contemplation. What is needed here are large artworks that compete with the gigantic scale of this space and the massive numbers of people who visit the gallery daily. Kelly discusses several artists and their works that sought to comment on noises in galleries or bring such an abundance of their own sound(s) that others would be diminished, if not rendered impossible to hear. Kelly provides details about several and how they have helped create a new vision of contemporary art.

Chapter 3, “Musical Galleries,” focuses on the relationship between musical performances and gallery spaces. Seeking to attract more and more visitors, many galleries engage musicians to perform during public hours. But, rather than musicians using gallery space as alternative venues, this chapter considers how musical performances in traditional art galleries have transformed music and how the art space has, in turn, been transformed by music.

The result is to reconsider experiences of and with sound inside spaces traditionally devoted to visual arts and the silent contemplation of that art by viewing. As Kelly demonstrates, historic and contemporary galleries have always been noisy places. *Gallery Sound* provides an engaging account of how contemporary artists have mined the sonic qualities of contemporary galleries for creative output and the production of new forms of contemporary art.

As Kelly argues, rather than being rejected as unwanted noise, gallery sounds can instead be part of a full experiential encounter with artworks on exhibition. With sound now part of the gallery experience, contemporary art requires one to listen as well as look.

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TEXTURES OF THE ANTHROPOCENE: GRAIN VAPOR RAY

by Katrin Klingan, Ashkan Sepahvand, Christoph Rosol and Bernd M. Scherer.

Reviewed by Edith Doove, Transtechnology Research, University of Plymouth. Email: <edith.doove@plymouth.ac.uk>.

do:10.1162/LEON_r_01674

Now that the Anthropocene, the world as disastrously defined by humanity, has found such a solid place in today’s thought, it is useful to return to a publication that has possibly not been given the attention that it deserves. Although the times we live in are no doubt daunting, we could also call them exciting times due to their particular challenges. The incredible intellectual candy store Textures of the Anthropocene makes that much clear, both through its wonderful collection of texts but also in its design. To start with the latter, each of the four volumes has its own identity through a different use of paper. Where the three main volumes all have a white cover, the “manual” is bright yellow and relatively thin compared to the others. Thus, while reading one not only has an intellectual but also a sensual experience that is quite important to understand the main idea behind this publication. Being in the Anthropocene is amongst other things realizing and respecting the agency of the nonhuman. Different qualities of paper, from grainy and light to glossy and heavy, thus add to the information that is communicated.

These textures can also be seen to allude to geographical layers that are further enhanced by the angles of approach of each of the volumes. Grain, Vapor and Ray talk respectively about the particulate, the volatile and the radiant. The setup is to bring various texts from throughout history and from different disciplines into conversation with contemporary comments. This results in a thoroughly and much-needed transdisciplinary undertaking. Although the volumes are accompanied and not so much introduced by a “manual;” the full publication as such is certainly not one, or at least not in any traditional sense. It does not intend to offer clear instructions of how to tackle the consequences of the Anthropocene. What the manual text by Klingan et al. in the yellow volume makes beautifully clear is the importance of imagination and storytelling if we want to find solutions or a way out. Narratives are world-making. Klingan et al. refer to various authors to make their point, from Hannah Arendt to Walter Benjamin, Henri Bergson to John Dewey, but especially Michel Serres. Where Bergson previously pointed to the fact that “all division of matter into independent bodies with absolutely determined outlines is an artificial division” (Manual, p. 11), Serres introduced the angel of flux (Manual, p. 16), connected to the inherent viscosity of Earth. Serres also states: “Indeed, it is worth telling the (his)story of a small, local, singular element, that of an atom, a grain of sand, a thin layer of fluid somewhere in the middle of this violent zone where various flows intermingle” (Manual, p. 24). Klingan et al. connect these ideas with the mutability and transformation of a history of imagination.

Although each volume is of an extreme richness, the Ray volume in particular brings everything together. Serres fittingly ends this volume, but equally forms a beginning to the whole undertaking. In a response to Athanasius Kircher’s Mundus Subterraneus (1664), Serres replaces Plato’s possibly overused cave with that of Jules Verne from his The Southern Star Mystery. Whereas Plato’s cave is mainly dark, with just one light source, Verne’s is a dazzle of light, textures and colors and thus points to a different and potentially greater kind of richness. Philosophy meets fiction in this example, but if there’s one thing to learn from Textures of the Anthropocene it is that all things mingle in a mixture from which new things can evolve. We used our imagination to get into the situation, as John Dewey would name the Anthropocene (Manual, p. 18); we can also use our imagination to potentially get out of it or find another way of dealing with it, even though we are at a point of no return. As we finally have become human by recognizing the unhuman in ourselves and in the world, this is the most important and creative insight we can have. Interestingly, Klingan et al. bring play into the equation—probably the last thing the average person would think about when considering the Anthropocene. But referring to Johann Huizinga’s Homo Ludens, the authors realize that “play is fundamental. . . . Things change, because people play, tinkering, toying, recomposing the rules” (Manual, p. 38).

Overall, Textures of the Anthropocene brings together such a poignant set of texts. There are too many brilliant combinations, too many quotes that one would like to give; it’s hard to name only a few. Starting the Grain volume, for instance, with Robert Smithson’s text “A Sedimentation of Mind: Earth Projects,” especially with its notion of time, is immediately mind-blowing because of it being so much to the point right now. It finds an echo in a fragment of The Shape of Time: Remarks on the History of Things in the Ray volume that is beautifully commented on by Molly Nesbit. George Kubler on Kafka’s “The Cares of a Family Man,” on the weird creature Odradek and Jane Bennett’s response to it, at the start of the Vapor volume, is another example:

There are multiple creatures, shapes, misfits, simulacra, doodles, and vapors afoot, colliding, en-
tangling, cooperating, competing, lurking, and crashing. They overlap with us even as we distinguish ourselves from them as a “species.” Odradek prods us to ponder these inter- and intra-actions and pushes us to consider how to respond to the fact of being outlived—as humans—even if not as earthlings (Vapor, p. 28).

The Ray volume is possibly my current favorite as it starts off with a fragment from Edwin Abbott Abbott’s Flatland and its reminder of the importance of Thoughtland. Textures of the Anthropocene is a form of Thoughtland in itself. Sometimes it is devastating to see what we knew all along but did not widely recognize or acknowledge, often coming from a poetic science fiction setting. Textures of the Anthropocene is very importantly about reading and rereading, discovering and rediscovering, to keep our subversive imagination and creativity flowing in dire times.

SO FAMOUS AND SO GAY: THE FABULOUS POTENCY OF TRUMAN CAPOTE AND GERTRUDE STEIN

Reviewed by Jan Baetens.
doi:10.1162/LEON_r_01675

This is a very ambitious and innovative work in the field of queer studies, whose methodology and theoretical insights make room for new research in a domain that for many may look definitely overcrowded. The book starts from a deceptively simple question: How is it possible that Gertrude Stein and Truman Capote, who did not live as closeted homosexuals, became mass-market celebrities in a period that censored other public gay figures? (Historically speaking, Solomon focuses on the period between the 1895 Oscar Wilde trial and the 1969 Stonewall riots, although a very interesting afterward expands his reflection on the current cultural production.) The fundamental answer to this question has to do with the distinction Solomon establishes between “broadly queer” and “specifically gay,” more precisely between the dissymmetrical relationships between both concepts, for not all those who are “broadly queer” are “specifically gay” and vice versa. For Solomon, it is the public reception of Capote and Stein as “broadly queer” rather than “specifically gay” that provides the possibility to use the former category as a reading frame that enabled the dissimulation of the latter while at the same time allowing a more or less sophisticated play with the forbidden, if not the unspeakable, which helps understand why the general audience could accept both authors as celebrities.

The term “celebrity” highlights a second aspect of the strange phenomenon that pushed Capote and Stein toward the center of mass culture. To be famous for a writer does not mean that he or she is also widely read. One can be a celebrity—and hence a kind of role model—without being read, and in certain cases the very possibility of becoming a celebrity depends as much on the fact that one is not being read as on the fact that one has many and dedicated readers. To be unreadable can be part of one’s image, and such an image can play a key role in the public production of a literary and cultural celebrity. It suffices to represent a certain idea of (in this case) modernity and queerness to function as a celebrity—an effect that the very reading of one’s “unreadable” books would never be capable of achieving for the simple reason that the number of actual readers is always ridiculously low in comparison with that of those who are informed of the celebrity status of queer and unreadable modernists. Unreadability (in the case of Stein) as well as the fact of being a celebrity more than a writer (in the case of Capote) are moreover important clues in the global shift from “specifically gay” to “broadly queer.” Indeed, the very reading of Stein’s and Capote’s books explicitly invite a gay reading, whereas their construction as celebrities makes it easy to remain silent on their gayness.

A third layer of Solomon’s reflection is the in-depth analysis of the complex relationship between the authors’ self-representation and the way in which their image is negotiated, transformed and in many cases censored by the mass media that promote it. It would however be naive to approach this difference in terms of opposition alone. Capote and Stein—and not only Capote, as is generally assumed—did make great efforts to get known, and they were extremely aware of the importance that “broad queerness” could have in the success of the work that they also—and courageously—produced as explicitly gay. Both authors did use the mass media in a very clever way, less by dissimulating gayness with the help of queerness than by exploring the frontiers of queerness in order to express gayness. The historical and archival research by Solomon makes these points very clear, and the comparison of Capote and Stein—the first having already been a celebrity before having published his first book and becoming a successful author and the second having a more difficult trajectory—helps him study not only the whole gamut of possible relationships between the status of celebrity and the fact of being read, but also between different types of homosexuality.

One of the most fascinating aspects
of Solomon's book is the close reading of the willful or unconscious misreadings of Capote and Stein, that is, of the countless readings that acknowledge their work and their figures as key to a good understanding of both modernity and queerness yet without giving any credit to their homosexuality and to the (positive) value these authors give it throughout their work. However, this misreading is not only that of their books—which are not always read, certainly not in the case of Stein—but also that of their public image, both as an idea (Stein and Capote as representative of queer modernity) and very literally as an image (and we know how important these images, often channeled via the major magazines of their times such as Life and Time, were for both authors). Time and again Solomon discloses the way in which readers, critics and cultural gatekeepers have managed to either ignore or minimize, if not criticize, the "specific gayness" of Capote and Stein. Solomon's reconstruction of the reception of these authors by those who made an important contribution to their status as celebrities clearly demonstrates the lasting impact and power of homophobic stances even in the commentaries and analyses of those who aided their success (in the case of Capote, who never managed to become a canonical writer despite his success as a celebrity author) and their institutionalization (in the case of Stein). This homophobia can be explicit or implicit, but the archival evidence discussed by Solomon, who brings together well-known and less-known testimonies of what cultural gatekeepers (ranging from journalists to academics working for Norton) have actually written on Capote and Stein.

The last chapter of the book offers a close reading of Stein's Three Lives. Solomon's ambition is here twofold. First, he wants to demonstrate how the implicit or explicit gayness of this book has been systematically overlooked or minimized by all existing scholarship. Second, he also makes a case for the very possibility of making an explicitly gay reading of a text that others approach as no more than (timidly) implicitly gay—an important example of this rereading of Solomon's reframing of race issues in terms of sexual issues, the former representing for him a "displacement" of the latter. More generally, this book can be read as an invitation to break away from the lasting mainstream tendency—which Solomon labels as homophobic—to read explicit gayness in terms of broad queerness. Many recent examples, such as Woody Allen's Midnight in Paris, are therefore criticized as cultural representations that incorporate reactions to gayness that may have been progressive in explicitly homophobic periods but that nevertheless fail to bridge the gap between queerness and gayness.

PATRICK TRESSET:
HUMAN TRAITS AND THE ART OF CREATIVE MACHINES


Reviewed by Rob Harle.
doi:10.1162/LEON_r_01676

This publication accompanies the exhibition Patrick Tresset: Human Traits organized by the Laznia Centre for Contemporary Art in Gdańsk as part of the Art+Science Meeting Project 31 May–14 June 2015. Of all the publications I have reviewed for Leonardo over the years, this book exemplifies more than most the Leonardo objectives of exploring and developing the symbiotic connections between art, science and technology: "Leonardo's writings are a testament to his love of art understood as a scientific endeavour" (p. 104). In a nutshell, the book discusses the process of a robotic-computer machine literally drawing human portraits from its observations of a human model, often as part of a gallery exhibition.

Patrick Tresset, a French (London-based) artist, "develops theatrical installations with robotic agents as actors. His [Tresset's] work uses computational systems that aim to introduce artistic, expressive and obsessive aspects to robots' behaviour" (p. 204). Tresset, originally a painter, has made the transition to working with robots as a way to explore human behavior and specifically the nature of "mark making" and how humans perceive others. Hence we have the extensive discussion in the various essays concerning the power, history and importance of drawing over and above painting and the other visual arts. At present Tresset's "machine artists" are reacting to observations rather than learning in the true sense of AI and neural network development. Tresset plans to explore these latter computer processes in the near future.

The book is richly illustrated with both color and black & white images, together with a list of contributor's biographies, no index, and seven highly informative and well-researched essays as follows:

1. Machines Like Gods. Introduction to Reflections on Creative Machines and the Art of Patrick Tresset
2. Artistically Skilled Embodied Agents
3. Paul, Successor to AARON

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5 What Are You Looking at When You Look at an Image? And What Are You Thinking About?
6 Human Traits
7 Robots, Nostalgia and Loss of Control. In Conversation with Patrick Tresset

The book is bilingual in Polish and English; all titles are bilingual, and the essays are arranged with the left column of each page in Polish with the right in English. One minor criticism is that the English text is very light grey, on white, semi-gloss paper, which makes it difficult to read, even with good lighting.

The first chapter by Kluszczyński gives a good insight into Tresset’s work:

The particular value and sophistication of Patrick Tresset’s work stems not only from the status achieved by its products—which are both its subjects and objects, its works and authors. These values derive also from the hybrid weave of various trends and artistic forms that come together and distinguish it: drawing, kinetic art, cybernetic art, robotic art, generative art, performance art, interactive art, installation art, [and] conceptualism (p. 36).

The last chapter, with Özden Şahin, “In Conversation with Patrick Tresset,” was most enjoyable and further helps to understand Tresset’s motivation, background and modus operandi as discussed in the other essays.

There are some highly contentious claims made in some essays. An example in the second chapter has Deussen quoting Pignocchi: “[He] argues that an observer can not only recover the artist’s high-level overt intentions, but also ‘all the mental states—conscious or not, propositional or not—that have played a causal role during the production of the work’” (p. 51). Whether Deussen really supports this ridiculous, preposterous claim is not at all clear, but he appears to do so. Ludzkie also quotes Pignocchi’s “hypothesized” claims when discussing the analysis of drawing, whether by an autonomous machine or human being (p. 165).

Chapter Three discusses AARON. This is starting to become a little passé now, even though it was groundbreaking many years ago:

Examining Paul, a robot created by Patrick Tresset (in collaboration with Frédéric Fotelmarie), and AARON, a programme developed by Harold Cohen, side by side reveals considerable differences between the two, ranging from the installation components and technologies used, to the dynamics of the procedures or generating and transforming visual representations and their stylistic distinctiveness, to particular intentions and interests that guided the makers of the two drawing systems (p. 73).

The Drawing chapter by Purc-Stepniak is quite a fascinating account of the history of drawing, from which I learned some very interesting facts; unfortunately, it is a little too long and reads like a college history lesson; a valuable addition to the book nonetheless.

I feel this book is a must-read for all artists, computer scientists, researchers and students interested in both the history of artist robots and in the immediate future of machine intelligence and especially creative machine intelligence.

**LIVE WIRES: A HISTORY OF ELECTRONIC MUSIC**

Reviewed by John F. Barber, The Creative Media & Digital Culture Program, Washington State University Vancouver. Email: <jfbarber@eaze.net>.

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Music has long been part of our sonic soundscape. But, beginning in the 1950s, and continuing through to current day, seemingly endless combinations of new technologies and creative endeavors created experimental electronic music. *Live Wires* captures that synergy with engaging history and personal insights.

The first chapter is devoted to the tape recorder, which, as it developed, established the conditions for the creation of new sounds and new music, including what came to be called electronic music. Warner provides an engaging history of the tape recorder’s development, as well as its contributions, such as musique concrète, tape music composition, tape delay, tape loop and multitrack recording. Warner concludes this first chapter by saying, “For composers and performers, the tape record[er] took off like a musical time machine, propelling musical culture into multiple sonic dimensions” (p. 53).

The second chapter focuses on circuits, which, according to Warner, “created a new culture of sonic literacy by opening a rich and still-
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concludes:

The turntable and record have, says Warner, provided new tools and techniques as artists and composers repurposed them into instruments for creating electronic music. Warner’s explanations of historical background regarding turntable mixing, blending and backspinning provide engaging context for his discussions of sampling and appropriation, both results of the record changing from material to raw material for the production of electronic music. Warner concludes:

If tape recording and its associated manipulations removed sounds from their sources and offered new organizational strategies, turntable techniques interrupted the homogeneity of mass-produced commodities even more forcefully and allowed for the noise of social relations hidden by standardized music production, which effectively removed traces of difference (pp. 94–95).

The chapter on the microphone acknowledges that amplification of sound (voice, music or noise) is most commonly accomplished with microphones. But, “more significantly, [the microphone] freed the vocal utterance from its physical and psychoacoustic bounds. . . . In this sense, the microphone acts as an extension not only of the human voice, but of the ear, reconfiguring the listener” (p. 112). “As such, electronic music composers have necessarily approached the natural worlds as a series of partial and changing soundscapes that are discovered and/or generated by the microphone” (p. 129).

The association of music and computers is long and storied. Certainly this is the subject of a prolonged, separate inquiry. But Warner provides the right amount of engaging backstory to provide a context for his discussions of sound synthesis, drum machines, sampling and MIDI. Toward the end of this final chapter, Warner makes an important observation, implicit in his narrative but explicit to his point. “There is rarely a complete or immediate shift to new technologies. Rather, composers are always finding different configurations of hardware and software—old and new—to make their work” (p. 165).

Warner, quoting Emmanuelle Loube, a French broadcasting and new media producer writing about laptop music in Japan, provides a context in which to consider electronic music. “It is a culture of emergence: a non-directional, non-intentional culture that leaves much room for error and blur. It is a culture that encourages ‘averageness’ over creativity, but it has the advantage of provoking unexpected results” (p. 170).

Increasingly we are listening to and more different forms of electronic music, experimenting and rehearing them as makers and listeners, finding their new meanings. In this remix we hear, recycled, reimagined, the work of major figures like Pierre Schaeffer, Pauline Oliveros, Brian Eno, Keith Emerson, Grandmaster Flash, Juan Atkins and Holly Henderson.

Somewhere, someone working with recordings, circuits, turntables, records, microphones and computers could emerge from a home studio or other creative space as the next electronic music artist or composer. Live Wires is open and sympathetic to this idea. Those readers with some awareness of the background Warner provides will find the story engaging. Those with no history with electronic music will find it a sonic adventure well worth reading.

**CHINESE DANCE: IN THE VAST LAND AND BEYOND**


Reviewed by Jonathan Zilberg, University of Illinois at Urbana-Champaign. Email: <jonathanzilberg@gmail.com>.

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Shih-Ming Li Chang and Lynn Frederiksen provide here a simple and easy-to-read introduction to Chinese dance and its history. Condensing 5,000 years of Chinese dance, from its shamanistic origins through the various dynastic periods, they show, for instance, how Confucian ideals endure physically across time in the precision of structured dance. The core of the book is built around seven interviews with seven Chinese women dancers working in the U.S., namely Lily Cai, Nai-Ni Chen, Lorita Leung, Yunyu Wang, Yin Mei, Jin-Wen Yu and Yu Wei. It is followed by a brief and wide-ranging chapter on how different dance is to this day in China, specifically in terms of why people dance and for whom, when and where, and concludes with an even briefer three-page chapter explaining the reasoning behind the annotated database of materials in hyperlinks available at the excellent...
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To evaluate Chinese traditions [1]. Standards being inappropriately used the reception of Chinese dance in the context Wilcox revisits the history of cultural hegemony in U.S. dance culture and institutions as manifested in the "suppression" of minority dance. It deserves to be widely read. In that change is a strident criticism of cultural hegemony in U.S. dance culture and institutions as manifested in the "suppression" of minority dance. It deserves to be widely read. In that context Wilcox revisits the history of the reception of Chinese dance in the U.S. since the mid-nineteenth century and shows how there exists a repeating pattern in criticism of Western standards being inappropriately used to evaluate Chinese traditions [1].

Chinese Dance follows on two other scholarly books on the topic, namely Choreographic Asian America by Yutian Wong (2010) and Kinesthetic City: Dance and Movement in Chinese Urban Spaces by SanSan Kwan (2013) [2]. In looking forward to future publications on Asian dance, the photographs of dancers in performance context used in this book, such as those by Yu Gen-Quan, Shen Jin-Sheng, Rachel Cooper, Suling Chou, Carol Rosegg and Marty Sohl, deserve special mention for their visual excellence. Indeed, they are so compelling that a related book (or website) purely of Chinese dance photography would surely be in order. Finally, when one considers that the first modern state dance company in China was only formed in 1992 and followed by the first private dance company in 1999 one can best appreciate how far apart the Western and Chinese dance worlds are and how recent is this emerging field of study.

Li Chang and Frederiksen's book should be used as a primer in an expanded field of dance education because it so effectively deals with the issues of cultural hegemony in dance and how to appreciate the fundamental differences between Western and non-Western dance traditions, in this case, Chinese. The book has been written with a far more general audience in mind than a purely academic one. It is so readable that it could equally be used as a high school text for the social sciences as for anthropology, theater or dance classes in college. For myself, the most interesting parts of the book are to be found in the lengthy and detailed notes. At that level, this book stands out as very different from Tomie Hahn's Sensational Knowledge (2007), which provides an interesting example of a more theoretically complex discussion of Japanese dance [3].

Chinese Dance provides an excellent example of the time-tested tradition of using interviews as contexts for artists to talk about their works and lives. In fact, the main body of this book is centered in the artists' statements and interviews, providing us with insight into the personal experiences of the seven Chinese women dancers mentioned above. The book is particularly strong in how it reveals cultural mistranslations and conundrums in the ways in which Westerners often misperceive Chinese dance with its conflation of form and content. For instance, as the primacy of form is to reinforce social hierarchy, the status quo, the dancer's motivation is external rather than internal. Herein form and content are very closely tied in with contemporary history and politics; in fact, that is its purpose. And as for virtuosity, the primary concern with form is as meaning in which through stylization the dancer's technical precision is of the essence. All this occurs within a political framework within which a dominance of form is a dominance of meaning. Furthermore, there is a very different history of relationship between the dancers and the audience which has to be taken into account.

These factors significantly complicate the cross-cultural appreciation of the form. Take, for example, the cultural conundrums presented such as the "smell of the circus" in the Chinese Swan Lake production [4]. Such details are fascinating because they are so revealing of the intercultural or transcultural encounter. They highlight how without having such knowledge one cannot appreciate Chinese dance on its own terms. Consider also how important scale is in Chinese dance aesthetics, where precision is required so as to create uniformity in order to achieve a mass effect—so much so that "where scale is concerned, there is a quantum difference regarding what is valued in dance" (p. 73).

The book is unencumbered by theory and complex language. Ultimately, the information in this book, significantly supplemented by that provided on the website, is aimed at young dancers of the next generation. And there, considering the sheer magnitude of the Chinese mainland and diaspora population, this book has an enormous potential use value in this racially belligerent and culturally divisive period in American history. In that this book serves an all-important social function. It promotes an understanding and appreciation of Chinese culture and history at the same time as it critiques cultural hegemony in American dance. Clearly this book looks to the future; there, what is happening with young Chinese dancers is no doubt also happening, if very differently, in other worlds of dance in Africa, India, Latin America and elsewhere. In short, Chinese Dance will help all dancers to look more consciously inward into their own hegemonic and counter-hegemonic dance traditions and outward into others.
References


ARThUR BALFOUR’S GHOSTS: AN EDWARDIAN ELITE AND THE RIDDLE OF CROSS-CORRESPONDENCE AUTOMATIC WRITINGS


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In Arthur Balfour’s Ghosts, Trevor Hamilton consolidates for the first time the complex “cross-correspondences” of an elite group of researchers, all members of the Society for Psychical Research. In the years 1901–1936, over 3,000 scripts were collected through an elaborate form of automatic writing by a select circle of automatists operating separately from each other and at many times in different countries. Investigating the scripts in 1906, Alice Johnson noticed a pattern emerge and concluded that such “correspondences” were from recently deceased colleagues and therefore proof of their having survived death. Hamilton outlines the main themes across the scripts examining the more salient examples of cross-correspondences and paranormal cognition and establishes objective parameters for their evaluation.

The book is divided into two parts, separated by seven pages of photographs. The first part is a dense study of the cross-correspondences of “automatists”: Diana Raikes; Margaret Verrall, lecturer at Newnham College, Cambridge; Trix Fleming, sister of Rudyard Kipling; American medium Leonora Piper; Dame Edith Lyttleton; and Winnifred Coombe-Tenant, sister-in-law of F.W.H. Myers. In the second part of the book, Hamilton assesses the evidence objectively through a range of criteria. Each chapter poses a question ranging from: Were the cross-correspondences unambiguous, consistent and meaningful? Have the correspondences been tweaked by wishful thinking? Of particular interest to the reviewer was the chapter that asked: Could one be sure that the cryptic nature of the cross-correspondences was not the product of psychological artifact? No definitive answer is given, but the points Hamilton touches upon make for interesting reading and further research.

The scripts Hamilton has documented were often fragmented, scattered between “automatists” and across time frames, frequently resurfacing years later. Through an erudite process of investigation, he tracks phrases, Classical references, drawings and dates from one “automatist” to another, weaving together a case for the documented evidence of cross-correspondences to be considered paranormal. The book begins with the communications from the spirit of F.W.H. Myers, author of Human Personality and its Survival of Bodily Death (1903). An important figure, Myers was one of the founding members of Society for Psychical Research and linked to many influential Victorians. His death in 1901 was the incentive for his friends and colleagues to seek contact with his spirit through various methods including automatic writing.

Socially elite, the cross-correspondents regarded themselves as being outside of the popular spiritualist movement and the mediums of that time. Rather, they were intellectuals engaged in serious research. Favorable to the idea of a communicable life after death and other paranormal activities, they were relatively unbiased in their investigations. Their eagerness and willingness to believe in messages from the beyond is clearly evident; as Hamilton writes, “It should be stressed, for a variety of obvious reasons, that conscious collaborative fraud is ruled out” (p. 158). On the other hand, he also warns against gullibility, for a “strange enchantment can sometimes descend on the producers and consumers of automatic writing” (p. 203), which may stem from their psychodynamic obligations.

The title of the book alludes to the many cross-correspondents linked to Arthur Balfour, as well as to the communications found mainly in the writings of Winnifred Coombe-Tennant regarding the Story and the Plan. The former recounts the love story between the Palm Maiden (May Lyttleton) and the Knight (Alfred Balfour) and her love for him from beyond the grave. The latter refers to the efforts of the “discarnate communicators” to campaign for world peace through influencing the birth of children, “the prediction of a new Golden Age ushered in by a new Augustus” (p. 179).

Laced throughout the text are references to the researchers being of sound mind and not easily given to flights of fancy. For example, one of the main investigators, Piddington, “was not an eccentric or unbalanced individual” (p. 123), or when referring...
to “automatist” Margaret Verral, “she was eminently practical & responsible, the exact opposite of the popular identity of ‘psychics’ and ‘sensitives’” (p. 13). Amusingly there is also mention of the “discarnates” irritation at the “automatists’” distortion of their messages (p. 199).

Alfred Balfour’s Ghosts is a comprehensive overview of varied and at times complex material only recently made available. Particularly engaging are the author’s anecdotes and background details, which bring to life this close-knit group of investigating intellectuals. Hamilton, also a member of the Society for Psychical Research, is certainly knowledgeable of the proof in support of psychic phenomena and the skeptical arguments against such evidence, one of his criticisms being that the investigators were too close to their subject matter to be objective. A dense book at times, it brings together interesting research for further pursuit and asks, quite honestly, how does one rigorously test and challenge these claims? Rightfully he offers no concrete answers. As he writes: “One just does not know. But one must always be cautious since explaining away the spirit hypothesis by other contested hypotheses like telepathy, clairvoyance, or some kind of cosmic reservoir may mean substituting one species of ignorance for another” (p. 273).

**CODE AND CLAY, DATA AND DIRT: FIVE THOUSAND YEARS OF URBAN MEDIA**


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Shannon Mattern’s *Code and Clay, Data and Dirt: Five Thousand Years of Urban Media* reads the city anew. It is a history of *ether and ore*, as her introduction coins the approach, the two poles that are the codetermining forces of knowing about materials and materials that provide the infrastructure for knowledge and media. Smart cities are written as part of histories of thousands of years, and media is conceptualized broadly enough to include the variety of cultural techniques from use of building materials to the ephemeral notes, sounds, patterns and practices that defined urban space much before the digital. While some architectural theorists and critics might claim that up until recently we have operated in data-poor culture when contrasted with the explosive abundance of data since the 1990s, Mattern turns this assumption upside down to demonstrate the richness of different sorts of materials, formations and information that have constituted the built environment. As a media archaeological study—a position that Mattern does without a critical engagement with some of the pros and cons of the field—it draws on a wide range of sources, sites, geographies and disciplinary discussions to compose an image of media practices of urbanity. And a composite image it is: The city is visual, aural, olfactory and more. It is a site of writing of many forms from casual to industrial, as Mattern argues, referring to materials of inscription (such as clay) and early forms of writing (such as cuneiform).

One key reference point becomes infrastructure, a key term of recent years of media studies including work by Lisa Parks, Nicole Starosielski and others. But infrastructure is not merely the nuts and bolts, steel, cement and wires that are at the ground and underground of the city, but also a temporally stretched perspective. It is alongside this temporal stretch where the argument also builds up. Infrastructure exists as residual layers on top of which media emerge again and again. Cities and urban settlements build on their own historical legacy, sometimes ruins, in ways that stores always some part of this material condition as part of its future.

The book takes us for a ride that is architectural, mediatized and geographically vast. It is almost too dizzying when the text transports us through (admittedly apt) examples from New York to Bethlehem, L.A. to Mecca, Baghdad to London and many places in between. Some of the examples become anecdotal, although they underline that the story is global and yet always situated. But of course, materials travel, even architecture and buildings travel. Reconstruction of the Palmyra Arch is one such traveling part of materiality that is connected to various political contexts of cultural heritage as well as the colonial roots of archaeology. Is it then in both cases a question of colonial infrastructure when 3D printing brings to London a once- or twice-destroyed piece of urban materiality from the Middle East?

What does it mean to have Western universities, tech companies and capital transform the culture of a non-Western city into a mediated artifact, and then dictate its circulation? Whose interests are served when the technological, intellectual and financial elite marshal their resources to resuscitate, to promise immortality to, a particular instantiation of a city that has already weathered the multiple cycles of history across its multi-millennial existence (even the arch itself restored in 1930)? (p. 152)
This also raises a broader question of politics of methodology of visual culture: At whose scale, at which angle is the media and the city approached? From the aerial perspective to the close-up of a city street and the casual scribble attached to a lamppost, from the grainy surface of stone, the acoustic environment of a street to the conditions of detaching images, sounds and affects of a city into another context. How far or close is one to the city and the sources that tell of the city? That is also a question that underpins some different approaches in media archaeological methodology.

The book delivers a range of excellent questions, answers and ideas how to think the lived qualities (to use a term from Brian Massumi) of time. Mattern is a writer who is able to mobilize detailed material in exciting ways. What strikes me is also how she is an educator whose work is entangled with her teaching. This might be a rather anecdotal thing to mention in a book review, but the way in which she also acknowledges the years of teaching and students as part of the scaffolding of the book itself makes it a significant part of methodology too. From classrooms to archives, from architectural sites to infrastructures of knowledge such as libraries, Mattern acknowledges the sites where our cognitive work takes place and situates itself among collectives. And the city thinks much more than its human inhabitants think. The implied lesson is that there's so much intelligence embedded in the routes and sites, architectures and automated habits that are formative of why the urban functions already as an intelligent system way before computers. Besides offering a rich scholarly study, Mattern's book is useful to designers and architects who are interested in developing alternative ways of thinking about the media+city link other than the supposedly new smart discourse. Sometimes the age-old is not the worn out.

**MODERNIST INFORMATICS: LITERATURE, INFORMATION, AND THE STATE**


Reviewed by Boris Jardine.

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Modernist Informatics pursues an ambitious double thesis: that the apparatus of the modern informatic state was brought into being in the late nineteenth century and consolidated in the early twentieth, and that modernist writers worked with and against entanglement in these "new informatic webs" (p. 16). The first of these claims is pursued in the introduction and serves as a framework for the case studies that follow: of Joseph Conrad's *Secret Agent*; scenes of identification in "dossier fiction"; the social survey movement Mass-Observation; John Grierson and documentary film; and Elizabeth Bowen's Blitz novel *The Heat of the Day*.

Underlying the two main arguments of Modernist Informatics—about changes in statecraft, and the "entanglements" of narrative—is a more fundamental proposition: that narrative itself came to be transfigured by the new discourse of protocols and documents. At its broadest, Purdon makes the case that in the period he is considering "communications technology moves out of the office to encompass and mediate all human activity" (p. 18). A highly focused version of the argument comes in the first chapter, on Conrad, who faced the problem that "the delimitation of the 'literary' as a subset of writing constitutes a pre-processing system of its own" (p. 30). "Novels, no less than empires," writes Purdon, "seek to manage their own coherence and security by a careful organization of those contingent factors which are the conditions of the real before they become the effects of realism" (p. 30). This is a provocative notion, and it is explored in a suitably complex chapter, which weaves together a close reading of *The Secret Agent*, biographical details about Conrad's own interactions with information systems and a history of the dual notion of privacy/secrecy as it played out in the postal service and government offices. Ultimately *The Secret Agent* is said to resolve paradoxes of representation by "acknowledging that impressions are not limited by the senses but are partly determined, or preprocessed, by the wider informatic networks which already structure the possibilities of perception, semiosis, and interpretation" (p. 19). Purdon's analysis travels down through layers of cultural history, biography and narrative until it hits upon the grisly detail that gives *The Secret Agent* its particular character (and which has determined readings from the first reviewers to recent theorists): amidst the extreme degradation of the body of the Greenwich bomber resides precisely the "preprocessed" clue that unlocks the mystery. High-brow artifice and low-brow schlock meet in mingled flesh and text; the "medium" is, in a gory sense, the message; information survives mortal loss.

This all sets rather a high bar, which is cleared in the chapters on "dossier fiction" and "information collectives." The first of these provides capsule readings of narrated encounters between characters and
their “data doubles” alongside rich theoretical reflections on identity, narrative form and paperwork. Here is a modernist, bureaucratic sequel to Leah Price’s How to Do Things with Books in Victorian Britain. Where Price showed how books themselves circulated within narrative—as objects, markers of status, bargaining chips—Purdon brings the range of new early twentieth-century official documents into view within narratives of conflict, travel and pursuit. World War I was decisive in the development of forms of official documentation (the passport, the identity card), and therefore also in the shaping of modern(ist) subjectivity. This involves a series of surprising inversions: The “fragmented” modern selves of older theories of modernism are reintegrated through “techniques of identification” (p. 71); paperwork is nothing like its dry-as-dust ideal type, becoming the substrate of a whole range of affective states, mysteries, confusions and horrors; and that last bastion of coherence, the human body, is “abjected” (p. 76)—a failing index of its photographic and inky traces. This is the fate that befalls “D.” in Greene’s Confidential Agent (1939) after he loses sight of his papers: “They were his authority and now he was nothing—just an undesirable alien, lying on a shabby bed in a disreputable hotel.” Throughout these chapters, pressure is piled onto narrative itself, which incorporates itself of older theories of modernism beyond recognition by the Second World War. This time, narrative, in the form of M-O’s complex arrangement and re-presentation of individuals as they come together and are influenced by events, cannot survive the informatic regime change. Just as M-O attempted to conjure up a new sense of nationhood out of observed fragments—as in Britain by Mass-Observation of 1939—the Ministry of Information was seeking “to consolidate a single, unified, ‘national’ point of view” (p. 96). This aggressive act of unification led to a state of national paranoia, in which M-O could at best act as an “amplifier” (p. 98) and at worst as an active collaborator with its government cousin the MOI.

At this point we leave not only modernism behind but also literature: where the documentary turn leaves off, documentary film picks up—more specifically, John Grierson’s theory of documentary, articulated in the context of massive state infrastructure projects that found justification in public information films. Here the analysis is less successful, however, perhaps because this feels like just one part of another story, about infrastructure and Empire, statecraft and propaganda—these are the back-ground of the rest of the book, while literature is the vivid foreground. The reversal is uncomfortable: vast topics that could somehow be telescoped into single quotations now loom into direct vision. Modernist Informatics is at its best when maintaining the high-wire act of telling the history of information through a dual structure of official developments and administrative history on the one hand and narrative devices, struggles and structures on the other. In the account of documentary film that duality disappears and the result is something altogether more prosaic. Or is this simply the triumph of information over narrative?

Either way, Purdon’s final chapter returns to the evocative literary history so successfully deployed before, with a wonderful opening:

An eavesdropper’s fascination with unattributed speech permeates the writing of the Second World War, perhaps because such careless talk, floating free in the blacked-out streets, seems at times as if it might become the choric voice of the war itself (p. 153).

Elizabeth Bowen’s The Heat of the Day (1948) is the antithesis of this chapter: “a kind of almanac of informatic pathologies” (p. 156). This is a darkly ingenious chapter and a fitting conclusion to the main body of the book, one strong implication of which is that the new informatic paradigm brought with it wonderful possibilities for prose (the thriller is, as Purdon acknowledges, the informatic genre par excellence).

A useful “Coda” returns us to the overall themes and draws out some resonances with our own deeply ambivalent informatic age. Whether or not the historical proposition—about the specific chronology of informatics—is borne out by other studies, Purdon is surely right that once narrative had become “entangled” with informatic systems the coupling could not be undone. In this sense, Modernist Informatics deserves to be read alongside.
N. Katherine Hayles's *How We Became Posthuman* as diagnostic of the "abjection" of lived experience by its data double.

**Note**

1. That has been undertaken by cultural and social historians, most notably Nick Hubble and James Hinton.

**MENTORED BY A MADMAN: THE WILLIAM BURROUGHS EXPERIMENT**


Reviewed by Jan Baetens.

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Although it tells the story of a great man, one of the most famous British neurologists in recent history, in his journey to groundbreaking treatments for Parkinson's disease, *Mentored by a Madman* is a horribly depressing book. The life narrative of A.J. Lees, as told by himself, reads like a long series of ups and downs, with the downs growing dramatically strong over the last two or three decades. The book is a lament on a type of medical research—theory, method, ethics as well as practice—that is no longer possible or accepted in modern research management and administration, where the emphasis is put on management and administration and no longer on research. For Lees the diagnosis—no pun intended—of this frustrating situation can be summarized as follows: Research is now seen as a form of production of wealth; public concerns with the health system have been replaced by lobbying of private companies and their stakeholders; research itself, more specifically trial-based research, has become the slave of a crippling system of bureaucratic and ethical rules that slow down the work while making it so expensive that only very big companies can afford and maintain it; the legal obstructions to experiments are so rigid that any risk-taking, even if patients and doctors are willing, is about to disappear; finally, modern medicine has stopped putting the patient and his or her stories and experiences in the center of the medical act.

These complaints are not new. Neither is the way in which Lees tells his story, which is both extremely individualized (although the author stresses the importance of teamwork and the input of his collaborators, this aspect is hardly foregrounded) and paradoxically rather abstract (one has the impression that many things remain untold and things in Lees's life simply seem to happen one after another). Thanks to the actor-network theory way of storytelling and reconstructing the life of researchers in their laboratories and times, we have been familiarized with more holistic ways of narrating science, a way that no longer follows the thoughts and actions of great men and women but focuses instead on the multiple and sometimes conflicting interactions between objects, institutions, machines, traditions, external and unforeseen events, and of course people. *Mentored by a Madman* offers almost nothing of this kind. It is a quite old-fashioned, linear, single-perspective description of the professional career of an exceptional and admirable individual struggling with the unfathomable suffering of his patients and the cruel obstacles of his environment. To give just one example: the book systematically refers to negotiations at the moment of possibly obtaining ethical approval for the launch of a new trial or the commercialization of new medicines, but how all this works in practice and how all this has changed over time, how it has been perverted at the expense of the needs of patients, doctors and researchers, is not something that one will learn from this book, elegantly written and clearly addressing a broader audience yet not providing the reader with some of the necessary information one needs to actually understand what is at stake and how it really functions.

What is new however in this book is Burroughs. His life, work and ideas—at least those related to drugs, more specifically to nonorthodox methods and substances to cure drug addiction—have been a permanent source of inspiration to Lees's own practice and thinking. *Mentored by a Madman* is thus a vibrant tribute to a man whose name will not often be quoted in positive terms by doctors and scientists: a mentor for Lees, a madman for his colleagues. Lees considers Burroughs a visionary prophet in the fight against the hijacking of patient-oriented medicine by corporate interests and antidemocratic state control and he discusses his writings and personal drug experiments as a positive shortcut to alternative ways of discovering, exploring and implementing certain drugs in the life of neurologically suffering patients, if not society at large. This part of the book—more precisely, this intermittent thread within it—is extremely convincing, and Lees's plea in favor of Burroughs's drug experiments is extremely well argued as well as empirically evidenced. It is also perfectly honest, as demonstrated by the personal commitment of the author to test certain substances and practices himself, including those that brought him to astonishing field trips in Latin America. More generally, Burroughs is framed by Lees as an illustration of what today's medical research is cruelly lacking: a dialogue...
between science and imagination, that is, between theory and method on the one hand and intuition and art on the other hand. This remains an important message, and Lees is its inspiring messenger.


Guest Editor: Susan Mansam; Editor: Ashtaq Ishaq. Designer: Tanya Heidrich. Illustrated, 44 pp. <www.icaf.org /childart/>

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I sat down to read this ChildArt issue about art and the brain a few days after I learned of Marian Diamond’s (1926–2017) death [1]. Perhaps best known for her studies of Einstein’s brain, which noted that he had more support cells in the brain than average, she was also a distinguished educator and a pioneer in brain plasticity research. The two products of her legacy that influenced me directly came to mind as I absorbed the essays. First, I recalled how Diamond’s skill as an educator came through in an interactive videotaped lesson on the brain she did during her tenure as Director of the Lawrence Hall of Science (recorded in 1990). While explaining the brain’s functions and dissecting an actual brain she also sensitively responded to questions posed by a group composed of two elementary school students and two graduate students. The composite demonstrated how a talented instructor is able to stimulate learning [2]. In addition, and similarly, when I was a docent at the Hall, one of the most popular installations was an interactive installation about the brain, designed by Diamond, that engaged visitors of all ages and backgrounds.

ChildArt’s “Your Brain on Art” likewise captures the importance of engagement in education and human development, introducing projects that highlight children in schools as well as cross-cultural and community outreach. Divided into three sections, the issue also reminds us that children learn and experience life in more than one way. The first section, “Health: The Arts Heal Us,” introduces neuroaesthetics and how art and the brain work developmentally. The second section, “Wellbeing: The Arts Keep Us Healthy,” expands on the idea of health by bringing more information about practices into the mix. The final section, “Learning: The Arts Teach Us,” conveys that educators stimulate the brain and aid its development. While the target audience for ChildArt is 10-to-14-year-olds, the substance of this project will appeal to people of all ages. Of particular value are the various activities, citations and summaries in the sidebars. These offer a means for those attracted to any particular topic to investigate further. There are also informative illustrations.

As a whole this publication underscores that education is not a one-size-fits-all proposition, even within particular approaches. In terms of art therapy programs, for example, several cohorts are mentioned. Save the Children’s HEART program provides support for children ages 4–18 who are faced with daily uncertainly in all areas of their lives. (HEART stands for Healing and Education through the Arts.) Generally the issues HEART addresses range from a lack of food and healthcare to war and poverty. By contrast, Creative Forces has a program that uses art and music therapy to heal post-traumatic stress patients. This program is a collaboration of the NEA Military Healing Arts Network partnership of the National Endowment for the Arts, the Department of Defense and the Department of Veterans Affairs. In addition, John Krakauer talks about brain plasticity in an article about virtual reality therapy, which has been shown to evoke changes in the limbic and visceral brain circuitry. As he explains, animated video games improve a patient’s ability to take on more tasks by increasing attention and focus through the game.

In terms of keeping us healthy, as Richard Louv points out, the sensory stimulation nature provides elevates our sense of aliveness, thoughtfulness and peace. Fred Marks’s article on architecture adds another vantage point through an analysis of architecture’s aesthetic and practical purposes. Indeed, how we design and build our environment influences our well-being because our brains do not work in isolation. Not only do architectural contributions impact our brains, architectural projects require some measure of collaboration and community involvement since implementation necessitates designers work with engineers, public officials, private citizens and others.

Collaboration and community are also a part of the architecture of learning in both formal and informal learning environments. The two themes overlap in many of the example programs that aid in child development. One is at the Center for Social Design at the Maryland Institute College of Art (MICA), funded by the Behavioral Health System of Baltimore. The initiative introduces seventh- and eighth-grade students to the social design process. Given the tools to think critically about complex social problems, participants are encouraged to conceptualize imaginatively and creatively about possible inclusive solutions for social change. The Baltimore Symphony Orchestra—
created OrchKids, by contrast, gives students opportunities to connect with music and instruments. These students get a chance to play side-by-side with professional musicians and both write and perform their own compositions with friends. Building confidence through music aids them academically as well.

Formal and informal environments additionally come into play in Tulsa Educare’s “Talking Is Teaching” campaign and in Urban Thinkscape, a Brookings Institution initiative. Both demonstrate that we can take advantage of a child’s natural ability when exploration and action are encouraged in everyday environments. One author, pointing out the value of informal settings, said that children only spend about 20% of their time in formal learning settings. While I think he makes a valid point, it seems that sleep would account for a large percentage of the time spent outside of formal settings so I am inclined to think that 20% is a misleading number.

Another striking element of this project is that while contributions are slotted into specific sections, their details often spread out to include other categories, in effect conveying how multidimensional learning is. For example, the Mentoring Video Project (MVP) at Wide Angle Youth Media in Baltimore is an approach that encourages young high school students to craft videos to tell their stories about violence and depression. These documentaries help them psychologically as individuals and aid them in learning new skills that will give them more room to grow their potential as they mature. These include interviewing techniques, researching topics, how to use a camera, sound equipment, digital editing and so forth. It would be fascinating to see if any of them follow this path professionally.

Collaboration is not only a topic evident throughout the issue, the project itself is a collaborative effort of two groups, The International Arts + Mind Lab and International Child Art Foundation (ICAF). Their shared goal is to provide a neuroaesthetics approach, which they define as “an emerging discipline focused on exploring the neural processes underlying our appreciation and production of beautiful objects and artwork, and the experiences that include perception, interpretation, emotion and action” (p. 2). The International Arts + Mind Lab launched in 2016 and is a part of the Brain Institute at John Hopkins School of Medicine. The International Child Art Foundation (ICAF) has been involved with children’s art and educational development for two decades. Indeed, this group spearheaded the children’s creativity revolution in the U.S. and worldwide since its founding in 1997, most notably through the World Children’s Festival (WCF), held in Washington, DC, on the National Mall every four years.

Festival participants are chosen through the Arts Olympiad, a global program that celebrates the children as it fosters creativity and imagination. Ashfaq Ishaq, ICAF’s Director, speaks about how World Children’s Festival empowers attendees to develop cross-cultural empathy in his “Developing Empathy” article, which responds to the question: “How do you develop empathy among 9 to 12 year olds from more than 70 countries in just three days?” He explains that the first day of the event centers on bringing the youngsters together through using artmaking as a universal language. Seeing they often share similar concerns in effect disrupts their biases. On the second they come to understand the power of their creativity and develop trust. The final day of the workshop includes activities that equip the children to feel they can bring about positive social change in their respective communities. Now that the event is in its 20th year, I wondered if past attendees come back to share how their experiences have shaped them. The next scheduled event is in 2019 [3].

Finally, this collection demonstrates that many trends recur generationally. For example, the idea of architecture as medicine is the subject of an article introducing how the Johns Hopkins University Hospital is combining art and architecture as a part of their mission to take care of the mind, body and spirit of their patients. As Richard Cork has documented in his elegant book on The Healing Presence of Art [4], many noteworthy works were composed for (and in) hospitals historically.

A few that come to mind are Hans Memling’s work in the Hospital of St. John (Bruges), Matthias Grünewald’s Isenheim Altarpiece (painted for the Monastery of St. Anthony in Isenheim near Colmar, which specialized in hospital work) and William Hogarth’s murals at St Bartholomew’s Hospital.

Educational methodology debates similarly are ongoing. For example, the article that discusses Destination Imagination celebrates the STEM to STEAM movement. Their program challenges more than 150,000 students in 48 states and 30 countries to combine drama, storytelling and 21st-century skills with science, technology, engineering and mathematics. Teams showcase their solutions at local tournaments, and the winners eventually go to a Global Final.

Looking at this group’s website to see if they mentioned the fate of all those who compete and do not win, I found that it highlights STEM, not STEAM. Exploring the various pages that compose the site, I did find the claim they have been “Putting the ‘A’ in STEM for more than 30 years” [5]. I wasn’t particularly surprised. I worked in STEM educational environments as far back as the 1980s, when the acronym STEM came into use (replacing the emphasis on METS). Even then STEM activities in various venues included and often emphasized modalities that are now said to represent a STEAM approach. Since the contemporary discussions seem more about adding something that is missing rather than encouraging educators not to take something away, I have come to find the STEM to STEAM push perplexing. Since STEM environments have included STEAM characteristics since the
introduction of STEM education, I think those on the STEAM bandwagon need to address what they think they are adding operationally. Perhaps a study that includes data precisely detailing what advocates believe STEAM is adding—or what STEM is missing other than the “A”—would help since so many STEM programs have used projects with arts modalities all along.

As I closed this issue I thought about how the idea that children are our future is a truism and is used with such regularity that sometimes it begins to sound like a cliché. This ChildArt project conveys that the idea’s power stems from the fact that it is connected to how we live intergenerationally, who we are and who we become. The articles also convey that the relationship between art and the brain is a complex one and, by bringing brain plasticity into the discussions, the issue underscores that new research allows us to fruitfully reconceptualize how we best address the varying needs of children. The well-chosen case studies demonstrate that talented educators, perhaps instinctively, know that while healing is needed in some cases, our children also invent and solve problems on their own terms. Ultimately, the collection reminds us that a child’s younger years form the foundation for how they will live, contribute and thrive as adults.

References
2 The "Within the Human Brain: A Dissection by Marian C. Diamond" video is available at <www.youtube.com/watch?v=jspFEHAKG8&feature=youtu.be>.
3 See <www.icaf.org/whatwedo/wcf.php> for details about the upcoming festival.
5 See <www.destinationimagination.org/mission-vision>.

MAY 2018
List Cultures: Knowledge and Poetics from Mesopotamia to BuzzFeed by Liam Cole Young. Reviewed by Jan Baetens.

APRIL 2018
Ten Great Ideas About Chance by Persi Diaconis and Brian Skyrms. Reviewed by Phil Dyke.

MARCH 2018
Arts of Living on a Damaged Planet: Ghosts and Monsters of the Anthropocene by Anna Lowenhaupt Tsing, Heather Anne Swanson, Elaine Gan, Nils Bubandt, Editors. Reviewed by Edith Doove.

Nonhuman Photography by Joanna Zylinska. Reviewed by Ana Peraica.