Pop calls these fields physics, psychology and aesthetics.)

In the Symbolist period, this broad take on symbols is not the privilege of artists and art historians alone; the notion of symbol is as powerfully present and as hotly debated in the scientific field (mainly mathematics, logics, philosophy). Moreover, the type of questions that are being asked in these apparently nonartistic domains converge with what is under scrutiny in painting and poetry: Is there something like a private language? Can we communicate feelings in ways that do not betray their singularities? How can one tell the difference between what belongs to the world outside and what is determined by the laws of our mind and perception—and are these laws mechanical, biological, strictly material, or is there room for the individual, the unsayable, the immaterial?

As one easily infers from this presentation, Pop's book, a mesmerizing read, is neither an art-historical study nor an illustration of the history of translation and Manet's highly unliteral illustration, each of them further read against a contemporary British background, are analyzed as tokens that disclose what makes Poe's text such a rich example of Symbolism avant la lettre.

But the long nineteenth century is also forward-looking. Indeed, Pop suggests that Symbolism is as strong a turning point in art history as Impressionism, the usual suspect when it comes down to explain the shift from figurative to nonfigurative painting. What Symbolism then represents is no longer the bizarre intermezzo between proto-modernist Impressionism and avant-garde's attempt to achieve full-blown abstraction, but the acme of a fundamental doubt regarding what it means to address forms and ideas not just in terms of pure forms (as in abstraction) or pure subjective experience (as in Impressionism), but in terms of meaning—and this is where the notion of symbol comes in.

A symbol, Pop convincingly demonstrates, should not be seen as a specific type of signs based on arbitrary, culturally accepted conventions (this is how the Peircean sign is commonly understood, when Peirce is reduced to the triad of index, icon and symbol). Instead it is an umbrella term that refers to various types of logically structured units and structures, with the notion of “logic” referring to the articulation of the world (as it exists outside of any subject), the experiencing subject (who does not receive the world in a passive way) and the meaningful entities (images, texts; in short: pictures) that try to express or reflect, but never in a perfect way, the relationships between world and subject. (In more disciplinary terms, Let us start with the latter, the art-historical period at the end of the nineteenth century whose works and authors are often discarded as esoteric, hardly understandable, if not just crazy (Decadentism was and still is one of the synonyms of the Symbolist movement). In this book, Andrei Pop argues that Symbolism is actually a way of thinking, imaging and imagining that continues, yet in a more radical way, some of the fundamental insights and interrogations of the Romantic period. At the end of an increasingly empiricist century, Symbolism thus represents the rejection of “pure” observation and subject-free recording, not in order to praise a wholly subjective way of making sense of the world but as a warning against the illusion that experience and observation can take place without or outside of subjectivity.

Pop’s “long nineteenth century” first highlights the pivotal function of Edgar Allen Poe, more particularly of his poem “The Raven” as well as the (in)famous commentary he wrote on this text. It then foregrounds the cross-medial reception of this work in Europe: Mallarmé’s quite literal
ideas, aesthetic as well as scientific. A truly interdisciplinary investigation, A Forest of Symbols is a book that aims for a better understanding of the role and place of meaning in symbolic interaction (in this case through words and pictures—sometimes in synergy, sometimes in blatant conflict with each other). This better understanding, however, does not tend to solve the question of meaning by proposing a new theory of new methods of reading capable of delivering a more solid ground for reading and interpretation. Instead, Pop's endeavor is to enlighten the reasons why meaning, or rather meanings, are at the same time impossible to fix and absolutely necessary, unless one wants to fall prey to one of the alternatives that logical symbolist thinking decidedly questions: on the one hand empiricism, on the other hand subjectivism (or, from a more collective point of view, social construction). Meanings, logical entities, mental images (and the notion of mental images supersedes the purely visual signification of the notion of image or picture) always emerge from the clash between world and mind (the “doubling problem” as Pop calls it), while also being the only possible way, in spite of their fundamental diversity and plurality, of negotiating between both as well as to better accept the internal divergences between competing meanings.

The conceptual and disciplinary scope of A Forest of Symbols is exceptionally broad. This is clearly not a book written by an art historian who is also interested in science, or a historian of science who also likes painting and literature. Pop masterfully moves from one field to another without ever privileging one of them. The refusal to give plain answers to difficult questions (at the end of this study, for instance, there is no “quotable” short answer to the question: What is a symbol?) is subtly underlined by the extreme precision and wealth of the brilliant illustrations that accompany the author’s argumentation, as if it were possible (but of course it isn’t!) to grasp the meaning of the book by just reading the sequential organization of surprising and often not well-known images. Just as pictures bear meanings that go beyond their mere referent or their mere subjective experience by a body and mind, texts bear pictures that both skillfully illustrate and strangely destabilize the prose of Andrei Pop.

SENSATIONS OF HISTORY: ANIMATION AND NEW MEDIA ART

Reviewed by Jan Baetens.
https://doi.org/10.1162/leon_r_01944

A reflection on our experience of history and the historical sensation in the digital age, this book opens by rebutting two widely accepted claims: first, the idea that digital media represent as well as perform the end of history (they are accused of killing our sense of the past, if not the past itself, and their spread strengthens the impression that we are living in a kind of eternal present); second, the idea that the complexity of digital media, which may at first sight overwhelm and frighten us, is something that can be overcome and undone by sustained efforts to open the black box (as if the opacity of digital culture, too big and too difficult to understand, could be superseded by a common pursuit of clarity, openness and transparency). In both cases, Hodge’s position goes radically against the grain. His book is an attempt to stress instead the continuity and permanence of the historical experience, more particularly the new forms this experience and this sensation have been taking in the digital age, not by opening the sealed container of our computers, but by taking seriously the very impenetrability of our contacts with software programs, digital equipment and the world of logarithms and calculation.

As the vocabulary of the previous paragraph immediately underlines—“experience,” “sensation,” “contact,” etc.—the conceptual framework of James J. Hodge is phenomenology, mainly the line of thinking represented by, on the one hand, Heidegger, from whom the author borrows the fundamental definition of history as “already there” (the world as well as history are in a certain sense ahead of use: We move forward into a world that has been shaped by previous experiences and that contains traces of the past) and, on the other hand, Husserl and Stiegler, whose work prioritizes memory and the role of writing (although Stiegler’s take on writing is less idealistic, less instrumentalist, in short very critical of the technology of writing and writing as technology, than in the case of Husserl, who considers writing a mere instrument of cognitive reactualization of the past).

By experience and sensation of history, the author understands the way in which traces of the past become visible before being turned into certain discourses on the past (this is “experience”) and the way in which our embodied contact with the world tries to find a balance between a purely bodily reaction to this input and certain ideas on how to make sense of these reactions (this is “sensation”). Technological opacity, which predates digital technology, is a key
factor in our experience of history—not because it hinders or destroys traditional forms of experience (at least not in general; it should be stressed however that Hodge does not directly discuss the problem of cultural erosion and loss of memory, which may be a pity), but because the appearance of new digital technologies we can no longer fully grasp, that have now developed a life of their own, that we are no longer capable of using as mere tools, engender new forms of experience of time and history.

Hodge examines these new forms of historical sensation and experience from two points of view, which he succeeds in seamlessly combining: philosophy and new media art. The philosophical background of the study, which the author manages to explain in very clear terms, is always accompanied by the close reading of a certain number of experimental digital creations, generally two or three per chapter. The origin of these case studies is very diverse: the author analyzes, for instance, games (the Cookie Clicker by Julien Orteil), literary works (overboard by John Cayley), installation art (1st sight by Paul Chan) and video (The Memory of a Landscape by Tatjana Marusic). The limited number of key examples also guarantees the possibilities of careful cross-referencing, which gives the book a solid unity.

Through the analyses, two major new experiences come to the fore. The first is “eternalism” (here mainly studied via the work of Ken Jacobs), which is, according to Hodge, the experience of new media artworks that “tell” or more precisely that “feel time” (p. 155, emphasis by the author). One might say that eternalism has to do with the experience of something that is becoming time. The second is “lateralism,” which is the experience that the new forms of time that emerge in the digital era and are powerfully experienced in new media art escape the traditional historical paradigm of before versus after (past, present, future) but that occur or take place beside this paradigm. What appears in the digital era is not a destruction of the classic paradigm but the appearance of a radical split between two paradigms (on the one hand: before versus after; on the other hand: the “eternalist” becoming of time) that are at the same time completely different and absolutely inseparable.

Hence, the essential role of “animation.” Things come to life thanks to the new technologies (that is, the technologies that we can no longer use as mere instruments, but that have come to live a life of their own). Animation is thus not the result of the invention of machines and technologies capable of recording, reproducing or simulating mobility, such as, for instance, chronophotography or cinema, but is the inevitable consequence of the very strangeness of technologies that are no longer just “ours.” (One of the chapters of the book gives a brilliant overview of what this means for the “hand” of the artist; the first tool of man, the hand is progressively deprived of its instrumental function, and its role is taken over by machines that are much more than just “extensions of men,” to quote Marshall McLuhan, surprisingly absent from Hodge’s book.)

Eternalism, animation, lateral time, writing as a technology that has developed a world of itself but, above all, the permanent friction between old and new forms of sensation and experience of time are the cornerstone of Hodge’s new vision of time in the digital age. Such a friction goes far beyond what Adorno might have labeled a textbook case of “negative dialectics.” In Hodge’s view, the old and the new do not belong to the same category, perhaps not even to the same world; the digital is not the antithesis of the old, it is really something different. The superbly analyzed new media art examples demonstrate, though, that these various and contradictory sensations and experiences of history do not end up in the silence of muteness. Humans adapt to the technological world, which is always “already there,” and they ceaselessly express, reshape and reinvent their being in time.
confused with unstructured streams deep internal reflection are not to be ture, but first-person accounts and phenomenological approaches are like gossip and introspection. Post-masked important discursive forms, has silenced important voices and over 400 years. This style, it is argued, built up around the academic journal tions of academic writing that have squeamish. Nonetheless, it is to come to expect from Idhe over the some medical detail that is not for rush in a tumultuous sea of the wild speculation, vaporware and the gesture rhetoric that discussions of technology seem to tolerate. This is more than a struggle for the history of the future. At stake in the promotion of this kind of loose talk claiming a fashionable modernity is the degradation of human values: See, for example, the vogue for articles on artificial intelligence that naturalize the conflation of learning and intelligence into a single concept. This may seem to be a convenient discursive short cut but on the way it reconfigures the human into organs of capacity and productivity. Smart zombies with software.

Clarity about technology and its relationship to us is what we have come to expect from Idhe over the years. Perhaps less usual is the literary style of this short book. Mostly written in the first person, it has the voice and detail of a casual conversation with a stranger over a long night in a hospital waiting room. There is much thoughtful introspection and also much personal detail, which at times feels a bit uncomfortable, and some medical detail that is not for the squeamish. Nonetheless, it is to be commended, since Idhe is putting his weight behind an ever-growing challenge to the routines and conventions of academic writing that have built up around the academic journal over 400 years. This style, it is argued, has silenced important voices and masked important discursive forms, like gossip and introspection. Post-phenomenological approaches are made for this kind of literary adventure, but first-person accounts and deep internal reflection are not to be confused with unstructured streams of ideas—the textual selfie and the late-night blog. Fictions require skill and aesthetic judgment, and personal stories are as demanding (if not more so) as any other kind of text. It is not sufficient to be very detailed and personal. If, as many now begin to argue, academic writing, biography, autobiography, even legal and scientific reporting are particular kinds of fiction that corral arbitrary data, then authors of first-person accounts have a responsibility to build a structure to tell a story and not unburden themselves at the reader’s expense. Idhe narrowly avoids this in Medical Techniques, but some repetitions seem to be accidental slips that the book could do without. Nonetheless, his short book is a delight that makes its point clearly and ingeniously when it is allowed to. It tells us something about the overinflated technofallacy of the cyborg that runs through much of the published material on technology and culture, and it equips us to think for ourselves about the contract we strike with any technology we use. More than anything, its embodied approach to knowing the world reminds us that, without critical vigilance, unreconstructed visions of technology may ripple out and reduce the riches of human thought and creativity to quantity.

**SOUND ART REVISITED**


Reviewed by John F. Barber.

https://doi.org/10.1162/leon_r_01946

Sound Art Revisited, by Alan Licht, published by Bloomsbury in 2019, is the second edition of an important resource for those considering the definition and history of the emerging field of sound art.

The first edition, also by Licht, published in 2007 as Sound Art: Beyond Music, Between Categories, was groundbreaking in its efforts to document the development of sound art. In that first edition, Licht located the roots of sound art in Italian Futurism, Dada and Fluxus. He examined the pioneering efforts of American composer and artist John Cage, simultaneously linking yet distancing sound art and music. Licht traced the history of sound art from the convergence of world indie bands and the art world. He introduced sound artists like Christian Marclay, LaMonte Young, Janet Cardiff, Rodney Graham, Laurie Anderson and others, briefly describing their various works in light of a growing aesthetic for sound art as an emerging field of study.

The result was not only an introduction and review of sound art, but as well an attempt to differentiate sound art from music, and sound artists from musicians. This second edition, Sound Art Revisited, continues to avoid overlapping experimen- tal music and sound art, even while showing how the boundaries and practices of sound art have expanded with respect to mixed-media hybridization over more than a decade between the publication of each edition. It also notably expands the number of identifiable sound artists and provides discussions of their works. Artist biographies are incorporated into the main text, as are anecdotal materials from the endnotes of the first edition.

To demonstrate the messy history and continued evolution of sound art, Licht expands the divisions of the book’s main text—from three in the first edition, to four in this second edition. Part One, “Introduction,” continues to grapple with the term “sound art” itself, noting its relation to music, but defining sound art as being non–time based, nonprogrammatic and thus different from noise music, sampling and musical collage. Licht proposes a fundamental definition that limits sound art to works of sound installation and sound sculpture. A “sound installation,” he says, is “an installed sound environment that is defined by the physical and/or acoustic space it occupies rather than time and can be exhibited as a visual artwork would be.” A sound sculpture is “a visual artwork that also has a sound-producing function” (p. 6).
In either case, sound art involves movement of the audience through some space or environment in order to experience sound(s). In contrast, records or concerts of music are often listened to from fixed positions. Part Two, “Prehistories and Early Manifestations,” considers technologies and aesthetics that led to sound installations, including telephone, radio, recording, all of which separate sound(s) from its original context(s), enable its transmission over long distance(s), and reinstitute sound(s) in new, different contexts, spaces and places. He considers music concrete, which prompted sounds to be distorted beyond recognizable forms and into unique, independent entities. Finally, Licht considers the reintroduction of spatialization into modern compositions. Examples and analysis are drawn from John Cage, Max Neuhaus, Luigi Russolo, Bill Fontana and Maryanne Amacher.

Part Three, “Sound and the Art World,” considers sound by visual artists utilizing sound and early sound exhibitions, arguing they go hand-in-hand and that such works constituted the majority of sound exhibitions until the 1990s, when the aesthetics of audio-only exhibitions began to emerge.

Part Four, “Recent Sound Art,” reviews contemporary trends to blend music, sound art, musical instruments, sound sculpture and interpersonal communication.

In Sound Art Revisited, Licht says the state of sound art in the 21st century is closely connected to listening to sounds from people, from each other and from inanimate objects, history and the environment. The fundamental concept of sound art, he says, is to frame sound within society, rather than, as he suggested in the first edition of this book, a subset of the sonic planet as a whole. Listening to sounds can be, Licht concludes, regarded as a tool for understanding human culture, past and present. What remains is “to reconcile the human and the universal within the scope of sound and create new sound art works that possess a balanced sense of the genre’s past, present, and future” (157). Sound Art Revisited provides a worthy roadmap and resource.

ARCHITECTURES OF THE UNFORESEEN: ESSAYS IN THE OCCURRENT ARTS

Reviewed by Edith Doove,
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https://doi.org/10.1162/leon_r_01947

Contrary to what the contents page of Massumi’s latest book suggests, it does not consist so much of five parts—three chapters plus a seemingly less-important introduction as well as “Concluding Remarks,” likewise of less importance. Rather it consists of three equivalent parts—the introduction and the conclusion, plus the middle, which is a large chunk subdivided into three chapters of what I would like to call “applied Massumi.” This chunk is dedicated to Gregg Lynn, Rafael Lozano-Hemmer and Simryn Gill, of whom only the first is, strictly speaking, an architect (a digital one). The others are subscribed as, respectively, an interactive media artist and a mixed-media installation creator. All three of them, however, share a certain connection with architecture, hence the book’s title. With occurrent arts, Massumi alludes to the process-based aspect of their art, or processual design, in which any object is just a temporary phase on its way to another.

Although the book in essence is nonlinear in its approach, let’s nevertheless begin with the book’s introduction because, despite its modest indication in the contents page (smaller font, deceptive roman page number), it’s about 11 pages long and, to me, Massumi actually performs the most important work of the book right there. Immediately in the first sentence he indicates that these texts are not so much about the named protagonists but rather that these are cases of “writings-with.” This immediately struck a note, as in my own writing on art I also prefer to write parallel to (the work of) artists I appreciate because they tackle problems in a way that interests me. Massumi offers here a theoretical approach of this wish by talking about writing from “a region of critical overlap,” where “two processes, strangers to each other, can intimately overlap in a problematic that is constitutive for both, without coming in any way to resemble each other in form or even sharing content.” In doing so “they fashion their own [content], reciprocal to their singular taking-form. They may perturb each other or attune, interfere or resonate, cross-fertilize or contaminate, but each will ultimately incorporate the formative potential in their own problematic way, so that the overlap is also a forking” (pp. vii–viii). And here we enter, almost inevitably, Massumi’s well-known universe of Deleuze and Guattari when he refers to their notion of “aparallel evolution: the intimate art of keeping a formative distance” [1].

In his “writing with” Lynn, Lozano-Hemmer and Gill, Massumi namely enters into his own personal realm in which he can revel in and develop a thinking alongside these artists’ work that is embedded in and developed alongside the thinking and writing of his usual compadrons. Apart from Deleuze and Guattari, from whom he in the Concluding Remarks also develops the notion of (being at) the outside, we thus encounter, among others, Bergson, Simondon and Whitehead. In what could be called the applied part, it should therefore not be surprising that there’s a clear recognition of the found critical overlap by way of keywords such as process, event, becoming, immanence—such as when indicating that “the status of the art practice for the philosophizing is that of a non-philosophical field immanent to philosophy’s becoming” (p. xii).

The interaction or what Massumi calls “processual fellow-traveling” with (the work of) Lynn, Lozano-Hemmer and Gill took place in

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different time frames and is partly still ongoing. In the case of Lynn this goes back to the mid-1990s, with Lozano-Hemmer even to the end of the 1980s, while that with Gill took place over a limited period of two months. Where the encounter with Lynn’s work would eventually leave Massumi’s “process to similarly spin off, orphaned by Lynn’s while irreversibly correlated to it, a wasp in the abstract embrace of an intimately distant orchid” (p. ix, my italics), Massumi’s work on the politics of everyday fear fed into the development of one of Lozano-Hemmer’s works. But whether developed over a shorter or longer time, the end result is predominantly Massumi and not so much any of the artists he writes about. When reading his process of writing in the concluding remarks, I couldn’t help thinking of that of making mille-feuille, for which the dough has to be stretched and folded back into itself multiple times in order to finally achieve the delicate, fine-layered pastry; intricate, not straightforward, to be revisited. And although Massumi’s book is classified under art history and visual culture, praised for its “invaluable contribution” to the first, it at times resembles more a physics book, owing to the extensive description of the processes followed by the artists. His close reading resulting in dense, at times very poetic, writing—an artwork, or process, in itself, perhaps.

Reference

1 This quote from Massumi references Deleuze and Guattari, A Thousand Plateaus (University of Minnesota Press, 1987) p. 11.

YELLOW: THE HISTORY OF A COLOR


Reviewed by Giovanna L. Costantini.
https://doi.org/10.1162/leon_r_01948

Yellow is Michel Pastoureau’s most recent addition to his series on the historical culture of color that to date includes books on Red (2017), Green (2014), Black (2009) and Blue (2001). It continues an interdisciplinary investigation into a history of color as a socially constructed concept whose vocabulary, codes and values have been determined by distinct and identifiable cultures. Pastoureau’s focus is that of European societies from Roman antiquity to the eighteenth century based on almost 40 years of seminars conducted at the École Pratique des Hautes Études and the École des Hautes Études en Sciences Sociales in France. It includes such topics as color etymology and taxonomy; minerals and pigments; prehistoric ochres; myth, lore and allegory; medieval heraldry; dyestuffs; color physiology; funerary traditions; iconographic conventions; robes and vestments; and medicinal functions. Lavishly illustrated, it is beautiful to behold.

Unlike the semiotic continuities of colors treated in Pastoureau’s previous volumes, in Yellow there is much disparity and, save for certain strains of medieval imagery, one can point to few threads of connection among the color’s connotations. This is due in part to the wide variability of associations attached to the color among disparate societies, epochs and uses, from cave paintings to Gauguin’s Yellow Christ. But it is also true that the luster of yellow often belies an assortment of denigrated meanings assigned over time that here receive some emphasis. One source of ambiguity, Pastoureau points out, owes to the color’s natural mineral identification with the precious metal gold. The yellow pigment in many cultures derived from orpiment, a highly toxic arsenic sulfide termed arsenikon in ancient Greece, zarakh (as in zar for gold) in Persia. Pliny called it auripigmentum or gold paint, a term retained by medieval writers until it was later translated as orpiment or orpimente. Widely used in the East, where yellow was the exclusive color of the emperor, it was known in Britain as “King’s yellow.” The Latin adjective aureus continued to be identified with gold metal for its precious, reflective value and for its resemblance to the light of the sun, informing the cosmic symbolism of funerary art, religion and sovereignty. In matters more mundane, since at least the sixth century BCE gold coins stamped with heads of bulls or rams or lions—later kings or emperors—were used to pay the armies of antiquity. Pastoureau illustrates a stunning gold stater of Philip II of Macedon that bears the head of Apollo wreathed in laurel, held in the Cabinet des médailles in France’s Bibliothèque nationale.

Despite an abundant use of gold in mobiliary art, Hiberno-Saxon manuscripts and Byzantine mosaics, by the early Middle Ages yellow in its painted applications had fallen into disfavor in Western Christendom due to vernacular associations with treason, chicanery, and villainy as well as cowardice, folly, sickness (as in jaundice) and decline. Related to a medieval theory of humours, yellow was associated with jealousy, envy and hatred. Likened to gall in animals and a choleric temperament as violent and unstable, yellow was a color much despised. One persistent strain of association occurred in depictions of Judas wearing yellow robes as in Giotto’s Scrovegni Chapel in Padua, where he is shown receiving payment for his betrayal. In the following century a manuscript from Prague depicts Jan Hus being burned alive for heresy in a yellow tunic. These and other notorious figures form part of wider categories of exclusion that for centuries perpetuated discrimination against Christian and...
non-Christian outcasts, extending to the yellow star worn by Jews during World War II and to derogatory terms for Asians.

But there are also amusing anecdotes about the color's history. When Cicero's personal enemy, Clodius (Publius Clodius Pulcher, 92–53 BCE) attempted to seduce the wife of Cesar, he disguised himself as a woman by wearing a long yellow dress dyed with saffron that Cicero considered a sure sign of his debauchery. One chapter, "Bile and Urine," contains color charts of variously colored urine flasks illustrated by way of a charming color wheel. The fifteenth-century Tractatus de pestilentia was used to diagnose medical conditions by color—but also by smelling and sometimes tasting. In other medicinal contexts, master physicians and doctors advised showing the color yellow to a man weak and near death in order to give him back his strength. Then there was the custom of painting doors and windows of a house yellow if persons went bankrupt and other more diabolical associations with the sulfurous content of orpiment.

From the Renaissance through modernity, there are innumerable resplendent uses of yellow among painters: Portrait of a Woman in Yellow by Alessio Baldovinetti; jewel-like Venetian brocades and satins; brilliant flourishes in Jan Vermeer like Venetian brocades and satins; jewel Yellow by wearing a long yellow dress dyed with saffron that Cicero considered a sure sign of his debauchery. One chapter, "Bile and Urine," contains color charts of variously colored urine flasks illustrated by way of a charming color wheel. The fifteenth-century Tractatus de pestilentia was used to diagnose medical conditions by color—but also by smelling and sometimes tasting. In other medicinal contexts, master physicians and doctors advised showing the color yellow to a man weak and near death in order to give him back his strength. Then there was the custom of painting doors and windows of a house yellow if persons went bankrupt and other more diabolical associations with the sulfurous content of orpiment.

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tience: “Finis seul ta ronde / Dans cette chambre qui tourne dans ta tête” (p. 94). Indeed, even at their most carnivalesque and eclectic, the poems never appear rushed or breathless in an attempt to exhaust their subject matter; if anything, they sometimes threaten to collapse under the weight of their motifs, riffing enumerations and towers of words (p. 59).

All of this creates the impression that the poems follow grooves that are not entirely of their own making. The hotel, in the end, is made partly out of bricks and mortar and partly from the words in which we dwell. It, too, has an ordering presence. The hotel imposes its life cycles and routines by means of “la machine des chambres” (p. 88): permutations of fresh linen, fresh glasses, fresh guests. This recalls the earlier poem in which water moves in rivulets along little trenches in the ground. Words flow in the same way: “Rainure de mots ni bons ni faux” (p. 38). The water speaks, time speaks, the hotel speaks out of bricks and mortar and partly from the words in which we dwell. And we follow behind, “Sans moi, venant derrière, / Courant après, marchant dessous” (p. 65).

On top of being clever, the collection is wry and cheekily self-deprecating, especially when it references poetry as a craft. Poetry gets left lying around (p. 37); it is “une longue liste de listes” (p. 52); it’s a washed-out affiche (p. 65). In the latter poem, Baetens also self-reflexively nods to the proliferation of stars in his own work: “En cet endroit […] j’ai dit ici, j’ai dit maintenant, / Les étoiles s’attroupent impatients.” Not only that, but he brings us back down to earth with a bump at times. Don’t dream of eternity. Walking among the stars or on the moon is possible only with one’s feet on the ground:

Nous n’irons pas aux étoiles
Fermons les yeux, elles n’existent plus.
Même sur la lune c’est encore la terre
Qu’on aura sous les pieds
Et la tête sur les pauvres épaules.

(p. 65)

VITAL FORMS: BIOLOGICAL ART, ARCHITECTURE, AND THE DEPENDENCIES OF LIFE

Reviewed by Robert Maddox-Harle.

https://doi.org/10.1162/leon_r_01949

Johung’s main concern in researching and writing this book was to explore “the capacity for the arts to directly engage in the oftentimes ambiguous formations of what it is to be biological and living” (p. 4). I believe she has done an excellent job in such a contentious, rapidly changing and “cutting edge” field. As Oron Catts says, “Vital Forms succeeds in an almost impossible task: it weaves together arts, architecture, life sciences, philosophy, performance, ethics, and biopolitics.” The book is as much about synthetic biology and scientific experimentation as it is about art. It exemplifies the Leonardo (ISAST) paradigm of the combination of art, science and technology perfectly.

The title, Vital Forms, alludes to the now-outdated philosophy of Vitalism. Vitalism believed in a fundamental difference between living and non-living objects; as Johung reports in many instances throughout the book, the supposed difference between living/nonliving or organic/nonorganic is being shown to be false. One instance is the work of Rachel Armstrong using Protocells in biological architecture applications (p. 100); these cells have no DNA but can do most things biological “living” cells do. It seems to me that these cells will play a major role in the stabilization and rehabilitation of our planet.

The book has an introduction, five chapters, and an epilogue, index and notes. It is illustrated with numerous photos of the art and architecture projects discussed in the various chapters.

Chapter 1, “Vital Synthesis: Art, Design, and Synthetic Biology,” looks at the intersections between synthetic biology, art, and design. Blueprints for Life was exhibited at Ars Electronica (2013); it explores the future and impacts of synthetic biology. “By speculating on the larger contexts and consequences of synthetic micromanipulations, these blueprints negotiate between the directed development of bioengineered living forms and the indeterminate situations and relations through which such life subsists in time” (p. 21).

Chapter 2, “Vital Maintenance: The Tissue Culture and Art Project and Infrastructures of Care,” discusses the pioneering work of Oron Catts and Ionat Zurr. Their Tissue Culture Art project involves seeding culture cell lines onto polymer scaffolds. “Across their arts practice, Catts and Zurr frame the contingencies of forming life through the persistence of care” (p. 21). This involves the practice at times of killing the living forms they have created!

Chapter 3, “Vital Contexts: Morphology, Mutability, and the Sabin+Jones LabStudio,” “calls attention to the dynamic attachments and reciprocities that constantly develop between living forms and their adaptable, flexible, and forceful surrounding environments across time” (p. 22). The work created through the liaison of Jenny Sabin (architect) and Peter Lloyd...
Chapter 4, “Vital Ecologies: Protocells and Holyzoic Ground,” looks at the “inextricably linked boundaries and variable symbioses between organic to synthetic, living to nonliving matter, within and then beyond the context of systems biology” (p. 22).

Chapter 5, “Vital Regeneration: The Promise and Potentiality of Stem Cells,” is possibly the most controversial chapter. Johung discusses the “developments in regenerative medicine and stem cell research,” noting major shifts from 2007 through to 2014. Pluripotent cells, embryonic stem cells, and their ethical and biocapitalist outcomes are investigated.

The Epilogue, “Vital Times,” in a sense summarizes the previous discussions and looks at ways forward but does not make any “definitive claims on how we should respond ethically or politically with full acknowledgment of the contingent ways in which life is expanding beyond itself in both form and time” (p. 146).

One thing that really impressed me about Johung’s research is that she does not make claims as to the correctness or otherwise of the art/science creations she discusses, nor the questions they raise. In fact, she is at pains to avoid these sorts of ultimate pronouncements and is content to let the reader “go with the flow,” so to speak—to come to their own conclusions about the works and the manipulation and future of the creation of life they are involved with.

This book is an important scholarly investigation into most aspects of living and nonliving matter, discussing both the manipulation of existing forms and the creation of new ones. It is contentious, thought provoking and a little frightening. I consider it essential reading for both the general public and those working in the art/science connected fields.

HABITER EN OISEAU


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

https://doi.org/10.1162/leon_r_01950

Vinciane Despret’s latest book has not yet been translated into English, but it merits in my view an early review. In these days of crisis, when reports state that birds everywhere have become more prevalent, or maybe rather more “audible” through the reduction of traffic and industry [due to quarantine restrictions—ed.], it seems more apt than ever to give them a platform. Habiter en oiseau could be considered in relation to Mundy’s Animal Musicalities that I reviewed earlier [1], but Despret’s book is more like a passionate manifesto. Its title can be translated either as Bird Watching or more literally as Living as a Bird.

The combination of both would not be bad, although Despret not literally urges us to live like birds. Instead she wants us to open up to other stories, to diversity, to other perspectives.

Despret in that sense is very clearly part of a group of scientists that urge for the need of new storytelling, such as Donna Haraway, but certainly also Bruno Latour and Isabelle Stengers, with all three of whom Despret regularly collaborates. It should therefore not be surprising that she dedicates her book to them and frequently makes reference to their writing and thinking [2].

Habiter en oiseau is in all respects a very sensitive book. To start with, it is very specifically composed in a Karen Barad kind of way, the questions researchers and their techniques more than the birds. Where the research into territory was for a long time viewed from the perspective of aggression and survival in which the “removal” of birds was common practice in order to test hypotheses, Despret poses, in a Karen Barad kind of way, the question of what it is that we decide to make remarkable in what we observe. In her quest to open our imagination to other ways of thinking and breaking with certain routines, it is remarkable that it is mainly female researchers that have discovered that female birds have a lot more to say in the choice of territory than thus far was assumed and that territories turn out to be flexible, not static, with a very specific function of birdsong that for a long time has been overlooked.

Referring to Deleuze and Guattari and their argument that “there is a territory when there’s an expressivity
of rhythm” [3] as well as Haraway’s notion of the Phocenec as an alternative phrase for the Anthropocene, Despret discovers the territory (of birds) as theatre and place of expression. Fights turn out to be not so much manifestations of aggression but rather tools for a better understanding in a community, ways for better living together. In short, as Despret states towards the end, we need to stop, listen and listen some more—to diversity and different ways of expression. And, I would add, we need to stop questioning whether interspecies animals invent and communicate in the first place—of course they do, why shouldn’t they? As Despret demonstrates, the questions should be about the how.

References and Notes


3 I have chosen here on purpose a more literal translation than Brian Massumi’s “There’s a territory when the rhythm has expressiveness.”

POPULAR VIENNESE ELECTRONIC MUSIC, 1990–2015: A CULTURAL HISTORY


Reviewed by Beate Peter.

https://doi.org/10.1162/leon_r_01951

Ewa Mazierska presents her new book, Popular Viennese Electronic Music, 1990–2015: A Cultural History, as a case study for music made on the periphery. Applying Regev’s (2015) concept of aesthetic cosmopolitanism to Viennese electronic music, she argues that the cultural exchange between nations or scenes leads to the sharing of aesthetics with regard to the production and consumption of music. Mazierska sets out to treat Viennese electronic music between 1990 and 2015 as a local phenomenon but also as one that reflects broader cultural developments. The time frame broadly reflects the technological changes that affected both music consumption and production, and Mazierska shows how those changes led to the rise of a music scene, but also its demise.

The book is divided into three parts. In the first section, Vienna’s history as capital of music is told, from Viennese Classicism to Conchita Wurst’s winning of the Eurovision Song Contest in 2014. Mazierska sets the groundwork for her book as a cultural (rather than technological) history by focusing on the cultural work of scenes. She uses this part of the book to discuss two very interesting points. First, a national identity (or its absence) is elaborated on with regard to the musicians’ self-image and the marketing of their music.

Linked to the discussion on identity is the second point: how musicians today fully embrace or reject local culture. Both points help to elaborate Mazierska’s adaptation of aesthetic cosmopolitanism and are further elaborated on in the second section of the book.

Here, the dialectic of global/local is discussed through factors that facilitated and/or hindered the establishment of a Viennese electronic music scene, such as the networking of previous music scenes, changes in technology, or the scene’s size. Mazierska tells the story of the scene on the backdrop of seismic political shifts in Europe and the rise of neoliberalism, evidencing that the development of Viennese electronic music is a result of both global developments and local conditions.

The third and most exhaustive part of the book consists of profiles of some of the most important protagonists of the scene, dedicating a chapter to each of them. Mazierska uses every profile to introduce current discussions in popular music studies, but also points out in what way the artists are exemplary of the scene. Similar themes surface in the portrayal of the artists and their collaborations. For example, the first three chapters feature Richard Dorfmeister, most famously known to be one half of Kruder & Dorfmeister. Comparing the collaborations, it is interesting to see how different aesthetics lead to different levels of commercial success. Also, it seems that the artists that chose to live abroad for a certain period of their careers have managed to translate their experiences into commercial sustainability more than artists who remained in Vienna/Austria. The last chapter of this section is the most interesting. It is dedicated to two female artists in the scene: Electric Inigo and Sweet Suzie. Mazierska considers it “unfair to group artists together for reasons other than artistic” (p. 195) and bemoans that this is often the case with women. Yet, she falls prey to exactly the same practice. Both women have an impressive oeuvre. However, it might be harder to compare it against their male counterparts, as their output includes collaborations that are not related to their musical careers. As Mazierska states, it “consist[s] of a deeper labor of love and rightly dedicated to the electronic musicians that defined the electronic Vienna. It is a great advocate for engaging with Viennese electronic music. At the same time, it makes one curious to see how music scenes in general and the Viennese electronic music scene in particular develop in times of a return to the nation state and localization.
**SIX CONCEPTS FOR THE END OF THE WORLD**


**BEING MATERIAL**


Reviewed by Brian Reffin Smith, Collège de 'Pataphysique, Paris

https://doi.org/10.1162/leon_r_01952

You sit there wondering if there are books that will help, directly or indirectly, to address imminent doom, or thoughts of such, from COVID-19. Tomes on art and post-humanism? No, not in the real world. Camus’s *The Plague*? Oh c’mon. More people have bought and not finished that than *A Brief History of Time*. *A Bluffer’s Guide to Epidemiology*? Oh c’mong. More people have bought and not finished that than *The Plague*. But this is no academic exercise in futurology, though it treats of such. Two filmmakers want funding for an end-of-the-world movie and get together with some drone scientists who need apocalyptic data to flesh out their models. What could possibly go wrong . . . six times? The exoskeleton supporting the central conceit is perhaps a bit loose, but we live in enforcedly playful times. The filmmakers and the scientists have two kinds of interaction: They are filmed by one man, while the other takes notes that will be developed into scenarios for the scientists whilst also serving as the basis for the film script. Scientists and these kinds of artists need each other.

The themes for the meetings, and the sections of the book, each starting with “Field Notes on a Residency,” are technology, sociology, geography, psychology, theology and narratology. They themselves are divided into subsections such as “Transcript of the Keynote Speech from a UFO Abduction Conference,” “Lost in Algospaces” or “Voiceover Script from an Occult Artfilm.” It is by no means clear where fact and fiction intertwine, smear themselves over each other, stop and start. This reviewer found it most comfortable to read it whilst floating above such a province, with lockdown anyway, with bleach one day, demonstrators screaming abuse at nurses the next. Matthew 23:27 in the English Standard Version of the Bible: “Woe to you, scribes and Pharisees, hypocrites! For you are like whitewashed tombs, which outwardly appear beautiful, but within are full of dead people’s bones and all uncleanness.” The beautiful and the bones, them dry bones, are the current poles of much creative lockdown activity.

The whole is also informed by the ideas and beliefs of Paul Virilio, the French philosopher and theoretician of culture, who helpfully pointed out that there couldn’t be a plane crash before the plane was invented. He was a military and technological determinist who aided the French military in the Gulf War, though of course to be a war theorist is not to celebrate conflict. Perhaps it is just as well that, according to philosopher and *Pataphysicist* Jean Baudrillard, that war did not take place. Those seeking more positive views of Virilio can find plenty online, as well as some what hilarious criticism, for example of his apparent inability to distinguish between speed and acceleration. And though he also believed in the “End Times” and angels, he was credited by Mark Lacy with “creating a vision of the world through concepts and language that is often unsettling, a (re)description that makes the world feel strange and unfamiliar.” Much like this book and these times.

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The scribe, the narrator, starts off the third section, “Geography,” with a talk about globalization. Remember they are looking for a catastrophe scenario. He elicits from participants a description of what is going on: “Everything is increasingly interconnected. Everyone is increasingly interdependent. It’s marvellous.” The young scientists nod and grin. “They have adapted to living in the slipstream of a constantly moving world.” Then he changes tack, with a photo of a child refugee and citing Virilio’s characterizing globalization as a mechanism for moving entire populations and turning the world’s cities into chaotic slums.

He asks how the end of globalization might be modeled in mixed-reality gaming. They come up with columns of refugees, checkpoints and closed borders, nationalism and
xenophobia, the end of cheap air travel, dead zones starved of investment, a new Dark Ages, censorship, torture and superstition. What could cause this? the narrator asks. Not the technology going wrong, but the accelerated migration of people somehow going wrong. A contagious disease, perhaps. A virus like H1N1, or Spanish flu. “Of course,” I said. “That’s it. A pandemic. Brilliant!” The session came to an end.

The modeling, locations and various effects are worked out, and imaginary proposals constructed. The mixed-reality modeling is called Operation Swansong. It is utterly no coincidence that the name of a 2016 U.K. National Health Service disaster simulation of a pandemic—whose results were allegedly too terrifying for public release, and whose recommendations were clearly ignored by the Conservative government—was called Exercise Cygnus, the Latin for “swan.”

To learn more about what the book’s characters decide, read the book. For more about our present “this is not a rehearsal” situation, look outside.

How can we escape from the unreal-feeling reality of the threat of COVID-19 disease and its global side- and after-effects? (As I write, more and more horrendous side effects of COVID-19 are being registered, involving, for example, the nervous system. It is thought that these, even if relatively rare, may be long term or even permanent.) Well, those who can escape, do. Those who can’t seek internal escape in creativity, binge watching surprisingly less-awful-than-imagined TV series or uninteruptible Zoom chats. Those who can’t even support that for long term or even permanent. (Well, the book was written two months of a global lockdown due to the COVID-19 pandemic. With face-to-face social interaction rapidly replaced by video conferencing technologies, it seems that the webcam is now well beyond just an “emerging” cinematic medium. Albuquerque, a webcam artist and scholar, draws on her extensive practice-based research to illuminate little-known aspects of the technology in which we are immersed. Her ideas around the webcam as a cinematic “continuum” or Latourian “mode of existence” resonate bodily under stay-at-home orders. But the book was written when it was the 24/7 video surveillance of public street life that was the pervasive webcam technology and the main political concern of webcam artists. The irony of reading these ideas during the pandemic is that public spaces are now mostly empty. Active social life is indoors, at home, surveilled perhaps within the video conferencing system itself.

A webcam is a video camera that...these times will have on making and thinking about the work of art in the age of its, and our, epidemiological transformation.

**THE Webcam As An Emerging Cinematic Medium**


Reviewed by Will Luers, The Creative Media & Digital Culture Program, Washington State University Vancouver. Email: whuers@gmail.com.

https://doi.org/10.1162/leon_r_01993

I am writing this review of *The Webcam as an Emerging Cinematic Medium* after two months of a global lockdown due to the COVID-19 pandemic. With face-to-face social interaction rapidly replaced by video conferencing technologies, it seems that the webcam is now well beyond just an “emerging” cinematic medium. Albuquerque, a webcam artist and scholar, draws on her extensive practice-based research to illuminate little-known aspects of the technology in which we are immersed. Her ideas around the webcam as a cinematic “continuum” or Latourian “mode of existence” resonate bodily under stay-at-home orders. But the book was written when it was the 24/7 video surveillance of public street life that was the pervasive webcam technology and the main political concern of webcam artists. The irony of reading these ideas during the pandemic is that public spaces are now mostly empty. Active social life is indoors, at home, surveilled perhaps within the video conferencing system itself.

A webcam is a video camera that connects to a computer, which then simultaneously streams live video to users through the Internet. Designed for online professional gatherings, the popular Zoom software uses what Albuquerque calls the “webcam apparatus”: camera, computer and the Internet. During the months of the pandemic, this same apparatus has become a medium that uses itself as...
the setting for diversion and entertainment: theater and sketch comedy skits set in mock webinars, live performances of music and poetry from kitchens and living rooms, and more vernacular forms of personal expression, such as virtual-background effects and stunts during meetings. The author, however, offers the reader a more penetrating and philosophical toolset with which to ponder the aesthetics and the politics of our post-pandemic relation to the webcam.

Albuquerque makes her case that the webcam apparatus is an expressive media with which artists explore, interrogate and subvert a pervasive culture of global surveillance. But her notion of the technological panoptic extends beyond crime-preventative webcam systems. The God-like eye, capturing the present moment as it passes, storing a shadow-life of the past in highly structured databases, is life lived on and through the Internet. We are a culture addicted to and dependent upon recording, sharing and storing the passing moment—the Now. Surveillance video works with online monitoring of personal data, social media updates, video chat, drones, personal webcams and video conferencing to create a cinematic continuum—a sequenced, structured and timestamped flow of moving-image data. This new temporality, what Albuquerque calls “Realtime,” is an extension of the “long-take” in cinema, a unit of continuous time without the illusory cuts. The difference is that the temporality of Realtime is synchronized across multiple recording systems, delivered through networks and stored in databases that are accessible as a future archive.

Albuquerque writes that the “camera entered the digital age by multiplying into several devices that operate beyond the scope of filmmaking and also the televisual.” By merging traditional cinematic time (continuity editing), the long take (the single continuous shot) with Internet or network time, webcam artists have a medium to deconstruct not only surveillance culture, but the dominant notions of contemporary temporality. With examples of her own body of work with webcams and appropriated webcam images, along with the work of artists such as Hito Steyerl, Harun Farokz and Walid Raad, Albuquerque examines the aesthetics and politics of appropriating low-resolution webcam images (Steyerl’s “poor image”) and the new narratives that can be discovered in the vast archive. Albuquerque’s three-channel video installation, Onscreen/Debris, uses discarded webcam footage from the 2013 Boston Marathon Bombing to explore the peripheral images around the main suspects in the case, “the potential future criminalization of anyone who happens to be filmed.” When artists appropriate surveillance video or stage their own forms of webcam surveillance they are quite literally altering the historical record.

This reader wonders what Albuquerque has to say about the new directions of webcam technology—the postpandemic infrastructures of surveillance and the new norms in virtual culture. For now, this prescient book is enough to get us thinking in new ways.

**DVDs**

**HEIMAT IS A SPACE IN TIME**


**CHEZ JOLIE COIFFURE**


**THE CORDILLERA OF DREAMS**


Reviewed by Mike Leggett, Associate, Creativity & Cognition Studios, University of Technology Sydney, Australia. Email: legart@ozemail.com.au. https://doi.org/10.1162/leon_r_01954

This group of new DVDs is from Icarus, the distributor of moving image documents made independently of corporations by an international group of filmmakers. The filmmakers work with small budgets but are well represented at the various festivals dedicated to an approach to the medium like an essay, prose or poetry, with space for reflection and thought. The technology of digital media makes this financially possible whilst also maintaining an unintrusive presence in the recording process. These three productions gather such advantages in different ways.

**Heimat Is a Space in Time** collects documents on paper from the
The twentieth century, recorded, written, discovered and photographed by the filmmaker's German family. The filmmaker reads from letters and diaries, whilst the images of places where we imagine the events took place are seen as they are today: snow-covered or desolate landscapes, cities rebuilt and repopulated, trains and train tracks—each shot a steadily made pan, or track, or scroll. It is a modern history recorded by family members through the First World War, then the Second, and on to the Cold War, with at first casual cards and letters, through disbelief as deportations were taking place to the East, onto the rancor of family survivors separated on either side of the Iron Curtain: “We can’t see the flow of history,” says one. A popular chorus from the 1930s in German pops up occasionally: “Just you never mind.”

Thomas Heise is the son of a philosopher fired by the authorities in the East, declaring he “doesn’t care to go under in the current theatre of forgetting”; the playwright Heine Müller makes an appearance in sound and photos. “This film whose material interests me; something foreign that I’ll take possession of.”

At over three hours’ duration, the film offers ample time to reflect, to interpret what is being seen and heard, to be active in piecing together significance and meaning. It is a cool (almost like the images themselves), a frozen, symmetrical aesthetic, set against the horror of the killing machines of Fascism and modern technology, not always seen but implied, the quotidian often set against the horror of the future. “We can’t see the flow of history,” says one. A popular chorus from the 1930s in German pops up occasionally: “Just you never mind.”

Patricio Guzman, the director of the third film reviewed here, *The Cordillera of Dreams*, has made over 20 films about the country he was forced to leave following “the volcanic” coup d'état in Chile during 1973, to live in France, where he remains. Chicago economics is cited as the driving factor, along with the U.S. government for maintaining the dictatorship over 25 years; the dictator has gone but the divisive economics remains.

The message is strong, and the delivery is likewise, rich in visual and verbal poetic substance. Guzman remains close to the earth, to the mountains remembered from his childhood, which, like a map of his city Santiago, is a mirror of the fissures and cracks in the slabs of stone quarried by his sculptor friend from the Cordillera, the Andes Mountains. The mountains comprise 80% of the country and sit, like “the back of a chair . . . a rocky container,” in the words of the sculptor, who stayed behind following the coup.

Drone technology has become an indispensable tool for filmmakers, and Guzman uses it, as with the camera, with gentle restraint, examining his ruined home, observing the military parades and revealing mountainous quarries from where Chile’s copper wealth is silently removed, by nighttime trains, for the benefit of overseas investors, we learn from another filmmaker who documented the harsh realities of life under the junta. Using succeeding formats of video technologies, he recorded the flash squad demonstrations by women and students, imaginative and peaceful, summarily broken up by water cannon, tear gas, and baton-wielding police (tools still used in Chile to this day).

Guzman’s gentle voice guides the way through memory and evidence toward realization, the thinker close to the pictures we see, nudge us toward an understanding of the importance of us recording and archiving, for the purpose of “writing the memory of the future.”
Les Archives sonores de la poésie, edited by Abigail Lang, Michel Murat and Céline Pardo. Reviewed by Jan Baetens.

Fiction and Imagination in Early Cinema: A Philosophical Approach to Film History by Mario Slugan. Reviewed by Jane Hutchinson.

The Sorrows of Priapus: Consisting of the Sorrows of Priapus and the Carnal Myth by Edward Dahlberg. Reviewed by Mike Mosher.


MAY 2020


STEAM Initiative on Education: Leonardo Special Section

Guest Co-Editors: Tracie Costantino (RISD) and Robert Root-Bernstein (Michigan State University)

The STEAM movement, focused on integrating arts (broadly encompassing visual and performing arts, crafts and design) into science, technology, engineering and mathematics (STEM) education is well underway. We are avid advocates of this movement but worry that integration of arts and sciences into curricula from K–12 through graduate and professional education is not supported by sufficiently rigorous pedagogical studies. If STEAM is to succeed, it must be underpinned by pedagogical principles, methods and materials of high quality and reliability.

In the spirit of interdisciplinarity, we explicitly welcome diverse methodologies such as mixed methods designs and novel assessment methods designed to meet the special needs of STEAM educators. We particularly welcome studies employing well-designed, randomized classroom controls and utilizing well-validated learning measurement standards, but Leonardo recognizes that one of the challenges of STEAM integration is that it may require new approaches to teaching and learning. We therefore welcome articles that are focused on the development and testing of novel approaches and methods for purveying and evaluating integrated learning.

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