Some enchanting literary works are destined to become classics from the moment they are published. Alice’s Adventures in Wonderland, Jonathan Livingston Seagull, Zen and the Art of Motorcycle Maintenance and, most recently, the Harry Potter books are of this nature. Flatland preceded these by over half a century but is of a similar stature.

These literary adventures excite aspects of the human psyche that are experienced by most but articulated by few. Jung would say that they address archetypes within the collective unconscious and as such possess a timeless, universal appeal and profound impact on moral, ontological and spiritual facets of existence.

Even though the underlying themes of Flatland are timeless, the setting and cultural conventions of the epoch in which the author lived are firmly entrenched. Written in 1884, Flatland depicts the Victorian class system and the suppression of women just as he was a visionary in exploring the nature of dimensionality and the myopic nature of society in this respect.

Flatland is a two-dimensional (flat-plane) world inhabited by individuals who go about their lives pretty much as we do in our three dimensional world, only they are, of course, flat. Abbott describes the various inhabitants of Flatland, Squares, Circles, Polygons and so on and their social standings, class-structure system and day-to-day activities. All is well until a mysterious visitor arrives from Spaceland. Arthur Square and his granddaughter Hex have to acknowledge the existence of a third dimension: height. I will not spoil the outcome of the story or the movie by relating what happens but as you can recognize the discoveries and teachings of Copernicus, Socrates and Galileo!

The following quote will give an example of the action, the writing style and Abbott’s imagination, which fills the book: “Of the Suppression of the Chromatic Sedition. The agitation for the Universal Colour Bill continued for three years: and up to the last moment of that period it seemed as though Anarchy were destined to triumph. A whole army of Polygons, who turned out to fight as private soldiers, was utterly annihilated by a superior force of Isosceles Triangles—the Squares, and Pentagons meanwhile remaining neutral. Worse than all, some of the ablest Circles fell prey to conjugal fury” (p. 39).

Dano Johnson’s essay, “The Visual Design of Flatland: The Movie” explains how as a schoolboy he read and, like most others, was enchanted by Abbott’s novel. Little did he realize then the task he would be given many years later, to

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**Leonardo Reviews**

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**FLATLAND: THE MOVIE EDITION**


Reviewed by Rob Harle (Australia).

E-mail: <harle@dodo.com.au>.

This review covers both the book Flatland: A Romance of Many Dimensions by Edwin A. Abbott and the recent movie Flatland: A Journey of Many Dimensions, produced by Seth Caplan, which is based on Abbott’s original book.

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**Multimedia**

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**Leonardo Reviews**

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**Multimedia**
The movie is delightful and works on a number of levels. It is "an animated story that includes action, drama, and geometry lessons. This heartfelt movie challenges audiences to grasp the limitations of our own assumptions about reality, and to think about the idea of higher dimensions." The DVD movie is in color, runs for 35 minutes and is in NTSC widescreen at a 16:9 aspect ratio. There is a wealth of extra material on the DVD, such as interviews with the actors whose voices bring the animation to life—Martin Sheen, Kristen Bell, Michael York and Tony Hale. An interview with Thomas Banchoff discusses the fourth dimension. The complete text of the novel is included in DVD-ROM mode.

I thoroughly recommend this book and movie to those readers and viewers of all ages who like a little romance, mixed with adventure and drama and fantastic color animation.

YLEM Journal: Artists Using Science & Technology

Reviewed by Eugenia Fratzeskou, London. E-mail: <eugenfratz@yahoo.com>.

"The Dichotomy of Reality" offers a substantial exploration of the ways in which quantum physics influences our understanding of reality and consciousness and reveals new challenges for science and visual art. The authors focus on the nature of the "dichotomy of reality" through investigating the conflicts between epistemological and ontological models and propose ways of resolving this dichotomy. The evolving relationships and possible interfaces between mind, science and reality are explored. Those topics are investigated through diverse perspectives in a selection of well-illustrated essays by quantum physicists, artists, doctors and biologists. The issue contains an editorial introduction and an essay by Rob Harle, essays by Loren Means, Julian Voss-Andreae, Jacqueline Boustan, C.S. Unnikrishnan, George Weissmann, Len Martin writing on artist Leigh Arnold and brief introductions to YLEM Forums. "The Dichotomy of Reality" opens up a number of interesting possibilities for developing promising collaborations between Leonardo/ISAST and YLEM.

In his informative introduction, Rob Harle focuses on the inherent incompleteness and inaccuracy of scientific theories, as context-dependent working theories. In particular, neither quantum nor classical mechanics should be perceived as a "complete ontological description of fundamental reality," as they obscure the complexity of reality and reinforce an arbitrary dichotomy between micro and macro worlds, which are in fact interdependent. As Harle proposes, that dichotomy has to be resolved to discover the "real ontological nature of the universe" (p. 2). Weissmann offers a detailed explanation of the "quantum paradigm," which is devoid of a subject-object dichotomy. The observer’s assumptions and perceptual illusions are exposed, instead of describing an objective reality independent of the act of observation (p. 16).

Unnikrishnan reveals the disparities occurring in physics between the underlying yet undefined “primary” reality, the apparently perceptible and thus comprehensible reality, and the scientific models and theories of reality that involve further approximation of reality. The existence of "unobservables" in physical theories manifests the fact that realism and ontology are disregarded (pp. 4–6). As Unnikrishnan argues, in quantum physics the issue is not the objective reality of the physical world but the clash between classical and quantum realities. Quantum “reality” is abstract and paradoxical. It is probabilistic, containing a degree of randomness while lacking causal explanations.

The issue offers various examples of how artists may invent interfaces between the physical world and abstract domain of quantum physics. Martin’s discussion focuses on Arnold’s artworks in which complex "meta-mathematical structures" are visualized (p. 13). Voss-Andreae engages with the quantum “reality” underneath the classical “reality” appearance of matter. In his “quantum sculpture,” he explores how fuzzy quantum reality may be “expressed” in sculpture (pp. 9–12). In his discussion on understanding consciousness and existence, Harle identifies the attempt to visualize what Stephen Adler defines as the dynamic "pre-quantum level of physical fields as yet unknown to physics," within which we are immersed, as an interesting challenge for scientists and artists. Harle proposes the invention of visual metaphors and the use of animated modeling, as the latter has enabled scientific discovery (pp. 2, 21).

Quantum physics encourages new insights on the relationship of the environment to matter, the workings of the mind and robotics. Boustan discusses the role of quantum theories in biophysics in terms of enhancing our understanding of how the environment and culture affect us. In his concluding essay, Means discusses the notion of "group mind" as manifested in distributed communication and group interaction in robotics through "emergent learning and evolutionary breeding." The “translation” of biological and chemical systems into mechanical ones is used in probabilistic and behavior-based micro-robot systems. What is remarkable is the manifestation of implicit and unintentional kinds of communication (alongside the explicit and intentional ones), enabled by creating “external memory” through the interaction between robots themselves and the environment. Ultimately, a "group mind" may emerge from a parallel auto-programmable information environment and may generate hybrid entities and realities (pp. 23, 27-28).

Books

Charles Ives Reconsidered

Reviewed by Katharina Blassnigg, University of Music and Performing Arts, Vienna. E-mail: <kblassnigg@hotmail.com>.

Gayle Sherwood Magee is an assistant professor of musicology at the University of Illinois at Urbana-Champaign and author of Charles Ives: A Guide to Research (2002), a comprehensively annotated guide to the most significant
the German-European tradition) at the
addresses a nationally established model of the
style. These include the changing cul-
ences and connections with great clarity
and transparency, particularly in her
sophisticated use of historical resources
and periodization for the manuscript
periods in his life such that later ideas
he revised his works later in his life.
His marginalia are scattered all over
his manuscripts and go back to diverse
national tradition in most of his new
period (1919–1929), Ives rejected the
tradition.
In the first part of his second com-
opositional period (1907–1914), which
coincided with his courtship and early
marriage, Ives developed a national-
ist, unconventional (in harmonic and
formal terms) and nostalgic style that
primarily used hymns and gospel tunes
as source material. During the First
World War (1914–1918) his composi-
tions invoked earlier wars and caught
the jingoistic mood of the time, while
in his music the U.S. nationalist style
vied with the tonal and formal dictates
of the German and larger European
tradition.
In his final main compositional
period (1919–1929), Ives rejected the
national tradition in most of his new
works. On the one hand, he attempted to
recapture his earlier innocence; on
the other hand, he was writing
completely new, modernist works and
revising earlier ideas according to his
continuously evolving aesthetic values.
During this period Ives made
connections within the New York experi-
mental
Quantum levels. For those members of the various cultural-studies tribes, any claims for a philosophy of nature will only elicit critiques concerning discourse and the “cultural construction of nature.” Even science studies, that most diplomatic of orphan quasi-disciplines, will cautiously qualify each and every mention of the word “nature,” often through the creation of new terms that exhibit a desire to have it both ways—nature “in itself” and nature as constructed, nature existing in itself but also there “for us” and because of us. Against these albeit generalized notions of nature—nature as something quantifiable “out there,” nature as subjectively constructed “in here,” and nature as the co-production between self and world “here and there”—Iain Hamilton Grant’s book Philosophies of Nature after Schelling proposes that we think about nature as irreducible to the entire dichotomous game of self and world, idealism and realism. Indeed, Grant argues for a reconsideration of “nature” in terms of the classical notion of phusis—this is a “physics” that is less concerned with quasi-verifiable, smallest units of matter and more a physics in the sense of a dynamical and ideational flux that pervades the very correlation of self and world, idea and thing.

Grant’s book is thus a book of philosophy—it makes no claims about science, culture or any admixture of them. However, it also asks us to think about what a “naturephilosophy” would be like today, an era in which concerns over climate change, natural disasters, emerging epidemics and the like dominate both the “serious” culture of policy discussions and the “leisure” culture of popular disaster movies. Before we ask whether we have adequately assessed this or that aspect of water shortage or the etiology of an epidemic, before we dismiss the very idea of “nature” as romanticized, before we ask about the co-production of “naturecultures” or “actants,” before any of this, Grant’s book poses the fundamental question: What is required a priori that something called “nature” be thinkable as such? To get at this question, Grant focuses primarily on the work of the German thinker Friedrich Wilhelm Joseph von Schelling, a figure often associated with German Idealism, Romanticism, or naturphilosophie, depending on who one asks. Schelling’s works not only are wide-ranging but also function for Grant as a counterpoint to the dominant epistemology of nature established by Kant.

As the title of his book indicates, Grant’s main argument is that the real development of the concept of naturphilosophie takes place in the cluster of 18th- and 19th-century developments in German thought, from Kant’s antinomies of nature (and his famous question about whether we would one day see the equivalent of a “Newton of a blade of grass”) to Fichte’s “sequential” logic of natural striving to Lorenz Oken’s dynamic, oozing “universal animal.” Grant focuses on this period for good reason, for it is Kant who stands both as the decisive figure in framing the post-Enlightenment discourse on nature and as the figure that any philosophy of nature must ultimately overcome. It is Kant who attempts to settle the endless debates between realism and idealism by distinguishing between an inaccessible world out there (noumena) and the world as it appears to us as sensing, thinking subjects (phenomena). What results is what Grant calls a two-world metaphysics, “in which something called “nature” is eliminated from its thought, world from self, physics from metaphysics, phusis from nous. Nature is eliminated from philosophical reflection, padded by its reduction to language (signs) or cordoned off as the separate, non-philosophical analysis of world (things). This split between self and world, idea and nature, so fundamental to our thinking about nature, entails a further two-worlds physics—between the inorganic and the organic, the non-living and the living nature. This culminates in Kant’s “antinomy of teleological judgment” concerning nature—we cannot separate order in nature from the assertion of that order by us. The easiest solution would then be to simply provide disciplinary demarcations—you worry about explicating natural phenomena and we’ll worry about complicating the endless metaphysical aorists that encompass such phenomena.

For Grant, Schelling consistently resists the two-worlds view—indeed, Grant argues that Schelling’s concept of naturphilosophie can be understood as the refusal of the separation of physics and metaphysics. Schelling’s emphasis on the dynamic, processual aspects of nature, on the parallelism between the natural and the ideal (in which the former is not simply deduced from the latter) and his interest in philosophies of the organism all make for a proto-complexity approach to natural philosophy. Against the poles of traditional idealism (as the projection of self onto
ties that renew, in many ways, earlier mable matter,” presents us with enti
we can call nature exists in spite of, and simply there “for us” or if something
and climate change often display great “transcendental geology.”
izes.” Not the angry god, but an imper
nature “droughts” or nature “mountain
phy suggests to us that “nature thinks,”
think of thought itself in an “elemental”
mental non-human. This requires
as unqualified and unconditioned, an investigation into the “autonomy of
reality in spite of, and for what Schelling
by Schelling’s naturephilosophy lies in
unqualified and unconditioned, an investigation into the “autonomy of
a thinking, perceiving subject; it is precisely the opposite—nature in the
subject-world correlation itself and that attempts to “explain the assumption of
of Schelling’s naturephilosophy, to sug
that we become adequate to the thought of a nature in itself, in spite or, or indeed, irrespective of, human
in that nature (either to instrumentalize it or to “save” it).
Indeed, Grant’s book is an investigation into a concept of nature that is unqualified and
investigation into the “autonomy of
But this autonomy is not that of an objective nature separate from a thinking, perceiving subject; it is precisely the opposite—nature in the sense of that which pervades the subject-world correlation itself and that attempts to “explain the assumption of a non-coincidence of nature and idea,” phusis and nous.
Note: As of this writing, there is only an expensive hardcover version of the book available, though a paperback is listed as due to be published in the coming year. In the meantime, interested readers can read Grant’s writing on this topic in the journal Collapse <www.urbanomic.com>.

RIDING THE WAVES: A LIFE IN SOUND, SCIENCE, AND INDUSTRY


Reviewed by Stefaan Van Ryssen, Hogeschool Gent, Jan Develinlaan 115, 9000 Gent, Belgium. E-mail: <stefaan.vanryssen@hogenet.be>.

Leo Leroy Beranek (b. 1914) grew up in a countryside village in Ohio and went through all the necessary stages of the American dream to become an exemplary member of the cultured U.S. upper middle class. It suffices to mention that he was educated at a modest local high school, received a scholarship against all odds, paid his way through his university education (Harvard, of course) by selling and repairing radio and television sets, was picked out of the crowd of promising students by some brilliant and unconventional professors, and started doing his own research in the at-that-time (the 1940s and 1950s) unsexy field of acoustics. After some successful years in academe (MIT), he started his own consultancy business with some colleagues, turned from a researcher into a manager and finally ended up locked in a 10-year legal battle over the rights to a part of the frequency spectrum for WCVB-Channel 5, a television broadcasting company “with higher quality standards than all the others.” Obviously, he and his colleagues came out triumphant.

If this first paragraph hints at being ironic, nothing of the sort is intended. Beranek’s autobiography reads like a novel, with a happy end and a lot of moral lessons for the young and ambitious of today. I am afraid it is simply impossible to be ironic about anything in this book. The story is straightforwardly told, in an undamaged but very readable style. There seems to be no trace of self-aggrandizement, nor is there a hint of spite or schadenfreude—apart, maybe, from where the author quite rightly gloats a bit about his defeated competitors in the legal struggle over “the waves.”

The astonishing thing about Beranek’s account is precisely that it so clearly exemplifies an American road to success without falling into the fairy-tale mysticisms one reads in lesser autobiographies. If he has a streak of pure luck, he admits to being simply
lucky. If he fails, he admits he wasn’t successful or he explains that he didn’t work hard enough. Leo Beranek, is, as far as one can guess from the text and a bit of background research, simply, utterly and straightforwardly honest. Amazingly, incredibly and unbelievably honest. And in this way, he indirectly paints a picture of an America that I, as a European, have a lot of second thoughts about. “Was and is it really so?” I have become used to asking: Could it be that harsh, that simple, so full of possibilities and so full of mischief… could it possibly be that a society or culture combines so much naïveté and wickedness? And should one accept that it really has offered some, if only a few, to succeed through hard work, good fortune and high moral standards?

Beranek’s achievements in the science of applied acoustics are exemplary. There is no doubt about that. On top of that, he has been a patron of the arts (classical music, mainly) and tried to raise the standards of broadcasting in the U.S.A. These are no minor achievements. On top of that, he has cared for his family and lived a rich and exciting life. In his self-portrait, he does not boast about anything but rather gives everyone who stood by him his or her due. It must be said that anyone who is interested in the history of America and its “waves,” whether acoustical or broadcast, will find in this book a wealth of detail and anecdotes worth reading and will meet an author who is as unprejudiced and honest as can possibly be expected.


Reviewed by Jan Baetens. E-mail: <jan.baetens@arts.kuleuven.be>.

First published in 1990, Rosalind Williams’s book has from the very beginning been a classic study in the history of technology. A deeply humanist examination of the mutual shaping of science and culture in (mainly) the 19th century, it has owed part of its rapid but lasting success to the strong environmental chord that resonated throughout its pages (although the author’s position is that of a strongly engaged academic, not that of a political activist).

The questions raised in this book are threefold.

The first question is historical: How to describe humanity’s attempt to move beneath the earth’s surface and how to analyze its two sides, the technological and the cultural, for the gradual discovery of the underground has never ceased to be interpretatively framed, whereas the basic landmarks of culture have also been displaced by technical inventions and scientific progress. Williams’s impressive survey charts the evolution of both the gradual penetration of the underground and its permanently shifting interpretations.

In this regard, a crucial element has been the shift—in the 17th century and dramatically accelerated two centuries later—of the religious meaning of the underground as hell to a geophysical interpretation linking space and time. Digging into the earth was the same as going back in time, and the space underground thus became “deep time.” Speculations on time were, however, one of the many factors that had fostered the exploration of the underground. Very soon, economic, philosophical, political and ethical issues were intertwined with “pure” scientific factors: The underground became also a place where truth as well as resources and wealth were to be found, just as it became the place upon which to project utopian and dystopian representations (the underground became a metaphor for underclass life and degeneration but also for dreams of beauty and a classless society).

The second question is methodological. Although Williams does not neglect other historical sources and resources, it is literature—French and British literature of the 19th century—that occupies the foreground of her analyses. Given that culture and science so strongly interact, what can be the role given one specific aspect of cultural life, namely storytelling, more specifically storytelling in literary texts? Williams follows here the ideas developed by Jameson on storytelling as “world-reduction”: the literary text is a scale model of the world, in which hypotheses are tested in order to see what may be the consequences of this or that premise. Literature is thus a special kind of “experimenting,” and in this regard its role is not so different from that of other types of science. This analogy enables Williams to prioritize literature over other cultural materials, and the reader can only feel grateful for the “unearthing” of so many fascinating but now often forgotten novels. Moreover, Williams’s reading is always very astute and clear, and she is not afraid of tackling issues raised by politically incorrect texts. A great historian, Williams is perfectly able to discern the difference between the form and the content of these books and show what can be learnt from them today.

The third question is philosophical. What does it mean for mankind to live “outside nature,” in a built or man-made environment? Despite the vanishing of the religious meaning of the underworld, fear has never left the humans who attempted to leave the earth’s surface. In this respect, the underworld itself, Williams argues, is nothing more than a tool revealing an even more hidden fear, that of the human destruction of nature. Underworld and millenarian catastrophism often go hand in hand. Despite the clear environmental consciousness and commitment of the book, Williams refuses to follow the dystopian voices that are now so dominant in public debate. She strongly emphasizes the ambivalence of our “destruction” of nature (for we fear this destruction as much as we enjoy its effects), the illusion of a dichotomic separation of “pure” nature and “impure” culture (unspoiled “wilderness” is a problematic concept), the possibility of transforming a cultural space in a human environment (what matters for Williams
is not the opposition of the cultural to the natural but the question whether we will manage to make our cultural space more human) and so on. As the new Afterword, written almost two decades later, reveals: the fact that in the first edition of the book the theme of the underground as burial space was totally absent demonstrates the strongly optimistic viewpoint of the author.

This brief but inspiring Afterword, which can actually be read as a second preface, offers three new perspectives on the book. First is a personal rereading by the author, who highlights a certain number of key statements. Second is a discussion of the critical reception of the work, which is also—given the importance of the book—a discussion of the state of the art in the field of environmental history and science studies. Third is a critical self-interrogation of the political stances of Notes on the Underground and, more generally, of the activism in this domain. The Afterword offers Williams the possibility to bring forth her conviction that environmental debates often miss the issue of power, while they frequently overestimate the importance of individual consumer choices.

One can only be delighted that Notes on the Underground is again available in print. Great books can only remain classics if they are reread by new generations of readers. It is now possible to put Williams’s book alongside other classics such as Leo Marx’s The Machine in the Garden or Raymond Williams’s The City and the Country. Notes on the Underground deserves to be added to this prestigious list of studies that continue to inspire all those who defend a holistic yet not necessarily homogeneous view of analyzing science and culture.

**Picturing Space, Displacing Bodies: Anamorphosis in Early Modern Theories of Perspective**


Reviewed by Amy Ione, Director, The Diatrope Institute 2342 Shattuck Ave, #527. Berkeley, CA 94704, U.S.A.
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I can still remember the first time vanishing-point perspective was explained to me. I was already in my 20s and, to put it mildly, I was shocked to realize that something so marvelous had never clearly entered into my thinking as an artist. A classically trained artist conducted my initiation into this aspect of art. The “lesson” included, among other things, walking down corridors and my drawing of a scene I saw through a window onto the glass with a marker. My vocabulary is not rich enough to capture the psychological impact of watching the drawing take form on the clear plane after he instructed me to shut one eye and then trace the buildings I saw on the other side of the window. Following our discussion of what perspective is “about,” I spent the first few days after this experience feeling as if I had slipped into an alternative universe, as I walked around my neighborhood with new eyes.

Looking back, it seems inconceivable that I had never explicitly conceptualized that objects appear to recede to a point, and that forms further away appear significantly smaller than those that are closer to me. It also seemed, at least initially, that the sky was falling as I looked at it meeting the pavement in the distance. For many months I spent every spare day climbing in the Berkeley Hills, with sketchbook in hand, where I could look down at the city of Berkeley and out at the San Francisco Bay in the distance. As I thought about how the sizes I saw differed from actual sizes, how part of objects were hidden from my view, and other types of impractical questions that arise when we contemplate what our world looks like, I eventually found myself more intrigued with how what we see with two eyes differs from the distinct monocular view that one can trace onto a window with one eye closed. Yet, as I hope my decision to start with this episode conveys, I never lost my sense that there is something magical, almost otherworldly, about perspective theories.

Given my enthusiasm for perspective studies, it is perhaps not surprising that I was eager to read Lyle Massey’s new book, *Picturing Space, Displacing Bodies: Anamorphosis in Early Modern Theories of Perspective*, which offers a comprehensive and timely examination of problems related to both seeing and depicting what we see. Her main argument centers around the idea that Cartesian perspectivalism collapses into incoherence once the body is re-inserted into the history and theory of perspective. In other words, she adopts the view that the body is historically treated either as a problem that interferes with the demonstration of the geometric and scientific character of perspective or as a point of reference for exploiting the illusory nature of representational space. *Picturing Space, Displacing Bodies* speaks to this dichotomy through a presentation of evidence that anamorphosis, a form of perspective used to produce hidden or trick images, offers an excellent vantage point for seeing how theorists of perspective tried to negotiate a relationship between these two sides of its history, rather than treating them as separate problems.

Divided into five chapters, the book seems to start in the middle, going backward and forward simultaneously in its attempt to negotiate the problems posed in examining the illusory nature of pictorial space, which, according to the author, are particularly apparent in the treatment of anamorphosis. I am not sure if this integration device helped the study or made it harder to follow, but it did allow the book to pose the questions raised in an intriguing fashion. Suffice it to say that Massey begins with the ongoing art-historical debate surrounding Velázquez’s *Las Meninas*, painted in 1656 and still a subject of controversy today. This chapter points out that the question whether there is something paradoxical about perspective has been central to one of the most important art historical controversies in the last two decades. Much of this debate is interwoven with Michel Foucault’s interpretation of the Velázquez painting and how recent debates encapsulate fundamental problems and contradictions between viewpoint and representational field.
also examined are theoretical views that range from Heidegger and Merleau-Ponty (including the latter’s work on Cézanne) to how perspective devices speak to ideas. Well-chosen illustrations, for example Emmanuel Maignan’s anamorphic perspective device, add some degree of support. Yet there is some irony here. The text discusses how the devices work, pointing out that, in a practical sense, they were often too cumbersome to use in any kind of comprehensive fashion. Similarly, the reader experiences the instruments as abstractions since they are on the printed page. Without hands-on experimentation, it is hard to fully conceptualize their value in providing what the artist needed to do in practice to achieve viable results.

The book closes by contrasting the 17th-century dispute between Abraham Bosse and Charles Le Brun at the Académie royale de peinture et de sculpture over academic instruction in perspective to Jacques Lacan’s psychoanalytic interpretation of anamorphosis. I have never warmed to the idea of the Lacanian gaze, which may explain why the book’s ending did not quite congeal for me. As I understand it, Massey’s point is that with the Bosse/Le Brun dispute we start to see a shift in the perception of perspective that corresponds to a split between artists and mathematicians, later taken up by Jacques Lacan in his psychoanalytic interpretation of anamorphosis.

Overall, Massey presents an alternative history that she uses to raise questions about epistemological and ontological views in Western art and philosophy and then interweaves these ideas with contemporary views of perspective. In order to achieve this complex goal, she compares and contrasts ideas associated with medieval optics and/or mathematics (e.g. those associated with Erwin Panofsky, John White, Samuel Edgerton Jr., J.V. Field, David Lindberg and Martin Kemp) with those theorists who see broader philosophical and cultural implications (e.g. James Elkins, Jurgis Baltrusaitis and Hubert Damisch). Although she works hard to integrate theories and experiments with the discussion of anamorphosis, I was not quite able to follow it. She may mean that if we detach the eye from the body, there is a dissociation of the center of perspective projection from the location of the viewer’s eye. If this is the case, I suppose, perspective collapses into anamorphism under these conditions. In any case, the anamorphic techniques were put into practice shortly after the appearance of the first written explanations of common or regular linear perspective. These illusions, to Massey’s eye, juxtapose disembodied and embodied notions of vision through their perspectival distortion of an object, making it viewable only from a certain angle. Little-known figures such as the Minim friars Jean-François Niceron and Emmanuel Maignan seemed to have recognized some of the problems and, using anamorphosis, sought to demonstrate anti-Cartesian properties of perspective.

The biggest problem I had with the book is that Massey’s philosophical position seems to respond more to recent trends than artistic praxis and the way perspective can excite us in a human sense, as I discussed in the early paragraphs of this review. I wondered, tongue-in-cheek: When was the body removed from art-making (and by whom), since only an embodied person can practice art and/or perceive “perspective” in the first place. More to the point: According to Massey, Cartesian perspective is now a commonly held view, one that has thinkers equating Renaissance perspective with Cartesian ontology. This equation, however, is actually a quite recent and highly fashionable idea that largely emerged in the 1980s through the work of Norman Bryson and Martin Jay.

Contemporary scholars interested in visual technologies, space, the body in the Renaissance and current interpretations of early modern art theory will no doubt find the publication very appealing. Related books that Massey cites include the anamorphosis books by Jurgis Baltrusaitis, which she draws on extensively; Jonathan Crary’s work; The Poetics of Perspective by James Elkins (which, like Massey’s work, offers an alternative picture of perspective theory); and Martin Kemp’s comprehensive The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat. While in some ways Picturing Space, Displacing Bodies is a rich publication and offers a welcome addition to the literature on anamorphosis, perspective, representation, drawing machines, the relationship between art and phenomenological theory and related topics, it is not an easy book to digest. Those interested in looking closely at perspective per se might want to complement their reading of this publication with Thomas Puttkärlen’s The Discovery of Pictorial Composition: Theories of Visual Order in Painting, 1400–1800, which traces the changing nature of
Consider an item that is available from five representative outlets south of the river at 95, 92, 94, 95 and 92 cents per item. The same thing is listed for 96, 97, 95, 96 and 98 at five different outlets on the north. The average (mean) price in the north is 96.40 cents, and it is 93.20 cents south of the river. The difference in the south—i.e. 3.20 cents (or 3.3%) lower south of the river at 93, 92, 94, 95 and 92 cents per item. The same thing is listed for 96, 97, 95, 96 and 98 at five different outlets on the north. The average (mean) price in the north is 96.40 cents, and it is 93.20 cents lower south of the north. The difference is considered to be very significant by a conventional statistical criterion (Student’s t-test). However, if we are talking about the price of a small glass of beer, it is probably not worth crossing the river for a drink. In other words, the difference is statistically significant but of a magnitude that is of little consequence (or interest). On the other hand, if you contemplate paying $1 million worth of something and the unit price in the south is 3.3% lower on average, then you can save $33,000. So size matters, and the t-test is not a reasonable basis for either decision.

The Cult of Statistical Significance has much to say about all of this. In fact, the authors’ take-home message, that the evaluation of “oomph” is often more important than “precision,” is repeated over and over again until it shifts from titillating to slightly boring. The subtitle—How the Standard Error Costs Us Jobs, Justice, and Lives—indicates the scope of their mission. An early example about the manufacturer Merck and the drug Vioxx (an anti-inflammatory drug for osteoarthritis) starts with excitement on the theme, gets confusing because of the added criticism of management style and procedure (a separate problem) and unfortunately leaves the reader up in the air with respect to evaluating efficacy versus risk. The book does contain historical perspective, engaging biography and interesting anecdotes. The frontispiece is a 1908 photograph of William Sealy Gosset (1876–1937), who published under the nom de plume of Student; thus “Student’s t-test” was born. Sadly, this turns out to be the only illustration.

The authors have academic careers in economics and are currently located in Chicago. A cover sheet from University of Michigan Press stated that the publication date was January 2008, but the paperback I was given last month for review warned on the front cover that it was an “advance reading copy.” This was repeated on the back together with the statements, “These are uncorrected proofs of a book not yet published. Errors will be corrected and formats adjusted before the book appears in print.” Many of the word errors (for example, “as” instead of “was”) might be attributable to their escaping a computer spell-checker tool, but others are nonsense misspellings, sometimes even involving the names of key players in the narrative. Inexplicably, there is no index. One wonders about the wisdom of this curious production and promotion scheme for what promises to be an expensive book that may attract only a limited and special readership.

**Topologies: The Urban Utopia in France, 1960–1970**


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Bobigny, La Courneuve and Sarcelles, as well as other planning projects such as Maine-Montparnasse and La Défense, constitute some of the grand ensembles constructed in Paris during the 1950s and 1960s that scholars have examined in order to understand the effects of national identity and political regionalism on the French urban landscape. Regulated by the administrative policies of Charles de Gaulle’s return to power in 1958, these housing prototypes of the Fifth Republic transformed the Parisian periphery into a series of “dormitory cities” composed of habitations à loyer modéré (HLMs), plunging what was to be ordered reconstruction into contentious social and economic problems. Topologies is another notable volume that contributes to the widening body of literature on postwar architectural history that reinterprets the technological thinking of French utopian architects, along with those such as Archigram, Buckminster Fuller, the Metabolists, Cedric Price and Team 10, who collectively foresaw the dawning of
a new age, tempered not by revolution but by the scientific techniques gained from economics and the social sciences. The book provides detailed biographical information on the work of David Georges Emmerich, Yona Friedman, Claude Parent and Michel Ragon while contextualizing their building schemes of 3D space frames and networked agglomerations against the ideas of well-known theorists Jean Baudrillard, Henri Lefebvre, Johannes Huizinga and Paul Virilio, whose thoughts on consumer society, space, play and the body, respectively, inspired these architects’ visions of the evolving city.

Despite other studies that have emphasized the polarizing events surrounding May 1968 or the widespread influence of the Situationists as indicative of the broader background underscoring postwar architecture, Busbea subtly proposes a more nuanced approach that targets the French architectural avant-garde’s profound faith in technology, a flaw that blinded them to the changes implemented by mass culture and relegated their beliefs to symptoms of the greater historical moment. He cites Jean-Louis Cohen’s assertion that French modernism’s slowness and lack of progress compared to the social sciences developed into a sense of isolation from architectural developments in other countries as well as an interior isolation that defined architecture’s distance from other intellectual enterprises [1]. Critic Reyner Banham proclaimed that the designs of the “urban spatialists” relied too much upon stylistic imperatives enforced through the simplification and flattening of the image. However, in denouncing a pronounced reliance upon visual formulations, Françoise Choay maintained that the designs of “technotopias” constituted an evocative field of interest for non-specialists. Busbea, in light of these critical perspectives, investigates the cybernetic and theoretical models that intrigued the French designers who privileged the forms of megastructures, attempting to re- connect architecture to the greater social meaning behind infrastructural systems; he carefully teases apart the political distinctions between seemingly similar architectural endeavors such as Constant Nieuwenhuys’s New Babylon and Friedman’s Spatial City. Visual artists Nicolas Schöffer and Victor Vasarely, who collaborated with Ragon, formulated a new “plastic language” for the changing conditions of the city, producing ambient environments, murals and paintings that addressed the phenomenology of perception and the semiotics of the urban landscape and collapsed the distinctions between art object and consumer object. This generation of architects and artists, born after Le Corbusier, sought to employ technology to eradicate the class struggle that characterized the ambience of France during this time period, balancing the ideals of Communist totalitarianism with the economic imperialism of the United States (p. 117). Utopia—a presumed interpretation that results from the images of Emmerich, Friedman, Parent and Ragon—is framed rather as an intellectual endeavor by Busbea and not merely as an aesthetic practice residing in the expression of formal structures that embodied leisure, mobility and spatial dynamics.

While the book’s chapters incorporate factual details behind each architectural group, they alternate rapidly between images of fantasy and research-based models of abstraction that serve as the basis for most of the built urban schemes. What is somewhat problematic is Busbea’s ubiquitous concept of topology, of which he offers several broad definitions, including the given area of a particular region, a specialty branch of mathematics and the way in which constituent parts are arranged together. Topology is also called upon to define artificial surfaces that cover the city. It is not clear how these definitions are tied together throughout the course of the book, which immerses the reader in a great deal of information. This minor point, however, should not detract from an otherwise enriching book with a generous amount of visual material provided in the form of numerous drawings, renderings, sketches and models. The images themselves may not bear any resemblance to the pragmatic urban solutions sought by French planners; their merit, nonetheless, lies in their existence as archival evidence of these architects’ ideas, which reflected the historical and theoretical currents of the decade.

The rise of theory in France during these 10 years is given its fair share of attention. Lefebvre, Gaston Bachelard and directors Jean-Luc Godard and Jacques Tati, for instance, each critiqued the state ideology behind these inhuman instances of modern planning in France’s postindustrial society. The tensions between the laws posed by Roland Barthes and the experience of perception as emphasized by those such as Maurice Merleau-Ponty loom in the book’s background, but a more direct link between French structuralist theory and the designs of the architectural avant-garde could be better emphasized to assist the reader in perceiving how these urban forms became related to the tenets of structuralism, thus merging the social importance of ideas with the physical extension of infrastructure. If the decipherment of the city rested upon the “programmatic expressions of a particular spatial culture” (p. 104), Paris as an “object virtually prepared,” for example, is a particularly key image for the reader to hold in mind. If Barthes willingly encouraged spectators atop the Eiffel Tower to sort the urban landscape into its various guises and incarnation, Busbea likewise skillfully demonstrates that it was the responsibility of the utopian designer to conceive of the plausible postwar cities that could have been for a contemporary audience and for future generations.

Reference

Frameworks, Artworks, Place: The Space of Perception in the Modern World
The relationship between consciousness and what we define as reality has been a fundamental and much debated issue, predominantly in art, philosophy and psychology, and has initiated significant changes in science and the humanities in general. There have been crucial turning points in our comprehension of human perception, due to which the borders of those fields are being questioned as the definitions of the self, realism, art, memory, knowledge, experience, vision and their relationships are changing. Such changes have radically challenged the notion of truth and objectivity and altered our understanding of the processes of identity formation and becoming, as the existence and workings of chaos, complexity, desire and the unconscious are brought to the fore. Such changes are reflected in the postmodern negotiation and even dissolution of the boundaries between the self and the world, objectivity and subjectivity, body and mind, chaos and order, particularly in art, performance, phenomenology, psychology, history and politics.

Frameworks, Artworks, Place presents a selection of essays by literary critics, art theorists, historians and visual artists who engage with the question of embodied space and situated consciousness in our constructions of reality and art. The emphasis is placed on exposing the unexpected slippage, unsettling conflicts and mental spaces of exchange that occur between the self and the world and how they are revealed in art. Pure and detached observation is questioned, and the trauma in post-Holocaust art is discussed in depth, as the construction of knowledge and visual representation are revealed by investigating historical and contemporary discourses and art practice through a psychological and phenomenological approach. Tim Meighan’s editorial introduction, “The Space of Perception,” is followed by three sets of essays on perception, perspective, representation, consciousness, imagination and constructions of self in space. The contributors are Dirk de Bruyn, Khadija Z. Carroll, Barry Empson, Louise Fairfax, Ron Goodrich, Ewen Jarvis, Uli Krahn, Peter Leech, James McArdle, Ann McCulloch, Paul Monaghan, Kim Roberts and Rose Woodcock.

The essays offer diverse viewpoints on the space of consciousness. Being and becoming are redefined as fluid, transformative and precarious, as the self faces its highly complex and alienating modern and postmodern condition. The arguments focus on the reciprocal relationship between the observer and the observed, as the observer transforms the world and is also transformed by it. The observer may attempt to impose his or her own constructs of order and reality on the world for gaining control and power, despite the constant failure to achieve this desire, as manifested in modern science and history. The problem of achieving detached observation and objectivity is discussed in the light of the complexity of perception, desire, unconscious drives, irrationality and scientific and social conventions that challenge the structure of consciousness and the possibility of fully understanding and controlling the self. It is argued that reflection may be proved to be a rather simplistic process for understanding consciousness. Those insights raise questions about what “realism” actually stands for and about representation of space in art in terms of what has been concealed and what can be revealed by the artist.

The publication presents interesting investigations on how new (re)presentations of space for visualizing the workings of human vision and perception may be feasible through phenomenology instead of geometry. Such (re)presentations of space are created to reveal the complexity of the reciprocal relationship between the observer and the world, thus bringing into question the hidden abstraction and flaws of perspectival geometry as a means of reducing the world and our subjective experience of it to an “object” that can be measured, understood and thus possessed. Influenced by the impact of the Holocaust, modernist art introduces a radical break with representation, content and description to introspectively reveal trauma by exposing the mechanisms of perception and the semiotic system of the artwork itself.

The concluding essays offer particularly revealing in-depth investigations of the strategies of the display and experience of art as part of the postmodern construction of “discontinuous historical realities” (Bhabha’s phrase, p. 217). Carroll identifies in her investigation of colonial acts of renaming “the inability to grasp matched with a desire to control” and thus, possess (p. 214). Such realities, therefore, have been the product of the non-neutral act of renaming and the classification
As a collection of short texts and conversations, this book cannot be isolated from the oeuvre of the author; in the time span it covers, it coincides with among other publications Deleuze and Guattari’s *A Thousand Plateaus* (*Mille Plateaux, 1980*), Deleuze’s cinema books (*Cinéma 1: L’Image-Movement, 1983; Cinéma 2: L’Image-Temps, 1985*), reflected in this edition in various forewords to their international translations, and his work on Michel Foucault. However, even for the non-Deleuzian reader it offers accessible insights into his system of thought, in particular in the interview passages whose conversational style very much marks how Deleuze saw a significant modus to facilitate the communal sharing of ideas. These conversations are characterized by his usual modesty and sharp observational mind, and it is not surprising, given the political implications of his philosophy, that this collection also includes several short statements on contemporary political affairs, such as the Palestinian agency in peace negotiations, pacifism in the international context, the impact of May 1968 on French society, and the Gulf War.

The outstanding concepts that Deleuze illuminated in these texts and conversations include his and Guattari’s conception of schizophrenic machines; the organ-machine with its flows and breakdowns; and the organless body as a critique of capitalism in light of the critique in his and Guattari’s earlier work *Anti-Oedipus* on psychoanalysis’s institutionalized constraints on the desire to sanction social imperatives. Furthermore, he treated the notion of the *dispositif* as an assemblage of lines or forces; immanence; the brain as screen; the issue of time in Boulez, Proust, Bergson and the cinema; and the question of the subject. An especially insightful area, reminiscent of Bergson’s separation of joy and pleasure, is Deleuze’s distinction between desire and pleasure. In this context his use of the concept of “lines of flight” becomes most tangible: he called these “shooting points of deterritorialization in assemblages of desire” (p. 127). In this text, in particular, Deleuze emphasized some core distinctions of his own work from Foucault’s, in that he showed his strategy to redefine the concept of desire as assemblages and relational networks, while Foucault refused to use the term due to an inability to detach its meaning from a psychoanalytical understanding of lack. Deleuze’s insightful comments on Foucault’s contemporary work, for example in “Michel Foucault’s Main Concepts,” are a recursive theme in this collection, and, in some of the interview conversations, reveal some of the most concise reflections on Deleuze’s own philosophical system.

The significance of Deleuze’s oeuvre in the wider intellectual community of creative and political thinkers is revealed in “On the New Philosophers,” originally distributed in bookstores in France in 1977 by Minuit, where Deleuze’s micropolitics become paramount. In this text he critiqued the “wholesale return to the author” (p. 139), the importance of concepts for political activism and his strategy for creative innovation as opposed to pure reactionism expressed through hollow intellectual rhetoric. The collection also contains, among other texts, a roundtable conversation between Barthes, Deleuze, Genette, Doutbrosky, Richard and Ricardo on Proust; an interview on the differences between *Anti-Oedipus* (1972) and *A Thousand Plateaus* (1980); a concise overview of Deleuze’s (and Guattari’s) critique of psychoanalysis in “Four Propositions on Psychoanalysis;” and, last but not least, touching reflections on his collaboration with Felix Guattari, and Deleuze’s last essay “Immanence: A Life.”

Of particular interest for an interdisciplinary community are Deleuze’s comments on writing about painting following his publication on Bacon and his gripping account “What Is the Creative Act?” wherein he again exemplified what it means to do philosophy as distinct from, as well as interrelated with, other disciplines in the arts and sciences. Furthermore a similar emphasis appears in his “Preface to the American Edition of *Difference and Repetition*” and his brief elaboration “How Philosophy Is Useful to Mathematicians or Musicians,” where his profound concern with cross-disciplinary thinking is reflected in his comments on the contemporary approach of Vincennes University. Deleuze conceived of philosophy not as a reflection on other fields, but rather as a state of active and interior alliance with them through mobile relations, each responding to one another, but each in terms that are proper to its own discipline (p. 307). Considering himself a classical philosopher, Deleuze understood the major role of philosophy in the generation of concepts for the novel redistribution of ideas:

For me philosophy is an art of creation, much like music or painting. Philosophy creates concepts, which are neither generalities nor truths. They are more along the lines of the Singular, the Important, the New. Concepts are inseparable from affects, i.e. from the powerful effects they exert on our life, and percepts, i.e. the new ways of seeing or perceiving they provoke in us (p. 258).

Deeply imbued by his Bergsonism, his philosophy is constructive and forward moving, directed toward constant renewal, in which he also saw the artist’s power; it is characterized by nascent actionism in constant negotiation between abstraction and the concrete in the intersecting lines of processes and dynamics of becoming. Especially in his reflections on his friend Foucault’s work, Deleuze points to the cracks and contingencies where new lines of flight may be detected and revolutions may arise on the micro level. These are also expressed in his notion of a geo-philosophy, his and Guattari’s conception of multiplicity, determinatorialization and rhizomatic thinking. While this collection, with only a brief reference list of the original sources of the texts, seems mainly geared toward the informed reader, it should be considered as more than an additional resource for Deleuze’s published works. Various outstanding texts themselves rather provide a rhizomatic glossary in conversational style, with entrances, assemblages and offshoots of some of Deleuze’s main concerns, ideas and concepts. In the spirit of his philosophy, these, although more fully elaborated in his major works, might in their concise exemplification inspire new lines of thought and creative becomings (*creativiness*) and further readings of, undoubtedly, one of the great creative and innovative minds of the 20th century.


The Parasite by Michel Serres. Reviewed by Anthony Enns.


Weimar on the Pacific: German Exile Culture in Los Angeles and the Crisis of Modernism by Erhard Bahr.Reviewed by Jonathan Zilberg.

August 2008


From Betamax to Blockbuster: Video Stores and the Invention of Movies on Video by Joshua M. Greenberg. Reviewed by José-Carlos Mariátegui and Jannis Kallinikos.

Disassembling the Archive: Fiona Tan by Philip Monk. Reviewed by John F. Barber.


Face Food: The Visual Creativity of Japanese Bento Boxes by Christopher D. Salyers. Reviewed by George Shortess.

La Jetée, Ciné-Roman by Chris Marker. Reviewed by Stefaan Van Ryssen.

Post Impressions: A Travel Book for Tragic Intellectuals by Hollis Taylor. Reviewed by Mike Leggett.


Modern Hospital, 1893–1943 by Martha Wahlberg. Reviewed by Martha Blassnigg.

Excellent Cadavers by Marco Turco. Reviewed by Fred Andersson.

The Face of Evil by David Tosco. Reviewed by Fred Andersson.


Radiant City, directed by Gary Burns and Jim Brown. Reviewed by Anthony Enns.


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Eternal Youth by AL and AL. Reviewed by José-Carlos Mariátegui.

How Putin Came to Power by Tania Rakhmanova. Reviewed by Fred Andersson.

Madame Tutli-Putli by Chris Lavis and Maciek Szczerbowski. Reviewed by Kathryn Adams.


Time Motion by Jonathan Shaw. Reviewed by Devabrata Paramanik.
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