

LEONARDO

1. Review of Dimensionism: Modern Art in the Age of Einstein

Review of Dimensionism: Modern Art in the Age of Einstein

Dimensionism: Modern Art in the Age of Einstein
Vanya Malloy, Curator

Organized by Mead Art Museum at Amherst College. The University of California, Berkeley Art Museum & Pacific Film Archive: November 7, 2018–March 3, 2019
The Mead Art Museum at Amherst College: March 28–June 2, 2019
Exhibit website: <https://www.amherst.edu/museums/mead/exhibitions/2019/dimensionism>

Dimensionism: Modern Art in the Age of Einstein
Vanja V. Malloy, Editor; foreword by David Little

Mead Art Museum, Amherst College, Amherst, MA
The MIT Press, Cambridge, MA, London, England, 2018
328 pp., illus. 56 col., 54 b&w.
Paper, \$34.95
ISBN: 9780262038478.

Reviewed by
Ellen K. Levy
December 2018

Vanya Malloy, the curator of the exhibition, *Dimensionism: Modern Art in the Age of Einstein*, and editor of the associated book, galvanizes the viewer into considering how a varied array of artists during Einstein's time grappled with new scientific ideas concerning the 'objective world' and visualized them in relation to their own lived experience. "The Dimensionist Manifesto" by the Hungarian poet Charles Sirtó that circulated in 1936 is the inspiration for Malloy's ambitious project and is notable for its response to the scientific ideas circulating in the early twentieth century. In his own words, Sirtó sought out "the new ideas of space-time present in the European way of thinking, promulgated in particular by Einstein's theories . . ." (p.21). Malloy first learned of the manifesto when reading Linda Dalrymple Henderson's *The Fourth Dimension and Non-Euclidean Geometry in Modern Art* (1983, p.3). We learn from exhibition press materials that the manifesto was endorsed by such well known artists as Alexander Calder, Marcel Duchamp, Joan Miró, László Moholy-Nagy, and Sophie Taeuber-Arp, that the exhibition includes nearly 70 artworks by the manifesto's signatories and their contemporaries, and that it

makes evident connections between the scientific and artistic developments that impacted the twentieth century.

This information does little to prepare a viewer to experience the exhibition as simultaneously simple and complex. In a sense, we, not totally unlike Einstein's "man on the train," have been shifted from our standard point of view to another. At first impression the viewer faces straightforwardly familiar artworks, many canonic. Yet it is also distinctly complex because, having been assembled on the basis of the artists of Einstein's time responding to new scientific discoveries, the works do not share *looks* as much as *concepts*. As a result, *Dimensionism* destabilizes the more formal art historical contexts in which many of these classic art objects are typically viewed. Potent comparisons stem from Malloy bringing together works of Surrealism (by Dorothea Tanning and Helen Lundenberg) with works of Modernist Abstraction (by Ben Nicholson). We also see that a master of Orphism (Sonia Delaunay) now shares space with works of Kinetic Art (by Calder, Herbert Matter, and Harold Edgerton).

Each artwork in *Dimensionism* intimates a narrative *in media res*. Trajectories are initiated along various paths of development: viewers see oil on canvas works by Wolfgang Paalen (*Les Cosmogones*, 1944) and Gordon Onslow Ford (*Escape*, 1939) before they meshed their talents during the 1950s with Lee Mullican to form the short-lived, influential Dynaton collective that was steeped in Eastern philosophy and the Surrealists' encounter with the unconscious. Although little use was made of self-organization and feedback principles in works of the 1930s, some of the works of László Moholy-Nagy and Marcel Duchamp that are included in *Dimensionism* can be viewed as aesthetic precursors of cybernetic art as described later in Norbert Wiener's *The Human Use of Human Beings: Cybernetics and Society* (1948). Duchamp's kinetic *Rotorelief A-F*, (1935 facsimile) and *The Bride* (with Jacques Villon, 1934) allude to earlier works. Looking at an animated Rotorelief, an informed viewer might recall his *3 Standard Stoppages* of 1913-14, which Duchamp made by dropping three equal one meter lengths of thread, from one meter of height. In her chapter on dimensionism, Henderson points out that Duchamp engaged actively with non-Euclidean geometry, giving the *3 Standard Stoppages* as an example since dropping the string created "three alternative, curved, non-Euclidean "meters" (p.60).

The viewer's relationship with the artworks changes as she looks and looks again. It also changes when remembering how she has seen the artworks in the past and, as importantly, in *their* past. I had the good fortune to be placed in the role of a space-time-traveler when, several months before visiting *Dimensionism*, I visited the exhibition *Gravity: Imaging the Universe After Einstein*, curated at the MAXXI in Rome by art historian Luigia Lonardelli, nuclear physicist Vincenzo Napolano, representative from the Italian space agency Andrea Zanini, and scientific consultant Giovanni Amelino-Camelia. In the Roman exhibition I could see the culmination (or at least one outcome) of developments blossoming from the earlier conceptual thrust of dimensionism; namely a biocentric philosophy that stressed organism and feedback loops. The exhibition in Italy started with Duchamp's *3 Standard Stoppages* (1913) and ended with Tomás Saraceno's 2017 cosmic spider webs, including a work that conveyed feedback loops between spiders' movements and the public. The *Gravity* exhibition brought to fruition incipient connections between microcosm, macrocosm, organicism, and kinetics that are intimated in *Dimensionism*.

Einstein dealt with observing systems and processes; many of the artists incorporated observation and self-observation into their works long in advance of cybernetic ideas. Biologic metaphors were prevalent in the 1930s as they are now. It seems to me that an important understated question *Dimensionism* raises is the relationship of biology to physics. Questions are raised not only of interrelationships between art and science but of resonances among different scientific disciplines. It is perhaps counterintuitive that biocentrism flourished amid considerations of physics. Paths appear to have opened up among art history, physics, chemistry, and biology. Oliver A. I. Botar explores these paths, pointing out that for Sirató and other followers of their literary journal, *Magyar Írás*, biocentrism was considered “characteristic of early twentieth-century Central Europe, featuring the work of Lebensphilosophen, neo-vitalists, Monists, and biologicistic thinkers such as Friedrich Nietzsche, Arthur Schopenhauer, Henri Bergson, Ernst Mach, and Sigmund Freud—as well as the theories of Einstein” (p. 25). Botar then concludes that Sirató’s world view was shaped by three elements, “an avant-garde aesthetic, a biologism suffused with Lebensphilosophie, and the Einsteinian-Minkowskian conception of the fourth dimension” (p. 25). Botar points out, “it was Spengler’s biologicistic linking of the development of mathematics and the arts that formed the basis for his [Sirató’s] arguments in the first paragraph concerning “unconscious” artistic developments, and he was also inspired by both Mezei’s and Hausmann’s speculations on the adaptation of Minkowski’s ideas to art. In the fourth paragraph Sirató invokes Bergson’s category of creative evolution”(p. 39). Malloy expounds that Jean Arp and Wassily Kandinsky’s biomorphic forms suggest cellular structures, and, referring to Henry Moore, she points out that telescopic and microscopic images influenced his art” (p. 93). Biocentrism is especially clear in the Gerome Kamrowski’s oil painting *Membrane, No. 239*, (1942–43) and in Joan Miro’s *Composition* (1937).

A potential question is the inclusion of works by several artists, including Naum Gabo and Duchamp, that were made in the mid-1960s, on the late end of the exhibition’s general time framework. Furthermore, Gabo never signed Sirató’s document. These inclusions are justified for several reasons; both artists were absolutely critical to the Dimensionism Movement and the later work pointed to a realization of some of its potential. For example, Malloy sees in Gabo’s stringed sculptures suggestions of the new microrealm made visible by X-ray crystallography (p. 94). Although some might argue that Duchamp’s *Box in a Valise* (1966) points primarily to the artist’s interests in commodification, reproduction, and Readymades, many scholars have questioned that interpretation given the multiple chains of reference that permeate Duchamp’s works and expand its boundaries.

Isamu Noguchi’s 1944 sculpture, *E = MC²* clearly declares the exhibition’s focus since it takes Einstein’s formula as its title. Although the title serves as proof of the centrality of Einsteinian science to culture, a viewer can flesh out many, but not all of the developments presented by Malloy on the basis of attentive vision alone. It is apparent that Moholy-Nagy’s *Light-Space Prop for an Electric Stage* (1930, and better known as his *Light-Space Modulator*) looks dematerialized, but we must read to understand that part of the Manifesto’s mission was to “vaporize” the sculptural object. We must also read to learn that Moholy-Nagy disseminated pivotal ideas via his book, *Vision in Motion* that included Joseph Breitenbach’s 1949 photograph of organismic patterns on a petri dish (p. 94). We learn that Matter’s works were based on the technique of electronic stroboscopic lighting invented in 1931 by Edgerton (p. 75).

Henderson, Gavin Parkinson, and Botar are insightful contributors, providing little-known information about the manifesto, the artists who were signatories, and Sirató. Malloy's chapter examines how attempts "to understand special relativity and space-time also gave birth to the spatial delineation of the "light cone" (pp. 76, 80). She then describes how the cone maps coordinates of time and space and the observer's relation to the past and the present. The appendix reveals that Sirató's treatise was informed by Émile Malespine's "The Direction of art" and Minkowski's definition of the fourth dimension as space-time, via the context of Henri Bergson's *Durée* (p. 199).

The exhibition and book challenge some of the accumulated narratives that purport to explain some of the relationships between the arts and sciences. Perhaps by now *too* many links have been theorized to exist between these fields; like any good mystery novel, there are an overabundance of clues and false leads. A common fallacy is the one identified as the "Cubism-relativity myth" that made a connection between Picasso's art and Albert Einstein's theory of relativity (p. 99). The fallacy is re-visited by Parkinson in his chapter, "In Art and Science: Cubism, Quantum Mechanics, and Art History." He points out the origins of the myth that ". . . a painting such as Picasso's *The Poet*, 1911 . . . is a synthesis of different observers, occupying different frames of reference—Einstein's term for individual coordinates of space and time that are relative to one another—viewing a moving object" (p. 99). That narrative was discredited by Henderson's 1983 book when she showed that the Cubists were responding to the fourth dimension spatially and not regarding the fourth dimension as time, as it is in Einsteinian relativity. Henderson established that most of the artists were grounded in the hyperspace philosophy of John Michael Hinton and Pyotr Demianovich Ouspensky. In her current essay, "The Dimensionist Manifesto and the Multivalent Fourth Dimension in 1936: Sirató, Delaunay, Duchamp, Kandinsky, and Prampolini," Henderson notes that few of the artists who signed the manifesto would have actually been engaged with relativity theory. Sirató successfully enlisted their participation by engaging broad, aesthetic issues of dimensional progression and artistic transformations (p. 50). Henderson points out that Wassily Kandinsky insisted on adding his own statement about the importance of the spiritual in art before signing the Manifesto "surely to counteract the document's overt relativity theory orientation" (p. 62).

Art treatises have proliferated in art throughout its history. A notable exhibition devoted to their flourishing was "Manifesto," written, directed, and produced by [Julian Rosefeldt](#) and presented at the Park Avenue (NY) Armory in 2016. Thirteen short films with scripts collaged from nearly 50 manifestos mostly by 20th-century artists, composers, architects and filmmakers expounded on Situationism, Futurism, Pop Art, and so forth. To my knowledge dimensionism was not included presumably because it was so little known, a situation the *Dimensionism* exhibition has now brilliantly corrected.

In his essay, "A Relativistic Account of Einstein's Relativity," published in *Social Studies of Science*, (Feb. 1988), Bruno Latour states, "Explaining a science means that we should be able to establish with it more equal relations in such a way that we learn from it about society and use our own discipline to teach a few things to the science we are dealing with" (p. 26). In the same article he also writes, "Should we thus conclude that his [Einstein's] work is so technical and abstract that it escapes from our world and pertains only to physics with no relation to anything else? Certainly not It is clear, for a start, that the various ways of shifting . . . the building of

equivalences, the keeping up of metrological chains - all these problems are common to many disciplines and activities, and cut across what is abstract and what is concrete, what is scientific and what is daily practice, what is political and what is technical” (p. 20).

Consider this possibility: The artists in *Dimensionism* have used their disciplines to learn from Einstein and to offer something back. This exchange, too, might well provide new dimensions of import.