

Dark Energy: Working at the Perimeter of Materiality

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ABSTRACT

Dark energy is a theoretical repulsive force that counteracts gravity, possibly accelerating the expansion rate of the cosmos. Physicists propose that dark energy may be a fundamental unseen force in the universe.

Like dark energy, contemporary art forms, especially in print, are expanding, fuelled by the internal energy in artists' practices that is generated by current technologies, and the refiguring of perceptual possibilities. Like the opposing gravitational field created by dark energy, the outline of contemporary creative practice is dissolving. New ideas include a multi-level understanding of space and matter, working with time-based forms, interdependence, and an increasing distrust of absolutes.

Print originated as a socially kinetic development of ideas using transfers among materials and concepts. It continues to transform with new, porous forms, including the vaporization of material into digital form. This paper considers related concepts in works of four artists: Ingrid Ledent, Oscar Munoz, Robert Smithson, and myself.

Dark energy – in the world of science – is a theoretical repulsive force that counteracts gravity, and which is potentially responsible for the expansion of the cosmos. As technology transforms our range of human understanding and perception, our understanding of space and materiality changes. Like dark energy, contemporary art forms are also expanding, fuelled by the internal energy of artists' practices, practices that respond to the redefinition of spatial perception. The shape of contemporary print practice is ever moving outward, questioning previously held dogma and absolutes, to a multi-dimensional understanding of space and matter, time-based forms and interdependence.

Elements of innovation have been present throughout the history of prints. In printmaking's earliest forms, the discipline answered the need for an effective expansion of concepts and the movement of ideas. Its material processes incorporated elements of time and of displacement in space—such as the element of remoteness between the fixed matrix and the distributed image—and such innovations continue today.

Some of its newest forms such as digitally based processes and computer-assisted methods involve a transformation from tangible image-bearing materials like wood, metal and ink into intangible

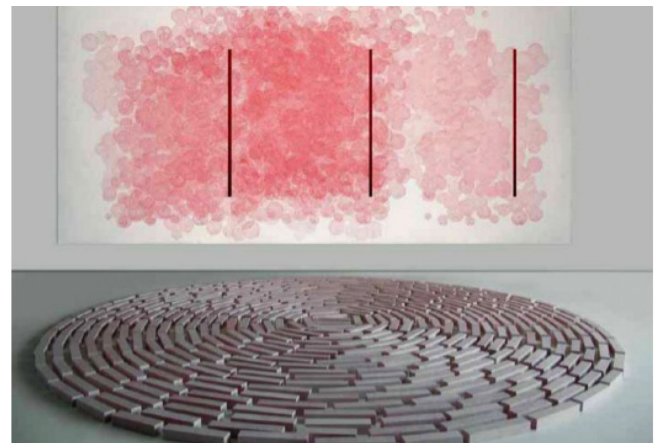


Figure 1



Figure 2

Figure 1: *Mindstream of Consciousness* (2011) by Ingrid Ledent. Installation comprising of two parts: a floor section made with lithographs printed on Wenzou-paper which have been mounted on wooden blocks, arranged in formation measuring 2250 x 2250 mm; and a lithograph mounted on wall, measuring 1070 x 2250 mm, with a video-projection (4 minutes, 13 seconds). Photo: Ivan Willemyns

Figure 2: *Narcisos en proceso (Narcissi in Process)* (2010) by Oscar Munoz. Screen-printed charcoal powder on water. Above: Installation view, Philadelphia Museum of Art, 2010. Below: Detail Photo: Constance Mench, Philadelphia Museum of Art

digital information, expressed in pigmented toner, hybrid processes, or in evanescent forms of light and movement. This porousness and transmutation into new forms, concepts, and mapping techniques support the creation of artwork with the ability to comment on our expanded perceptions. They enable a response to our reframed understanding of time (time compression, time dilation), and, for me, they create an awareness of process as inescapable—of large interdependent patterns of change. These processes sustain the ability to represent things unseen by the human eye—molecular structures, transformations, permutations of scale and complexity. Materiality becomes deceptive. Works of Ingrid Ledent, Oscar Munoz, and Robert Smithson connect to these issues, and likewise connect to my own practice as they reflect a changed understanding of the world. Each occupies an outward-looking point that is on the very boundary of previous held definitions of the space that print has traditionally occupied.

Ingrid Ledent's installation *Mindstream of Consciousness* (Figure 1) contains sculptural elements, lithographs and video projection. The projection visually transforms the static surface of printed paper into a deceptive, changing non-narrative cadence. Her printed non-referential forms dissolve and shift—observed forms in the print become indistinct, as the video textures travel over them. She writes:

'Time, since it is also... a process, is the basic theme in my work. Emerging out of the manner in which I experience time, I highlight what can not be interpreted as concrete, within measurable time... This is a foundation for my images, a non-transparent, archaic tissue of frequently recurring forms.' [1]

The immaterial, shifting quality of Ledent's works resonates in the work of Oscar Munoz. (Figure 2) Munoz, a Colombian artist, works across disciplines: photography, printmaking, drawing, installation, video and sculpture. With printmaking, he revises traditional technical methods to purposely challenge the solidity of material. In *Narcissi in process*, a set of silkscreened self-portraits were printed with charcoal pigment onto the surface of water in shallow pans lined with paper. As the water slowly evaporated, the pigment shifted and finally sank down to settle onto the paper, altering the original image with time and physics.[2]

Munoz is concerned with transformation, as both image and matter disintegrate over time. Emphasizing the transitory nature of human existence, the image oscillates between presence and absence. The lack of stability in the image manifests as a metaphor for a distrust of the absolutes of reality. The idea that perception is unstable, mutable and multi-level recalls the tenets of phenomenology, a philosophy which studied perception and the constitution of meaning in human experience. [3]

The understanding that disparate moments in time and space build to create a larger understanding is evident also in the work of Robert Smithson, active in the late 60's to early 70's, who positioned himself at the innovative perimeter of his time. Working across media



Figure 3

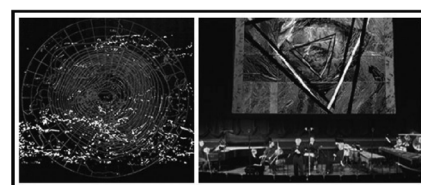


Figure 4

Figure 3: *Spiral Jetty* (1970) by Robert Smithson. Film stills from the film *Spiral Jetty*. (Panel A) Gelatin silver photographs in three panels: each panel 660 x 1118 mm, overall installation measures 660 x 3454 mm. Collection: The National Museum of Art, Architecture and Design, Oslo, Norway. Photo: Morten Thorkildsen.

Figure 4: *Wind Driven* (2015) by Deborah Cornell with sound by Richard Cornell. Left: Still Image from video. Right: In performance by Boston Musica Viva. Vimeo link: <https://vimeo.com/114947442>

platforms, Smithson was a visionary, keenly aware of the complexity of process, of crossovers in time and material, and especially of complex interdependent relationships.[4] (Figure 3).

In *A Sedimentation of the Mind: Earth Projects* Smithson wrote:

The strata of the Earth is a jumbled museum. Embedded in the sediment is a text which contains limits and boundaries which evade the rational order...

In *Robert Smithson: The Collected Writings*, edited by Jack Flam, p. 100.

Smithson's earthwork *Spiral Jetty* was accompanied by videos, essays and a set of images printed together, a photo-essay with references he saw as being of parallel importance, including salt crystals, spirals, and dinosaurs; this work was based on a comprehensive understanding of relationships in time and space.[5] Smithson's intense interest in parallel relationships was based on volumes of far reaching information, much of it scientific in origin, conflating mineralogy, thermodynamics, physics. Smithson's representation of large patterned relationships among forms of matter that are disparate in both time and place forms connections that are of great interest to me.

The viewpoints that pervade these three works resonate closely with my own. My practice engages evanescent time-based media that consider the large empty spaces surrounding the complex human sphere, in digital prints and video collaborations, where the properties of matter become at once magnified and microscopic (blood circulating; constellating stars), suggesting the difficulty of visualising what is occurring beyond our immediate perception.

Ideas and themes in my prints are sourced in physics and astronomy: climatic diagramming, microscopic examinations of biology, and patterns of cultural expression—juxtaposed to create conceptual links. This imagery, expressed digitally, forms a visual language, one that expresses mutability of form and transience. Digital forms occupy an insubstantial space that can sustain layered forms and realities and also evoke awareness of the complexity surrounding us, both tangible and intangible.

In using both visual and aural platforms, we encounter far-reaching intangible relationships and parallels. In a recent collaboration, *Wind Driven* (9-minute live concert performance with video, commissioned by Boston Musica Viva, a new music ensemble), I worked with composer Richard Cornell, who wrote the concert performance score. (Figure 4). The video work is in close conversation with my prints and uses their actual images, but is not printmaking in the sense of marks on paper. It is an offshoot of printmaking's essential language; it has shifted from the medium's centre, transformed to a light-and-energy-based production, one that originates in print methodologies and refers to them. Its visual structure encompasses a base of familiar printmaking elements – although its actual expressive marks have migrated to digital form, it uses juxtaposed overlays of

images and overlays of tonal colour, it engages reproducible iterations, temporal states, and linearity and stillness. My video process involves methodically adding and adjusting layers to build my images. Though not print in substance, the work could not exist without the embedded platform (and actuality) of print.

Wind Driven connects natural systems and cultural histories that control our present moment, such as genetic, archaeological, and atmospheric forms. Many systems like climate are in transition and indicate profound impending changes. One recurring image is a graphic of atmospheric pressure, showing the forces that drive the air and sea, cultures, and even cellular life. Among the still images from my prints is a triangular overlay, the triangle being a symbol of caution. Visually, the element of darkness suggests spaces that are obscured from our view. Wind Driven's sounds derive from natural sources (an offshore storm, thunder in a canyon), that determine the harmonic resonances for the instruments and electronics. Emphasizing particular wavelengths in sound or colour is a formulation of our interest in the physics of matter and parallel process.

The works discussed above have in common many elements – a multilevel presentation of space and matter, time-based forms, and interdependence of systems as well as a seeming distrust of absolutes. They function in a place beyond closely defined forms; they extend the reach of expression to accommodate intangible, unexpected discoveries and connections.

In all these works, the pull of gravity is expressed in the forceful, grounding origins of the print language, and its lasting capability to connect to message. But additionally, the dark energy force pushing outward is seen in the capability of new methodologies, in their ability to express expanded relationships and perceptions of time, space, and matter.

IMAGE GALLERY

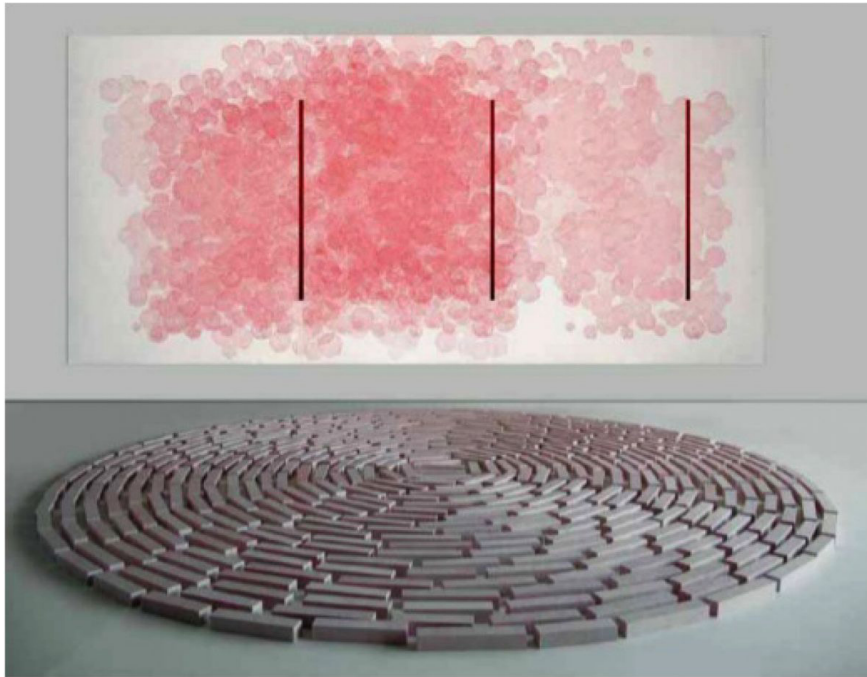


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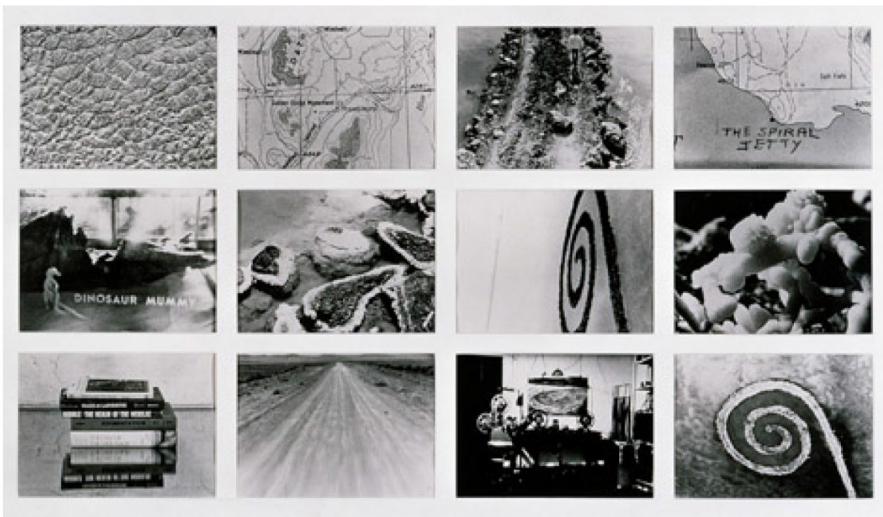


Figure 3: Spiral Jetty (1970) by Robert Smithson. Film stills from the film Spiral Jetty. (Panel A) Gelatin silver photographs in three panels: each panel 660 x 1118 mm, overall installation measures 660 x 3454 mm. Collection: The National Museum of Art, Architecture and Design, Oslo, Norway. Photo: Morten Thorkildsen.

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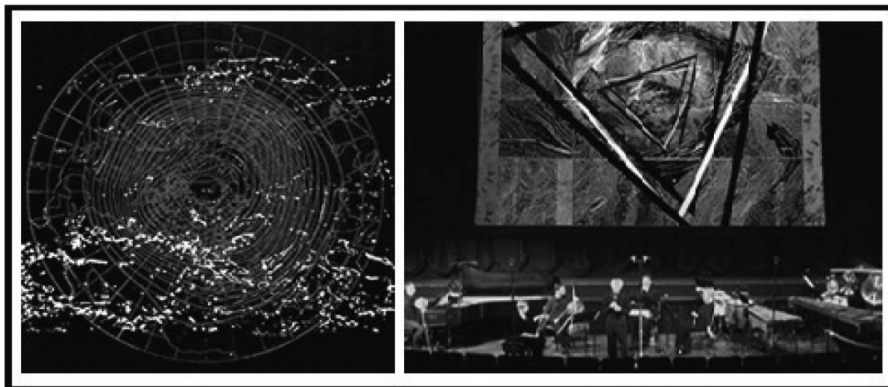


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FOOTNOTES

[1] (<https://www.splitgraphic.hr/curator-2017?lang=en>) [Accessed 22 November 2019].

[2] <http://www.philagrafika.org/pdf/WS/Working-States-Munoz.pdf>

[Accessed 22 November 2019].

[3] See Maurice Merleau-Ponty, phenomenological philosopher. Merleau-Ponty was strongly influenced by Edmund Husserl and Martin Heidegger.

[4] "Robert Smithson...constantly strived to conflate and expose the complexity of issues, elaborate on possible interpretations, and remove clear focal points for the more difficult periphery... Smithson was a clear thinker about muddled issues. As an artist he was a maker of objects that seem rational and consistent, but his works usually represent the uneasy conjoining of contradictory systems of thought." Hobbs, Robert "Smithson's Unresolvable Dialectics". In Robert Hobbs, Robert Smithson: Sculpture. Ithaca: Cornell University Press, 1981; p 20.

[5] Lawrence Alloway notes in his essay 'Site/Nonsite,' that Smithson 'acknowledged complexity and contradiction as a working condition.' (Alloway, 1979)

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