

---

C O N T E M P O R A R Y

# IMPRESSIONS

The Journal of the American Print Alliance

---



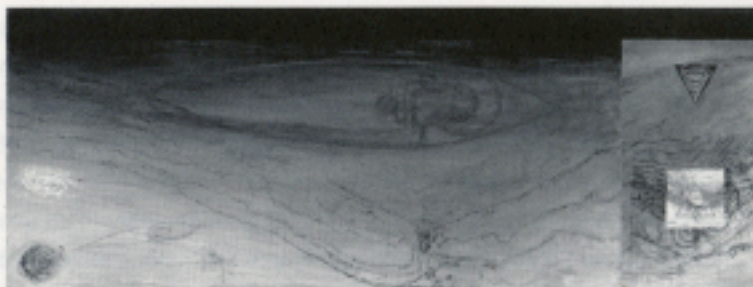
---

VOLUME 11, #2

FALL 2003

## A (Virtual) Reality

By Deborah Cornell



In his *Fifth Mirror Displacement* from *Incidents of Mirror-Travel in the Yucatan*, Robert Smithson writes about the nine mirrors he has seated in the landscape before him, "Who can divulge from what part of the sky the blue color came? Who can say how long the color lasted?"

These questions reveal Smithson's awareness of the shifting conundrum of reality, its transience and its power to bind the attention. His work preferred remote, far-reaching layers of meaning and context based on entropic transformation and the relationship of myriad components. Smithson re-focused the sources of art to include a broad territory of implications — manipulated image, concept, language, natural phenomenon and cultural expression. I identify closely with that territory. Within this landscape, the print form — with its links to the object, its conceptual character and its societal history — finds an open field.

Through technological research, reality is being revealed as far more complex than anything we can invent or imagine, and it invites a new relationship to the human position. Human will, in forms such as genetic manipulation, has become a new and powerful agent at environmental and molecular levels, and it is poised to change our fundamental assumptions about what we perceive as the real.

I am drawn to the unfolding schema of changing reality, its amazing energy and transformations — and the way its shimmering, refracted images are reflected in human culture. Of the diverse cultural influences that condition our view, one widespread influence that interests me deeply is the vision of science. It questions the nature of the real; its answers are succinct, but shaded by possible unknowns. In astronomy, our observation of the movement of galaxies leads to frequent theoretical revisions. Simultaneously, in physics, the recent observation of unstable subatomic particles (gluons) points to the theoretical existence of "dark matter," a discovery that could change the concept of gravity itself, and which may someday overturn our ideas about the world within and about us.

I have always been intensely absorbed in nature — through landscape (especially the forces that model it), natural history, physics and other researches. My early background suggested relationships among many areas of knowledge. In my family, everything was of interest and somehow related — classical music connected to horticulture, ancient languages, jazz, electronics, geology, genealogy, medicine, railroads, the study of time, comparative religions. The house was filled with books (and now computers), and the garden with specimen plants. Faced with this absorbing complexity, I responded by working in multiple forms: multimedia installation, painted cast hydrocal relief, virtual reality environments and the traditional print. Digital or tactile, time-based or still, the forms I use are generated by the sense of the work itself. I first encountered the print at Rhode Island School of Design, through Lawrence Heyman, a student of Krishna Reddy. I was fascinated by its territory, halfway between object and illusion, and by the way its process influences invention. Many qualities of the print permeate the fabric of my work, particularly the tangible/intangible disconnect between the idea and its trace once removed.

Deborah Cornell, *Crux Australis*, 1995. Cast hydrocal, oil paint, color transfer print and intaglio on panel, 26 x 72 x 3".

---

Deborah Cornell is director of *Printmaking at the School of Visual Arts, Boston University*. Recent solo exhibitions of her prints have been held in St. Petersburg, Russia and Venice, Italy. Her work in virtual reality has been presented internationally over the *High Speed Access Grid* and documented in *The Electronic Canvas, a history of video* produced by *Creative Television* and the *DeCordova Museum*, aired on PBS.

Smithson's color photographs were published in *Artforum* (1969) to accompany his essay (reprinted in Nancy Holt, ed., *The Writings of Robert Smithson: Essays with Illustrations*, New York University Press, 1982).

---

*As a phenomenon of human consciousness, the scientific view infiltrates philosophy, art, sociology and many other aspects of cultural history that express our experience of the real.*

---

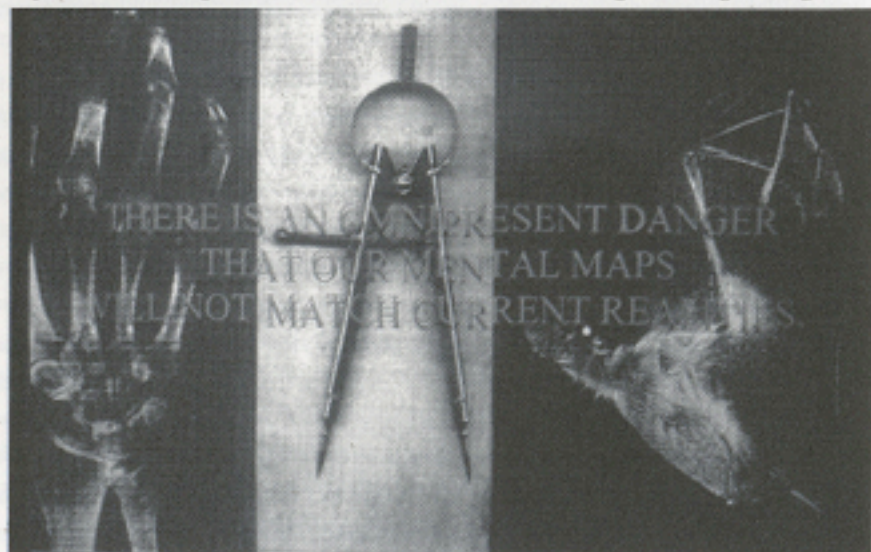
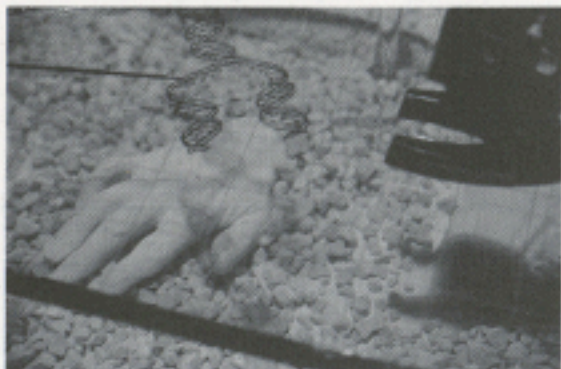
My early work centered on natural forms and fields of color in expanded-scale works on paper and paintings, delving into the what and why of reduced geological form. The space was fractured into layers, or it built from the plane of the surface visually. I often made studies in the extreme climate of the southwest, drawing and observing, in areas where time was impossibly long and impossibly short. The accidental leavings of culture — ancient paths, trash, footprints illumined in the sharp desert light — began to demand attention along with the geological transformations. This temporal and material complexity demanded a rich, compelling surface. I developed a technique of cast hydrocal reliefs, paintings that were also printed, carved, stamped — heavy, dense objects with intensely tactile surfaces and deep color. *Crux Australis* is typical of this work. It combines the color of the Indian Ocean, remembered from a research trip in Australia, with depth charts of the area, distinctive shell forms and a figure (part votive-part boat) from imagination. I became increasingly interested in the diverse record of human experience, the cultural devices that overlay and alter the power of direct experience.

The conceptual lag between the experience and its evocation began to suggest a return to using the print, the impression being the reflection of an idea/object that exists elsewhere. In prints, I had to condense both scale and surface, but kept the conceptual scale large by using series — an overarching idea connecting disparate parts. *Blood and Water*, a suite of four intaglio prints from the late 1990s, suggests the confluence of human idea and biological basics. In *Transposition*, a fossil bat faces off with a Moqui crab deity: the bat as a relic of animal life, and the artifact as a trace of a human belief system. These images join with aquatic cells and a SeaSat image of the ocean from space. Other prints in the series use microscopic images of chromosomes with images of measuring instruments and skeletal archeological remains. The lens-altered image permeates this work. I became a master of strange, fleeting, imperfect photographic transfer techniques: aquatints with intentionally flawed transfers were allowed to degrade in acid. This preserved the moment-based record of photography, but without its specificity.

These two streams — the trace and the object — are also seen in my installation, *The Sleep of Reason: A Cautionary Tale*. It is visual, tactile and auditory: sculpture, prints and sound coexist in an enclosed interior space. The remote image is used in all these forms. A collaboration with Richard Cornell, composer, the work grew out of a long series of discussions about advances in genetic engineering.

**PhotoImage: Printmaking 60s to 90s** (Museum of Fine Arts, Boston, 1998) surveyed the range of photo-influenced contemporary prints, connecting the poles of virtual historical trace and tactile object; in this context, my work leaned heavily toward tactile object.

Deborah Cornell, *The Sleep of Reason: A Cautionary Tale*, 2000. Installation. Sculpture detail: wood, hydrocal, rope, brass fittings, plexiglass, printed transfers, marble chips, shells, rubber casts, microscope and pointer, 48 x 120 x 40". Color transfer print and plexiglass, 24 x 30". Text: "There is an omnipresent danger that our mental maps will not match current realities. David Harvey."



Motivated by a concern for the magnificent specificity of living forms, *Sleep ...* suggests the dangers of the recent crossing into the unknown territory of genetics. The caution is meant not as a stand on the virtues or ills of biotechnology, but simply to ask pertinent questions — to reflect on our potential for changing the foundation of the natural world with genetic anomalies, in a way that supersedes even the Burgess Shale. The title refers to *The Sleep of Reason Begets Monsters* from Goya's *Caprichos*, in which a sleeping figure conjures demons of the night as reason is suspended. In my work, elegant natural forms like human hands, plants and the fleeting, beautiful shapes of jellyfish connect to the intrusions of bio-science and to texts from cultural observers — artists, philosophers, writers and international corporations. These cross-references from disparate sources create new voices, and condense cultural time.

The form of the central work is a vessel, a shape repeated at many levels. The central sculpture is arrayed with casts of organic forms: human hands and feet, fish, shells, ears of corn, lizards, set into a field of white marble fragments. Suspended above is a plane of luminous orange plexiglass, engraved with a grid and printed with an encoded molecule of DNA, and supporting a microscope and a pointer. Special lighting throws its uncanny color onto the white forms beneath it, along with the shadow of the DNA.

Seven printed wall images incorporate microscopic photography: forms of animals so deep in the water column that they cannot be brought to the surface intact, x-rays, false color images. The images are litho-linked photocopies printed onto plexiglass, then suspended between two transparent sheets. Each print is viewed through its own colored light-conducting plastic filter. A text is printed opaquely onto each filter. One quotes an article from *The New York Times* about growing eyes on the wings and antennae of fruit flies. Another invokes Yeats, "All changed, changed utterly, a terrible beauty is born."

Images are layered throughout the work — genetically transformed species like corn, the snake with its specially re-evolved eye. One of the strongest motifs is the hand, a metaphor for human volition and for evolved natural form. In the prints, x-ray hands reveal the mysterious inner shape of origins, exposed in the light of research, while monotyped handprints suggest the immediate human action, with its implications for affecting nature. Cast hands are strewn throughout the plane of the sculpture. The instruments poised above impose the questions of science. Themes and images amplify each other, creating an architecture of reference that simulates multi-level reality.

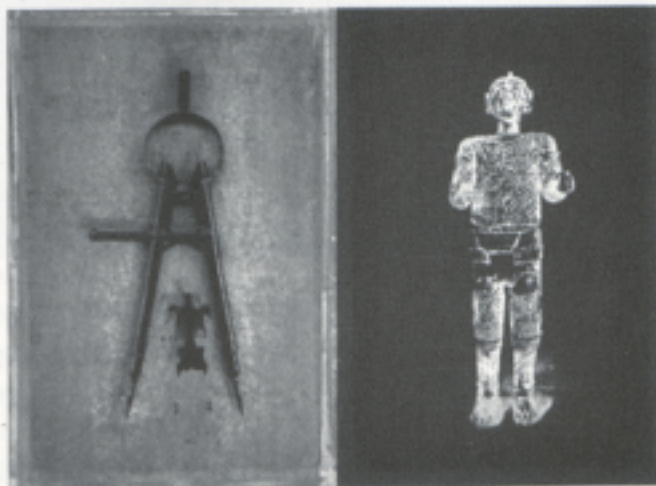
Transformations of human culture that are affecting nature profoundly are also the source for a subsequent suite, *Requiem Canticles*, an elegy for things passing and forms under threat from societal changes. Each print has a pairing of images — half from actual objects and half from cultural references. In *Warrior*, for example, instruments of scientific analysis are paired with a large figure of an Aztec soldier; in *Maelstrom*, a cluster of frogs, under threat from global changes, is juxtaposed with a map of a climatic storm. Physiological and ecological change work through every level of social context, and it is this interdependency that the suite invokes. The images come from objects that I find or own or invent, that evoke a broad memory, or seem particularly telling as relics of the real — familiar but symbolic. Images are scanned or drawn, photocopied, re-drawn, made into prints, rescanned. I want the light quality and sense of actual reportage of the photograph, but at a remove, actualized into an image with a rich surface.

Cf. Stephen Jay Gould's theory that these extraordinary fossils represent a "road not taken" in the history of life: **Wonderful Life: The Burgess Shale and the Nature of History** (W.W. Norton and Co., 1989).

*I was interested in creating a spatial field in which images address each other closely. The manipulated electronic sounds, composed by Richard Cornell for the work, activate the physical space. The sound derives from the images (bats, crickets, my voice electronically granulated, reading the text) and it conditions the experience of the space over time, as attention shifts from eye to ear and back.*

See Thomas Palmer, **Landscape With Reptile** (Ticknor and Fields, New York, 1992), p. 84.

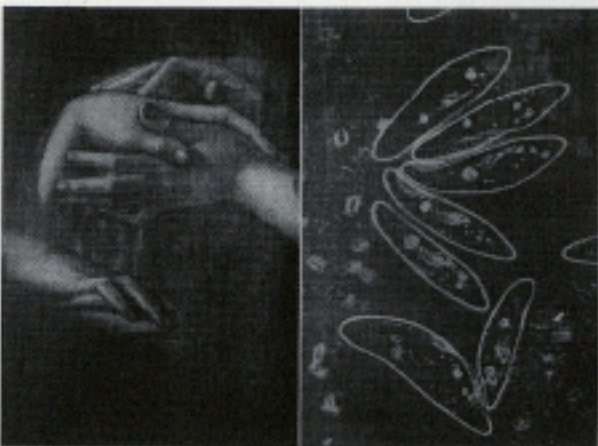
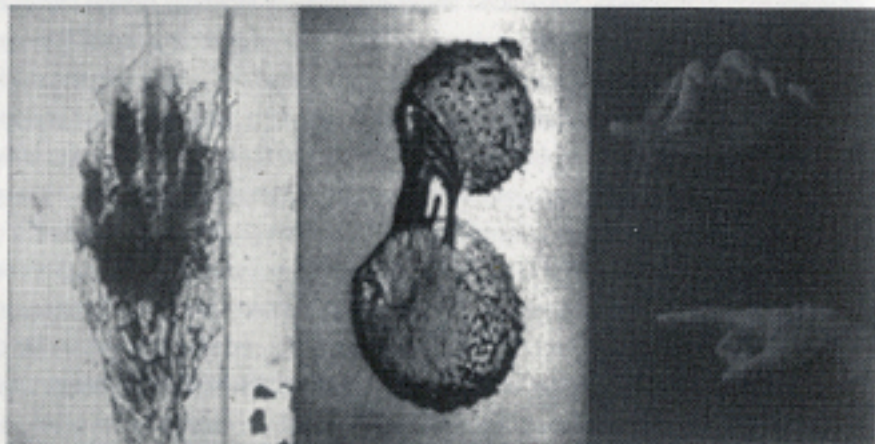
Deborah Cornell, **Requiem Canticles: Warrior**, 2001. Color aquatint and transfer, 18 x 24".



Deborah Cornell, *In the Space Left Vacant: Leonardo*, 2002. Color aquatint, lift ground and photoetching, 18 x 36".

Deborah Cornell, *In the Space Left Vacant: Bellini*, 2002. Color aquatint, 18 x 24".

*Requiem Canticles* allows symbolic ripples to intersect, like two stones thrown into a pond. It raised the issue of the spaces in between. Inspired by a recent stay in Venice, the suite *In the Space Left Vacant* uses the deep tonality of aquatint, alternating light and dark fields in sequence. While there, I connected to the powerfully configured spaces among figures' hands created in the works of Renaissance painters, especially Bellini and Leonardo — spaces that seemed somehow to encapsulate the tension of human relationships. I used this humanistic, ordered Renaissance vision in the suite, combining it with the lift ground image of a hand, overprinted with a photo-etched monotype of my handprint. This last hand is a shifting image, partially dissolved into space. The suite suggests a scale for the representation of matter, with human form in the middle ground. At opposite ends, a cloning cell and a portion of the night sky occupy more distant magnitudes. *In the Space Left Vacant* suggests the vacuum of space that forms a continuum for matter.



In both content and form, there is a dialectic in my prints between the tangible and the intangible. In combining traditional forms with digital means, neither is autonomous and each influences the other. The intangible file is data — there, yet not there — transient but unchanging. At the same time, equipment and software may eventually render it inaccessible. The tangible artwork itself appears more permanent, but in actuality it has a material half-life. My work in virtual reality reflects the same dialogue. I find it a deeply immersive and affecting form, an imaginary illusive space that can also be felt physically.

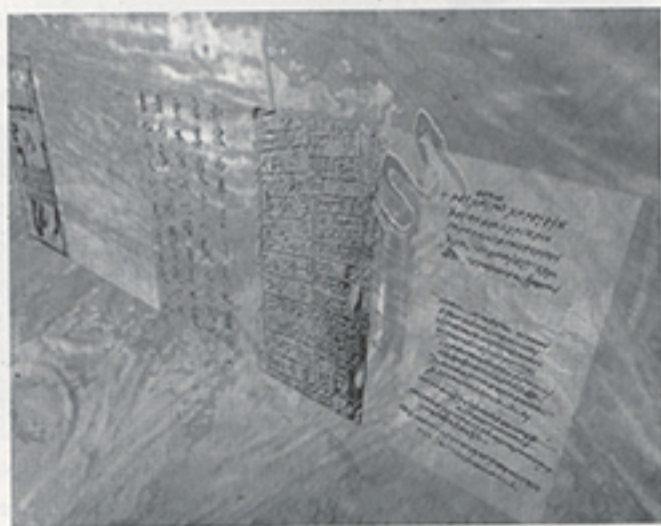
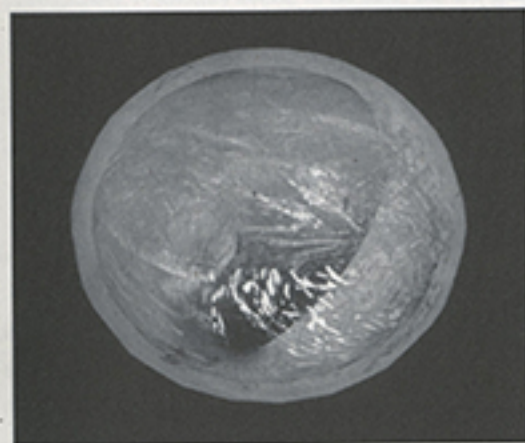
*Tracer* is a recently completed two-year project, a virtual interactive environment created in 3D modeling. It uses the rich surfaces from real-world works (a painted relief and a four foot gestural woodcut) with digitally generated images to create an imaginary, enveloping space that evokes a luminous, dreamlike, aerial experience. Using a special headset and wand, the viewer navigates through the seemingly 3D space, choosing a trajectory and activating sound and image with changes in position. The motion results in a neuropsychological experience of flying through a real space. In transit, the viewer encounters archaic figures, a Greek archer, shapes evoking the Great Serpent Mound in Ohio, and

transparent planes bearing pages of ancient but indecipherable forms of language, such as Mayan codes and cuneiform. In this kind of space, the present and the absent can exist equally as pictorial space, which, for the first time, can actually be penetrated. The viewer and the pictorial space collaborate.

This Spring, commissioned by Boston Musica Viva, *Tracer* was revised and premiered as a 20-foot video image in a concert space, with live performance of a new score by Richard Cornell, Chair of Music Composition and Theory at Boston University. In this version, *Tracer*'s enveloping surfaces are enhanced with further iterations of the gestural woodcut, which read as a slowly rotating, lighted stellar cloud, evocative of wind patterns. Though translucent and unclassifiable as woodcut, the strength and interest of the overlay come from the direct path of the tool through the resisting wood. This pattern is impossible to create digitally, so subtle and variable are woodcut marks, but it is superbly effective in the digital space. (*Tracer* also owes a debt to the print in its language of the layer, its uses of imagistic duplication, and its ability to be recast through saved information. The concert version increases the work's accessibility to a large number of people, as do print multiples.) The imaging condenses time — eons of human language, nonspecific but intensely familiar shapes of nature, and the simplified forms of animation.

This architecture of immense space, with its thoroughly integrated light, color, sound and movement, is a powerful form. Different from — but surprisingly related to — prints, the virtual image has the ability to present a multilevel reality existing in time and to connect physically separate spheres that are conceptually related. Like Smithson's mirrors, both forms reflect the experience of a divergent reality, seated within the real, and leading to an understanding of its provisional nature. With these expanded means of exploration, the representations of art become a powerful vehicle for reassessing the real. ★

Deborah Cornell, *Tracer*, 2003.  
Virtual reality computer image,  
overview, and detail of still frame  
from 20-foot high video projection  
(11.5 minutes). Sound by Richard  
Cornell.



*"Artists' theories are like scientific theories in that they are both rooted in the same process of imaginary elaboration. But artists' theories do not prove anything; at most they produce real effects, which in transforming the world, also have the function of helping us to know it."*

Gilles Tiberghien, *Land Art* (Princeton Architectural Press, 1995), p. 18.