

## Dove Bradshaw Art and Indeterminacy

By Thomas McEvelley

Dove Bradshaw's vocation as an artist might be traced to her childhood desire to find "a crack that leads into another world." Eventually she found one, but, at once surprisingly and not, it did not precisely lead into another world, but into another understanding of this one – an understanding based upon a suspension of old rules, a loosening of its fixity, a relaxation of the grid.

The essence of the discovery was "indeterminacy." This concept began to push its way into her consciousness in 1969, through ordinary life events that were not originally intended as are. Changing her mind about her intentions, and opening herself to what show was unconsciously doing, led into indeterminacy.

Additional impetus in that direction came from Bradshaw's long friendship with John Cage, show she met in 1977 and with whom she discussed her work from time to time till the end of his life in 1992.

Cage, in an essay of 1958, spoke of music "which is indeterminate with respect to its performance."<sup>i</sup> He notes that Johann Sebastian Bach, in the *Art of the Fugue*, did not indicate timbre or volume, so those features remain indeterminate until they are performed, at which time they are determined, by a performer, for a specific performance. There seem are clearly two kinds of indeterminacy involved.

In one case, indeterminacy means that although we do not know what an entity is, nevertheless we may be sure that it is something or other. We may be sure because a logical principle of the Law of the Excluded Middle insists that it is impossible for something to be neither this nor that. There is no middle position between this and that, or yes and no (“Maybe” is not a third position: it simply means we don’t know yet). Given the dichotomy between A and not-A, then, any entity must be either the one or the other. And that entity must also be stable and cognizable, because another logical principle, the Law of Identity, insists that each thing is itself and nothing else. It is just that our knowledge is incomplete at the moment, so that the thing in question *seems* to be indeterminate.

The other, more radical type of indeterminacy goes beyond the problem of knowledge into ontology. In this mode, we cannot know what something is, not simply because our information is incomplete, but because it isn’t anything in particular at all. It exists without a clear or determined identity, in a state of ontological as well as epistemological uncertainty. Its identity is indeterminate in itself, not simply by an accident of the observer’s point of view. In this case the Law of Identity and the Law of the Excluded Middle are both denied. In such a world it is indeed possible to be, without being either one thing or another.

The distinction between these two modes might be called the distinction between logic and dialectic (or between daytime and night-time logic, or solar and lunar logic). In a nutshell, logic proves things, dialectic disproves them, or, in slightly different words: logic constructs proofs, dialectic deconstructs them. So the solar world of logic contains clear identities, but no process or flux; it is a rigid grid of meanings that will never change – a kind of prison. The lunar world of dialectic, in contrast is a world with no clear identities, no certainties, a world characterized by change and lack of definition.<sup>ii</sup> While it may give you nothing to hold on to, still it allows you (or even enforces on you) a certain freedom. This is the crack.

The path leads through the crack, out of the world of gridded order and into the world of flux and indeterminacy, involves reversing habits and expectations. It is a transition that is prepared with difficulty and takes place slowly. That is the central story this text – and that art of Dove Bradshaw – will tell.

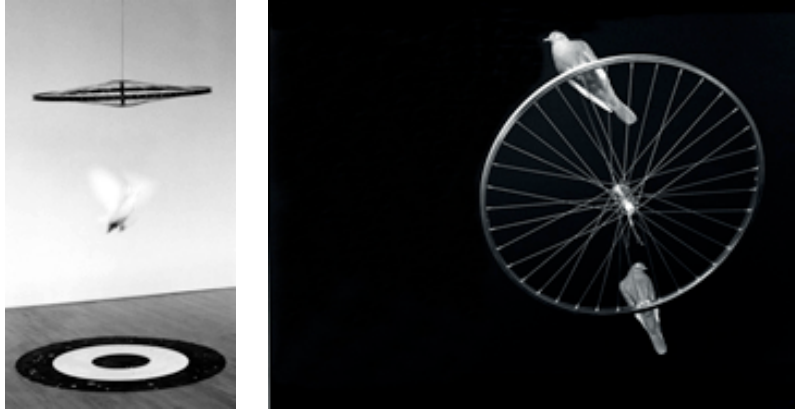
Dove Bradshaw was born in 1949 in New York City to a family whose members were gifted with artistic talent, especially draftsmanship. Her father wanted to be an artist but ended up as an agent for commercial artists, representing Andy Warhol before he made the crossover from the world of advertisements to that of art galleries. Still, the Bradshaw household encouraged artistic activity – a place where children’s secret societies, clubs, and the theatrical production companies thrived. At age seven Bradshaw began writing, producing and



acting in children's plays. In high school she painted, but the drama of three-dimensional things kept drawing her. When she went on to study at the Boston Museum School of Fine Arts it was with a specialization in sculpture that uses clay as medium.

At the time, the early '70's the traditionally staid medium of ceramics had been infused with avant-garde tendencies by artists such as Peter Voulkos, with whom Bradshaw studied in the summers of '71 and '74. Ceramics, with its newfound energy, turned into a volatile mode of creation that led Bradshaw into Conceptual Art and indeterminacy. The Japanese *raku* firing method, for example, ensures indeterminacy; because when the artist puts the work into the kiln there is no telling what it will look like when it emerges. Like the timbre of the *Art of the Fugue*, it is indeterminate until it actually happens.

For Bradshaw, early formative experiences included seeing Marcel Duchamp's *Bicycle Wheel* at the Museum of Modern Art at age 14. His work would become her first initiation into the world of indeterminacy. As the years passed *Unhappy Ready-made* (1919) [p.20, top] – a geometry book left outdoors on a balcony to be aged by the weather – world seem to be especially formative on her work. The tactic of allowing the work to be finished by natural processes, which were out of one's control, was part of the adventure of indeterminacy. In 1969 a friend gave Bradshaw a pair of doves. She welcomed their free flight in her studio, without consciously designating it a work of art. After a while, playfully tipping her hat to Duchamp, she hung a bicycle wheel from the ceiling for a perch. Next, to echo its shape, she put a Zen archer target on the floor beneath the wheel, not least as a reference to Jasper Johns. Meanwhile the doves began collecting bits of string, wire, and hair (from her hairbrush) and using them to construct a nest. At this point Bradshaw began to feel that what was going on was an artwork on which she was going on was an artwork on which she was collaborating with the doves [pp. 12, 13, 15, 88]. Somewhat as in Duchamp's *Unhappy Ready-made*, the work was set up by her, but completed by natural forces out of her control. She presented the installation for a school critique. This was the beginning of indeterminacy in her oeuvre.



*Plain Air*, 1969, Installation view: PS1 Contemporary Art Museum, New York, 1991, installation with live birds

In 1969, while the doves were flying in her studio, Bradshaw cast a broken eggshell in bronze. This was the predecessor of a number of later eggshell works (*the Nothing, series*) – castings in bronze, silver and gold. Always the eggs are broken: the birds have flown the coop. The shards of shells mark the itinerary of their births and point to their ephemerality. Emptiness lies inside the broken shells like a question mark.



*IV series, Nothing*, 1989, 18 carat gold, 1 ½ x 3 x 1 ½ inches  
Collection: The Art Institute of Chicago

In 1971 Bradshaw made  $2\sqrt{0}$  (*The Square Root of Zero*), a *klepsydra* or water clock, which she had conceived along the lines of an hourglass, but using acetone instead of sand. Again she did not clearly think of it as an artwork at the time, but as an invention. With the help of a technician at the Massachusetts Institute of Technology she came up with a design inspired by the infinity sign not unlike the double vessels portraying the male and female principles (mercury and sulfur) illustrated in alchemical manuals. If held vertically, it functions a clock; if horizontally, as a level. Since there are no markings on the glass and acetone is heat-sensitive, its readings are undependable – indeterminate in the epistemological sense. The nonsensical reportage of the piece implies that the space-time reality it measures is continually changing and hence indeterminate. The idea of a measuring

device that combines time and space was to be a major theme of Bradshaw's later works in which unpredictable changes in a spatial field take place over time.



2√0, 1971, glass, acetone, 3 inch dia. x 6 inches length, shown as a level and a clock, Collection of the Museum of Modern Art

These three pieces of her student years –the doves, the broken eggshells, the water-clock/level – were the seeds from which her conscious pursuit of an art of indeterminacy would grow.

Three years later in 1974, Bradshaw met William Anastasi, one of the founders of classical Conceptualism, with whom she established a life partnership that is still fruitfully in effect. Meeting Anastasi had a lot to do with moving Bradshaw increasingly away from the heavy earthiness of ceramics and into Conceptualism. In 1979 for example, she made several pieces in which she hammered a nail partway into a wall, then threw at it a pancake-shaped disc of wet clay; sometimes it caught on the nails or on the floor below. The opening of the crack, the loosening of the grid, was underway. The fabled solidity of ceramic was giving way to ephemerality. The daytime logic of the solid object was becoming a nighttime logic of indeterminacy and surprise.

Back in New York after art school, Bradshaw began to move her work out into the larger world of New York galleries. Her first exhibition was *Reliquaries*, 1975, made up of ceramic boxes with symbolic contents. The key was a reliquary honoring Duchamp. In line with his personal history it was a chess box, divided into two sides, one for the white pieces, one for the black. Each slot for a chess piece was filled by a miniature reproduction of a work by Duchamp. There was a small *Belle Haleine*, a perfume bottle with Bradshaw's picture on it, a little urinal in clay, a bicycle wheel with delicate spokes obsessively crafted. The reliquary was, in effect, a miniature ceramic *boîte en valise*.

From about 1974 to 1979 –her last years as a clay artist – Bradshaw kept the reliquaries, and in fact nearly her entire oeuvre of miniature ceramic works on floor-to-ceiling shelves that fell down one day, breaking almost everything. She experienced this as a cutting away from her past, a permission to go on to other media and styles. Coincidentally, at about the same time (1977) she met Cage through Anastasi. As a student she had been moved by Cage’s seminal book *Silence* (1961), where his writings on indeterminacy flowed parallel to her own thoughts. As the years passed Cage would become a collector of her work and they would collaborate on productions for the Merce Cunningham Dance Company starting in 1984 when she was chosen co-Artistic Advisor along with Anastasi.

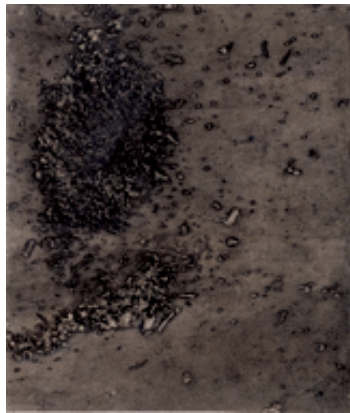
In 1979, after the fall of the shelves, she began a body of concentrated work shown a few years later in *Drawings*, her first museum exhibition, at Wave Hill, New York, in 1983. These were closely observed drawings of two-stages of a single leaf or lily or other natural form, first drawn in the morning as it was freshly harvested, then later, in the evening or on the next day, after it had shriveled. With emphasis on the passing of the blossom stage and the onset of decay, the pictures had something in common with the 17th century tradition of the *vanitas* painting – a painting that pointed to the passage of time, to the mortality inherent in things –to ephemerality.



*Without Title*, 1978, pencil on paper, 7 x 7 ½ inches, Collection: David and Jean Bradshaw

In 1981 Bradshaw began making what she calls Carbon Removals, which were featured in that year’s show, *Removals*. These small works were made by placing found materials on a sheet of adhesive tape, then placing the adhesive side down on a sheet of carbon paper and rubbing with even pressure. The surface picks up the carbon except where the interposed materials have been placed, leaving an ambiguous impression that seems

both positive and negative at the same time. Bradshaw stag the adhesive surface so dust could fall on it (a procedure inspired by Duchamp's *Dust Breeding*, 1920), and whet on to use hair, wool, tealeaves, herbs, grass blades, and scraps of paper or cellophane such as a cigarette wrapper found on the street. The element of indeterminacy is introduced through the chance-based process of accumulating or scattering the material. Again, once this stage is over, the indeterminacy becomes determined. The fleeting situation a Carbon Removal commemorates in perishable materials introduces ephemerality.



*Without title* [Carbon Removal], 1981, carbon paper, 4 7/8 x 4 1/8 in.  
Estate of John Cage

The ephemerality of things has traditionally been covered up as much as possible in artworks, for example by choosing durable materials and attempting to protect them from deterioration. For this reason Old Kingdom pharaonic statues were often carved in granite, a stone so hard it was worked with diamond-or carbon-tipped drills. The idea that the works of humans should appear to be eternal supports the idea that one's society is based on eternal verities. It is part of the conservative ideology upholding the status quo.

Recently a reversal of values has taken place under the name of post-Modernism. Art has come to be understood as a tool for resistance to the status quo rather than a celebration of its eternity. Artists now vie with one another in ephemerality rather than concealing it. An example is Anastasi's *Sink* in which water is poured daily over a steel plate, causing it to "sink" by rusting away successive surface layers. The action of the work points to its own ephemerality. Many works of Robert Smithson were similarly aggressive about their ephemerality. *Asphalt Run Down* (1969) was installed on the forward edge of a landfill project, to be covered

over almost immediately. James Lee Byars said that his works were fleeting atmospheres. Jean Tinguely presented explosions as his work.

Ephemerality became a positive principle in an ideology that, because it reversed the values of traditional art, has been called “anti-art.” While traditional art presents itself as an ideal world apart from everyday life, anti-art seeks to collapse the separation between the two.

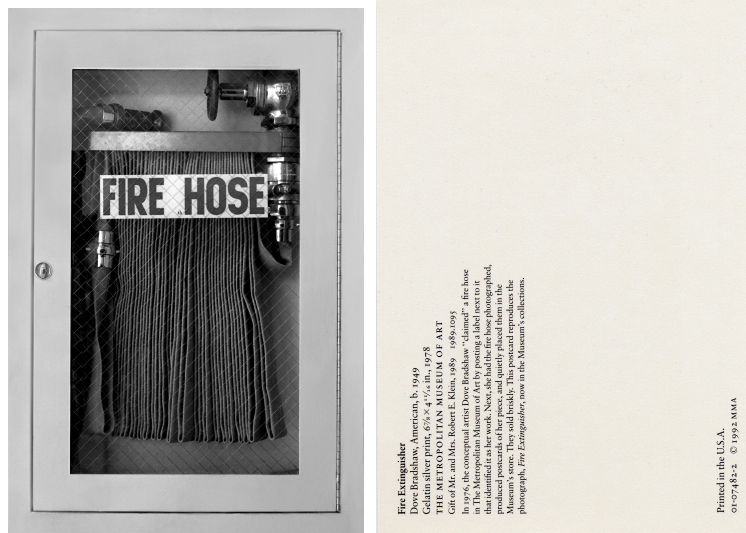
Already in her student years Bradshaw had begun to cross the no man’s land that Robert Rauschenberg, Jean-Luc Goddard and others have said separates life from art. Across the barrier between the two she began to see her future. The flight of the doves showed the way, but many works followed, in the decade after her emergence from school, that addressed the art-life breach by venturing further into indeterminacy. The three serendipitous works of her student years – doves, eggshell, clock/level – and many of the works from the decade after were gathered for the major show – *Works, 1969-1984*, at Utica College of the University of Syracuse, in Utica, New York, in 1984. The thirty-two works in that show comprised a virtual index of Conceptualist themes.



Announcement for *Dove Bradshaw, Works 1969-1984*, Utica College, Syracuse University Exhibition, 1984  
Collection of the Whitney Museum of American Art, New York

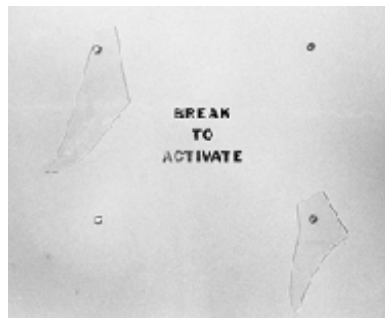
*Fire Extinguisher* (1976) (now called *Performance*) was an early act of the genre that would come to be called Museum Interventionism. Bradshaw fixed a label to a wall beside a fire hose in the Metropolitan Museum of Art in New York, identifying it as her work. She photographed it, had postcards made from the photo, and insinuated them surreptitiously into the museum’s postcard racks, in the twentieth century section. When the museum staff had sold them, she would quietly replenish the stock. They became complicit. This went on for

several years. Then in 1980 the museum acquired Bradshaw's photograph for its collection, and in 1992 issued its own version of the postcard, printing a brief description of these events on the verso, thereby seemingly ratifying the validity of her appropriation of its premises.



L: *Performance*, 1976, “claimed object,” the Metropolitan Museum of Art, New York  
 R: verso Metropolitan Museum official postcard, 1992 Collection of the Whitney Museum of Art, New York

*Break to Activate* (1977) consisted of those three words from fire-emergency instructions, painted on the wall with a rectangle of glass mounted in front of them. The usual hammer was missing. When the piece was installed at PS1 Contemporary Art Center, New York, it took two months for someone to act on the suggestion. The words on the wall were jaggedly framed by the remaining fragments. The request for the viewer to break the glass recalls two Duchampian motifs – his famous statement that the audience finished the work and his legendary observation, when he heard his work *The large Glass* had been broken that it was finished at last.



*Break To Activate*, 1977, glass, Press type, 12 x 10 inches

*Hygrometer* (1978) (now called *(A)claimed object*) is a variation on *Fire Extinguisher* of two years earlier. A label was added to a humidity detector on the wall of the Kunstmuseum, Dusseldorf identifying it as a work by Bradshaw, then photographed. The photograph was exhibited. This piece proved to be prophetic, in light of her later work emphasizing humidity in the atmosphere.



*(A)muse*, 1979, “claimed” object Kunstmuseum, Dusseldorf

In *Do Not Touch* (1979) a DO NOT TOUCH sign in the Museum of Modern Art was replicated and affixed to a wall in the museum, labeled as a work by Bradshaw. It was removed almost immediately by a guard. The themes of solipsism and appropriationism were conjoined with that of ephemerality. Again the art/life distinction was basic: in the world of art one should not touch, in the world of life one does.

*Untitled* (1981) was three New York Police Department shooting-range targets showing an armed assailant pointing a pistol at the viewer. The three targets were installed in the windows of a gallery on 53rd street, opposite the Museum of Modern Art, until the building’s owner became concerned that they might cause the windows to be shot at, and removed them. Several Conceptualist themes converge: the found object or image, the public site, the apparent aggression against the viewer, the testing of the exhibitor’s dedication.

*Spent Bullets* (1980) are slugs of revolver bullets fired at a shooting range, then exhibited as a tiny sculpture or cast in gold to be worn as jewelry. Themes of alchemical transformation and closing the art-life gap mingle with gender ambiguities.





*Spent Bullets*, 1979, photogravure, printed Niels Borch Jensen, Copenhagen  
Collection of The Metropolitan Museum of Art, New York

*Bye Bye Product* (1975) is used-up and flattened gallon paint can heavily encrusted by its former contents, its lid still in place, evidently run over by a heavy vehicle. The work relates to the idea of focusing on the process of making art rather than the resultant artwork—for example, Yves Klein’s exhibition of the rollers he had used to make paintings, rather than the paintings themselves (*Untitled Sculpture S 7*, 1962). A process is necessarily involved in change, while its product often appears static.

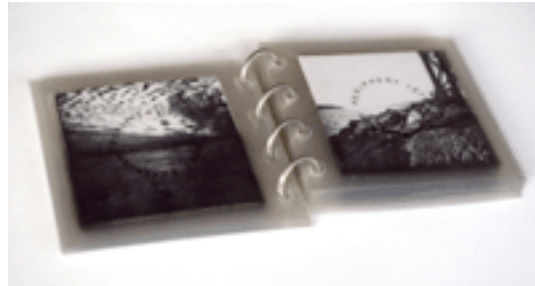
*Being* (1979) was the nest that the doves had made in her studio fifteen years before—in effect a work of art made by another species, a radical closing of the traditional break between nature and culture.

*Pose (proposal for a film)* (1977) is a pair of Polaroid photographs that became the basis for a treatment for a split-screen film, Bradshaw photographed Anastasi asleep, then after he awakened asked him to adopt the same position and photographed him again. The pictures are virtual replicas, but one is art, the other life. The viewer is gazing across the art-life disjunction.<sup>iii</sup>



*Without Title*, 1977, wood, glass, mat board, newsprint, 12 x 8 5/8 x 1 inches

*Untitled* (1977) is a wooden frame containing a piece of newsprint mounted on mat board behind glass. The parameters of the work are space and time interacting in a material. Each material was evaluated and labeled by a conservator with the number of years it could be expected to endure seemingly unchanged: two years for the newsprint, 100 years for the mat board, and so on. The piece flaunts the ephemerality of its materials as the essence, negating the artist's traditional desire to attain eternity.

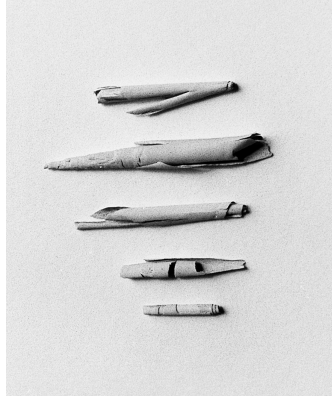


*Periphery*, 1979, laminated SX70 photographs, 92 pages, Collection of the artist

*Periphery* (1979) is a photographic record of a walk Bradshaw took around the perimeter of Manhattan Island. She began at the base of the George Washington Bridge and headed north along the Hudson River. Focusing her camera on the farthest visible point of land extending into water, she photographed it, then walked to that point. There she would repeat the process, then turn and shoot her last point of departure, then move on. The resulting 92 photographs were around with rings so there was neither beginning nor end; one could start at any point and recreate the walk around the island in one direction or the other. It is performative photography – human, landscape, and camera interacting to create a record.



*Dazzle Camouflage* (1983) Bradshaw covered the walls of Time and Space Limited, an experimental theater in Manhattan with a pattern of camouflage obtained from the United States Navy. The pattern, used to make ships unidentifiable from a distance, involves five colors (black, white, light grey, dark grey and blue) applied in camouflage style. It is a direct attack on the Law of Identity, positing an entity outside definition, or at least temporarily removed from it by the elusiveness of perception. Within the space, now made indeterminate by its bewildering camouflage, the director developed a performance based on it. The camouflage plan and installation shots were subsequently exhibited.



*Painting*, 1978, acrylic 2 ½ inches longest scroll

*Painting* (1978) consists of dried paint scrolled from glass. The theme of detritus, or used materials, combines with the idea of emphasizing process rather than product. Paint itself becomes a tiny sculpture.



*Without Title*, 1980, rubber stamp

*Cliché* (1980) is a rubber stamp presenting the word “cliché.” The inked stamp was exhibited attached to a pedestal with a string, with instructions to use it. The word cliché was stamped all over the pedestal. Audience participation and tautology were combined with the reversal of the value of originality.



*TURPSECLU*, 1979, plastic, 3 x 6 x 4 inches

*TURPSECLU* (1979) is a set of transparent marbles marked with those letters and exhibited in a transparent box; the viewer shakes the box and randomly produces words or suggestions of words, perhaps an anagram. The product remains an undetermined “sculpture” until the viewer’s intervention.



*50% Better*, two day performance at Grand Central Station, one day straight faced, the second day smiling

*50% Better* (1979) was a performance in which Bradshaw, dressed as a nun, sat on a chair in Grand Central Station in New York for two days, holding an alms bowl for donations from passersby. On the first day she sat with a neutral expression, on the second with a warm smile. The collection of the second day was 50% greater than that of the first. Again the process was the point; there was no product except photographs (the money was given to charity).

The Utica College show focused on the Conceptualist thread in Bradshaw’s work from 1969 to 1984. A number of valuable ideas involving indeterminacy had been laid down in her work during those years, but she was awake for other possibilities that would help her move on. Her inherent draughtsman’s ability lay invitingly available yet seemed to offer no further advance. How easy it would be for someone who had facility

to just go on doing it forever. One thinks of Picasso once saying that his biggest problem was learning not to draw. In a similar vein, Bradshaw was inclined to venture out of conventional craftsmanship and representation into the free space where one could use any material or style. For the rest of the '80's she studied the issue of how to work in two dimensions without representation. This investigation unfolded in four stages, each represented by an exhibition.

In *Collages on Wood*, 1986, Bradshaw dissected mathematical, architectural and medical diagrams and transferred selected images onto wood. There were eight in the show, each 17 x 14 inches – complex images that were semi-abstract and semi-scientific – somewhat in the Duchampian tradition of moving art away from the realm of religion and closer to that of science. In terms of anti-art, they block the urge toward draftsmanly expressiveness through the use of appropriation. (One of them later became the set for a performance of the Merce Cunningham Dance Company, *Fabrications*, 1987.



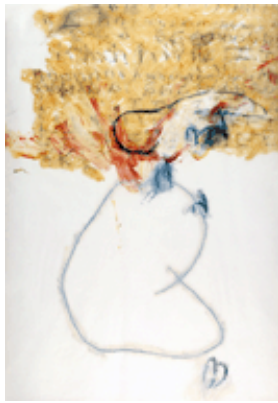
*Fabrications*, 1986, oil, crayon, china marker, pencil on vellum, 52 x 36 in.  
Collection of the Brooklyn Museum, New York



*Fabrications*, 1987, City Center, New York  
Choreography: Merce Cunningham, Music: Emanuel Dimas de Melo Pimenta, Décor & lighting: Dove Bradshaw

While learning how *not* to draw, Bradshaw found a child's composition book that contained images made with household materials like fingernail polish remover. It effectively merged art and life. She gathered

children's drawings from various sources – a Harlem daycare center, a Danish kindergarten, and some a friend brought from Kenya. She manipulated these by projecting a chance selection onto vellum, painting on the vellum with a spatula through the light of the slide projection with oil, then cutting the oil with crayons and graphite and obliterating areas with erasers melted in medium.



*Birth Series*, 1987, oil, china marker, liquid on vellum, 52 x 36 inches  
Collection of the Philadelphia Museum of Art

In 1988 a second exhibition at Utica College, *Dove Bradshaw*, contained twenty-three oil paintings on vellum. Painterly spatula-work was combined with intense coloration to affect a picture of an interior landscape. Some showed childlike renditions of faces; these egg-like shapes resumed the *vanitas* theme and suggested primordial intuitions of birth and the gradual articulation of life forms. Concurrently, with a related show (*Paintings*, 1988) Bradshaw opened the Sandra Gering Gallery in New York where she would exhibit her work for a decade. In 1989, in her second show at Gering Bradshaw exhibited a full recreation of the 1969 dove installation from her studio, under the title *Plain Air*. There were also works on unprocessed vellum (calf-skin with the hair still on). Bradshaw chose one of the liver spots on the calfskin and remade it in silver leaf, placing it elsewhere by chance. In another room two cast eggshells – one bronze, the other silver-lay on a metal table. The show relentlessly critiqued the tradition of opposition between nature and culture.

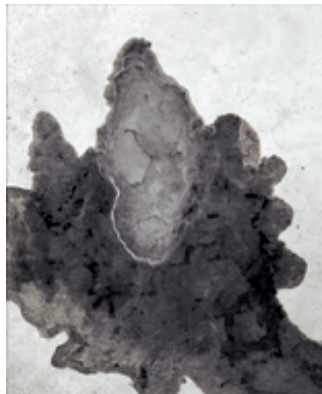
The next exhibition at Gering, *Full*, 1991, was named after a red monochrome canvas that Bradshaw freshly dusted with red pigment at the start of the show, then left to change as it would. The piece, as John Cage observed, “is willing to give of itself and to change itself, and without losing itself.”<sup>iv</sup> The monochrome’s metaphysical eternity is merging with ephemerality. A red-pigmented thorn exhibited nearby heightened the

focus; it was as if the painting had become a sculpture, losing its generality and becoming small, precise, and painful.



*Full*, 1991 pigment on varnish, oil on linen, 7 ½ inches square

Bradshaw's third show with Gering, *Contingency*, 1993 began the series of three breakthroughs that would most clearly constitute the passage through the crack. She had begun making what she calls Contingency work in 1984 and had included one in her first Utica show. Over the next few years they developed in several directions. The most basic form is silver-leaved paper or canvas onto which a substance called liver of sulfur is poured or brushed. Liver of sulfur is a 17th century term that is still used (the modern scientific term is sulfurated potash). It is made up of various liver-colored substances including metallic sulfides and compounds of a metal or sulfur with an alkali. As a chemistry book of 1800 states, "You fuse together equal parts of sulfur and alkali...and the result will be a solid mass...which has a considerable resemblance to the liver of certain animals." <sup>v</sup> Dissolved in water, it is used to patinate or sulfurize silver.



*Contingency Pour*, 1997 silver, liver of sulfur, varnish on linen, 17 x 14 inches  
Collection of Dorothea Tanning

When this agent is applied to silver, the surface becomes unstable, changing in various ways in response to ambient humidity and heat. In *Contingency Paintings* Bradshaw brushes the whole surface with liver of sulfur; in *Contingency Pours* she pours it and lets it spread and pool as gravity dictates. Upon contact the silver turns a brilliant gold, then gets turquoise hues in a pitted or streaked form, then deep blue, then a greenish color, and eventually an iridized black. The initial chemical reaction is most noticeable, but it keeps going at a slower rate thereafter, and never stops. The effect is indeterminate in the sense that the result is unpredictable and often surprising. The mottled pattern is ephemeral or constantly changing and resembles the effects of expressionist painting, often with a somber look as of natural processes that go on at night in the dark while people sleep unawares. Here Bradshaw seems to have found an enduring mode of indeterminacy beyond Cage's idea of the event that remains indeterminate until it happens. The flux produced by chemical ferment is a *Contingency* painting never ends unless the painting itself is destroyed.

It has a claim to actual ontological indeterminacy. It will continue to document the process of change in the face of all claimed certainties. The idea was carried over into outdoor sculptures that are likewise susceptible to atmospheric changes, beginning with a copper wall piece (*Passion*, 1993) and land sculptures employing a copper cube (*Notation I*, 1999) for the indoor work she has treated the copper with vinegar, ammonium chloride, copper sulfate and urine to set off the reaction;<sup>vi</sup> for the outdoor work she leaves it to the weather.



*Passion*, 1993 copper embedded in wall  
Collection of the Museum of Contemporary Art, Los Angeles



The Gering exhibition *Contingency*, 1993 contained five works of liver of sulfur-silvered canvas. The size of the support surface was determined by the reach of the artist's outstretched arms, horizontally and vertically. They were executed outdoors so that outdoor environment would stamp itself on the chemical reaction. The pieces were titled by the dates when they were made, and one critic's feelings about their poetic evocations of the seasons illustrates the parallel with the way expressionist painting is sometimes received: "*May 14, 1992*, has the rich copper colors of a warm sunset. *December 24, 1992* has the winter chill in its grey coloring, while *October 18, 1992*, with its peeling surface, calls to mind the ragged trees of autumn.<sup>vii</sup> This critic also observes, "like a potter putting newly glazed ceramics into a kiln, Bradshaw has no way of knowing exactly what the final product will be"<sup>viii</sup> "Bradshaw, " observes another critic, "has made pieces that embrace what most art shuns: the inevitable chemical changes that fade cave paintings, crack and crumble frescoes, darken oils to obscurity."<sup>ix</sup>

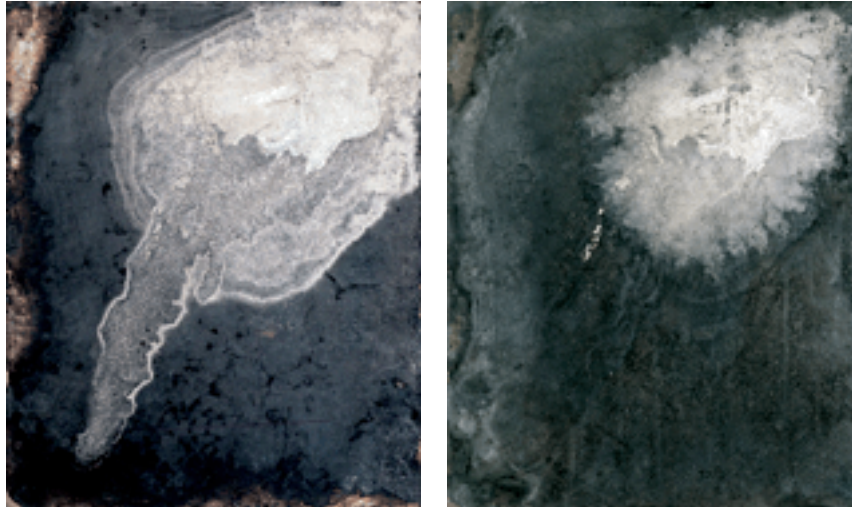


*Contingency, December 24, 1992*, silver, liver of sulfur, varnish, gesso on linen, 82 x 66 inches  
Collection of Sam Jedig, Copenhagen

The reversal of values involved can be appreciated through a comparison with the fate of some of Mark Rothko's paintings. In the late 1960's, while making the black, maroon and brown monochromes for the Rothko Chapel in Houston, Texas, the artist was clearly aiming at the capture of the eternal in the paintings. In a conversation about them he remarked to the visitor, "I am trying to convey the infinity of death"; when his guest said, "Don't you mean the eternity?" Rothko replied, "Ok, the eternity." Yet in preparing the paint he contradictorily threw in some organic matter, specifically egg yolks. This was tantamount to Bradshaw's

using the liver of sulfur. Soon after the paintings were hung in the Chapel they could be seen changing as the egg-yolk spoiled. But change was the opposite of what was desired. The eternity of death was supposed to be static. Conservators tried to arrest the process of change – to little avail. Now the difference between the paintings as they originally appeared and as they appear today is a somewhat hidden fact about the work. In Bradshaw’s Contingency Paintings, on the contrary, the artist deliberately triggered the process of change and it is that process, far from hidden, that is the centerpiece of the work. The title, Contingency, points to this fact. Rothko’s paintings were supposed to be absolute, not contingent.

With a sense of deferring to nature, Bradshaw happily yields control to the changing atmospheric conditions nature provides, whatever they might be. In decisions like this the role of the artist was being redefined; rather than controlling the work’s appearance for the ages, she deliberately unleashes a process of unpredictable change. The desire for mastery that was basic to Modernism yields to an acceptance of the unexpected. In a broader sense the idea of contingency leads to a quasi-metaphysical complex which Buddhist tradition calls conditioned co-production (Sanskrit, *pratilya-samutpada*) – meaning that things come into existence in causal *nexi* which are continually shifting as they themselves are similarly contingent, and the factors they are contingent upon are also contingent, and so on. The whole vast network of phenomena is seen as arising not from essences (or fixed identities) but from temporary contingencies that are always in a state of flux and therefore are without identity or essence or inner truth; everything, in other words, is both ephemeral and indeterminate. As Aristotle remarked in the *Metaphysics*, “Nothing is true of what is changing.” So the Contingency works are at the entrance, as it were, to the crack between the world of the daytime and nighttime logicians. By implication they reject both the law of Identity and the Law of the Excluded Middle. They affirm change, made possible by the lack of fixed essence. One critic appropriately brought up Matthew Arnold’s lines, “Change and decay in all around I see;/O thou who changest no, abide with me,” and observed that “Bradshaw’s work seems made to demonstrate that any search for what ‘changest not’ is doomed to failure.”<sup>x</sup>



*Contingency Pour*, 1991, Activated: June 1991, Photographed L: January 1992, Photographed R: August 1993  
Silver, liver of sulfur, varnish on linen paper, 17 x 14 inches, Collection of the Louisiana Museum Humlebaek, Denmark

Bradshaw did not devise the Contingency works with the model of alchemy in mind, yet they seem virtually late instances of that tradition. Alchemy was a pre-modern laboratory science that attempted to induce changes in metals by the application of chemical substances. Similarly in the Contingency series a process of change takes place in a metal to an applied chemical. Furthermore, liver of sulfur is a compound of sulfur, and sulfur is one of the three substances of alchemy – usually regarded as the most important. It is found in many minerals and ores (especially iron pyrites, which are used extensively by Bradshaw). It occurs in plants, animals and meteorites. It burns with a blue flame and is what the Bible calls brimstone.

According to one alchemical theory all physical substances are made up of differing combinations of three elements, sulfur, salt and mercury. Bradshaw has worked with all three. In 1993, for example, she called a tiny bottle containing seven drops of mercury indeterminacy. In the S Paintings, a series begun in 1996, powdered sulfur was bonded with varnish, the yellow surface remaining powdery and subject to change, like the surface of the red monochrome Full. Bradshaw's Contingency works symbolically sum up the alchemical process; the oxidation of the silver deposits salt on the surface. Sulfur, salt and silver are all involved.

Since, according to some forms of alchemical theory, sulfur, salt and mercury are the components of all things, by properly manipulating them one should be able to produce any other substance, such as gold or silver. A Medieval Arabic alchemist known as Pseudo-Gerber “taught that the imperfect metals were to be perfected or cured by the application of ‘medicines.’”<sup>xi</sup> One such medicine was called “philosophical sulfur.”

Bradshaw's Contingency works enact an analogue of this process. But there is more than material change at issue. The process has spiritual implications.

The 16th century alchemist Paracelsus simply called sulfur the soul. As Jung wrote in the *Mysterium Coniunctionis*, his long reverie on the spiritual implications of alchemy, "Sulphur is a spiritual or psychic substance of universal import...Sulphur is the soul not only of metals but of all living things." <sup>xiii</sup> In Bradshaw's analogue, liver of sulphur acts as the inner soul of matter enlivening it for transformation. For sulfur has both chthonic and heavenly aspects. The *Turba Philosophorum*, a Medieval Latin alchemical treatise, says, "The soul is ...the 'hidden part (occultum) of the sulphur'," and also that "Sulphur is a shining heavenly being." <sup>xiii</sup> Brimstone's association with hell-fire prepares us for the *Turba's* remark that "The little power of the sulfur is sufficient to consume a strong body." It is this power that the alchemical summons and that Bradshaw invokes by analogy in her works, as the liver of sulfur transforms the silver into artwork.

John Cage, who owned Contingency works, saw another spiritual and ethical content in them. "If I, so to speak, change with [the painting]," he remarked, "then I can change with the world that I'm living in, which is doing the same thing." <sup>xiv</sup> Contemplating the indeterminacy of the changing painting sharpened his awareness of his own indeterminacy and brought him into tune with it.



*Indeterminacy*, Sandra Gering Gallery, New York, 1995

The show *Indeterminacy*, 1995 (the next major show at Gering's), was a breakthrough that would lead Bradshaw to a full confrontation with the themes of sculpture, ephemerality, indeterminacy, and alchemy. In the procedure, which evolved from the Contingency process, outdoor sculptures of unhewn stone are "activated" or engaged in chemical change. One stone of a type which is prone to leach out chemicals, usually pyrite, is placed on top of a receiver stone, usually limestone or white marble. At this point the arrangement recalls

something dedicated on an altar, offering itself for transformation. Placed out of doors, accessible to the rain, the upper stone leaches streaks and bands of chemical color onto the lower one. They are, as it were, paintings made by nature. In preparation for the Gering show three one-ton pairings were exposed to the elements for half a year; the pyrite stained the marble with rust-colored patterns that recalled the drips or streaks of expressionist painting.



*Indeterminacy XI*, 1996, Activated: March 1996, Photographed: September 1999,  
Carrara marble, pyrite, 15 x 21 x 22 inches

Later that year a related work was shown at the Pier Art Center in the Orkney Islands. Boulder of Scottish sandstone was brought up from the beach. A seventy pound piece of pyrite was placed on top. Unlike the constituents of the Contingency works, the pyrite will dwindle away to nothing in 50 to 100 years. At that point the involvement in flux, which entails indeterminacy on Aristotle's principle, would come to an end in that particular form, through the stone with its stain would continue to undergo change in slower and less visible ways.

In 1998 the exhibition *Dove Bradshaw*, curated by Julie Lazar at the Museum of Contemporary Art, Los Angeles, included three of these works. As one critic remarked, they “ironically dissolve the concepts of immutability and permanence usually associated with stone.”<sup>xv</sup> The works “allude through their material substance to the legendary legacy of sculptural medium, established by the Greeks and Romans.” But at the same time they “underscore the perishable and mutational nature of marble, and by implication of the artistic canon, eroding confidence in its allegedly formidable and timeless essence.”

Like her Contingency work, Bradshaw's Indeterminacy Stones participate in the alchemical paradigm. The process in which one stone touches another and creates a change in it is analogous to the idea of the Philosopher's Stone, which according to alchemical legend has the ability to change the state of other stones by touching them. So in the Indeterminacy Stones the pyrite performs an analogue to the function of the

Philosopher's Stone. (That pyrite is also known as Fool's Gold suggests an ironical critique of the alchemical approach.)

The idea of the artist as alchemical was most clearly enunciated by Yves Klein in his description of himself as a "midwife" to nature – a term which some medieval alchemists applied to themselves. In his *Twelve Keys*, the alchemist and Benedictine monk "Basil Valentine," who for his achievements in the chemical sphere has been given the title of Father of Modern Chemistry, declared, "The minerals are hidden in the womb of the earth and nourished by her with the spirit which she receives from above."<sup>xvi</sup> This spirit of the sky, which, in a cosmic marriage, impregnates the earth.

By his chemical manipulations, the, "The alchemist strove to assist Nature in her gold-making;"<sup>xvii</sup> As the midwife he was assisting Mother Earth to give birth to the perfected element that was gesticulating within her. Left to her, she would sooner or later give birth to it anyway, but that might take geological ages. The alchemist hoped by his laboratory procedures to hasten the parturition in hopes of making the Stone available within his lifetime.

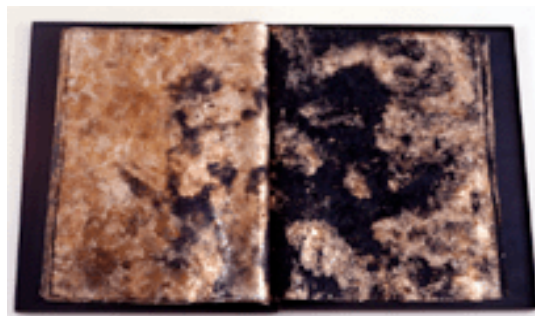
Klein performed as midwife when, for example, he made paintings by sifting powdered pigment into the air and inviting wind and rain to dispose it upon the canvas. In so doing he saw himself as intervening in the process of nature and midwifing a birth. The idea is not dissimilar to these works of a Danish critic commenting on Bradshaw's work: "The meeting between the materials is the essential...Bradshaw facilitates the meeting, but after that, the work is out of her hands. It is nature that takes over..."<sup>xviii</sup> Among contemporary painters, Sigmar Polke has similarly produced paintings with elements of volatile chemical coating that will change in response to changes in ambient temperature and humidity. Unlike Bradshaw's roughly contemporaneous works, in which the process continues to advance, these works of Polke's may return to the same visual condition again and again, as the same climatic conditions return. In his use of such methods there is a certain objection to the separation of culture from nature, an affirmation of nature as the goal rather than the raw material.

John Cage meant something similar about the dichotomy between nature and culture when he observed of the use of chance in art making that an unforeseen action or effect "is not concerned with its excuse. Like the land, like the air, it needs none."<sup>xix</sup> The artwork, then, that has become involved in natural that has become involved in natural entity, a thing which is without purpose, which simply exists as itself without reference to or implication of anything else.

The third of Bradshaw's breakthroughs as midwife to nature comprised two related series, Negative Ions and Waterstones. The Negative Ions works were first shown in the Sandra Gering/Linda Kirkland concurrent exhibits *Irrational Numbers*, 1998, a complex gathering of Bradshaw's recent series into a single presentation that showed their inner unity. Gering had four Negative Ion works – rock salt crystalline boulders (the largest about a quarter of a ton) onto which water dripped from hanging laboratory vessels with regulating valves. At about five drops a minute the salt erodes about two inches a month in conformations that are unpredictable – indeterminate until they have occurred. Another work in the Gering show was *Contingency [Book]* (1995-97). This is Bradshaw's principal bookwork to date, consisting of seven large linen pages, silvered on both sides, four of which had been stacked for two years interleaved with other works treated with liver of sulfur. The chemistry from these other works invaded the new-silvered sheets and worked on them. The seven leaves were then bound together, each still in the process of oxidation. As viewers turn pages in the gallery the process is accelerated briefly as each one is exposed to air, light and human touch. Closed, the pages re-engage in the process of becoming each other.



*Contingency [Book]*, Activated March 1995, photographed May 1999  
Installation view: Sandra Gering Gallery, New York, 1998



*Contingency [Book]*, 1996, silver, liver of sulfur, beeswax varnish on linen paper,  
26 1/4 x 42 1/4 inches, 2 of 7 leaves

The Kirkland exhibition had four Indeterminacy Stones (Indeterminacy XXIV-XXVII, 1997). Each was 12 inch limestone cube topped with a smaller chunk of pyrite which was somewhat diminished after a year of weathering. Each diminished pyrite rested centered in its stain.  $2\sqrt{0}$ , the clock/level, crazily mirrored and measured the space-time transformations going on. To reveal the early stages of their chemical development, Bradshaw treated four Contingency Pours with a shot of liver of sulfur the night before the opening.

Like the Contingency Paintings, the Negative Ion works occurred in several forms. In some, the water dripped on poured heaps of road salt instead of salt boulder. Another series, using limestone blocks instead of rock salt, were called Waterstones. In these works as in Indeterminacy XXIV-XXVII) the blocks are hones cubes.



*Negative Ions II*, 1996 installation view Stalke Gallery, Copenhagen 2001

Again there is an interesting kinship with the works of Robert Smithson, reflecting issues alive in the culture in general. Smithson had proposed looking at the decayed state of structures and environments hewn they are chaotically falling apart rather than the stage at which they seem rigid, stable and under control. As he formulated it, that stage shows the process of entropy, ore “energy drain.”<sup>xx</sup> He seems to have felt that the ethical meaning of entropy is that everything will always lose energy and disperse and that we should accept and even celebrate this hard news. This was a part of the post-Modern concentration on ephemerality. Similarly, Bradshaw’s Contingency, Indeterminacy and Negative Ion/Waterstone paintings and sculptures all focus attention on the ongoing process of disintegration. (Smithson’s practice of showing untrimmed stones in galleries – sometimes boulders of rock salt – also lies in the art historical background of these shows, as does his tendency to conflate art and science.) But there are still deeper spiritual implications to the theme of disintegration, as the entropy theory clearly bears a resemblance to Taoist thought.



Tao means “the way”. According to the *Tao Tê Ching*, the classic text attributed to Lao Tzu. The Way may also be called the Valley Spirit or the Water Spirit or the Mysterious Female. The nature of the Water Spirit is that it seeks the low ground. When water has reached the lowest point, it has returned to the state of the Uncarved Block, to the Mysterious Female.<sup>xxi</sup> Bradshaw then is using the Way, or the Water Spirit, in both the Indeterminacy Stones and the Waterstones; the liquid flows downward eating away the rock as it seeks the lowest place.

The essence of the Way is ceding control, holding oneself back from intervention as much as possible. In terms of art, this is anecdotally embodied in the story of Kokusai dipping a chicken’s claws in ink and letting it run across the page. Similarly, Bradshaw lets the pyrite leach onto the limestone. She has said, in reference to her role with her materials, “I like to withdraw,” meaning that after setting up the situation she lets the forces of nature take charge and go their own way. Though not the western style, this is nevertheless a strategy for control. As the *Tao Tê Ching* says, “The sage’s way is to act without striving” (LXXXI). “Those that would gain what is under heaven by tampering with it – I have seen that they do not succeed” (XXIX), Cage was referring to something like Bradshaw’s “withdrawal” when he observed, “Morton Feldman said that when he composed he was dead.”<sup>xxii</sup> Sol LeWitt must have had something similar in mind when in *Sentences* he says, “The artist’s will is secondary to the process he initiates...”<sup>xxiii</sup>

A basic image in Taoism is water’s ability to wear away stone –a foundational point of Bradshaw’s Indeterminacy, Negative Ion and Waterstone works. “Nothing under heaven is softer or more yielding than water,” says Lao Tzu, “but when it attacks things hard and resistant there is not one of them that can prevail” (LXXVIII). A modern text on Taoist art observes that everything is characterized by perpetual motion because everything is infused with a need to return to the Tao; dripping water, for example, is seeking to return to the Tao.<sup>xxiv</sup> This relationship is encapsulated in the Taoist term for landscape painting, *shan-shui*, mountain water.

“The term for landscape,” a modern scholar writes, “...is...symbolic of the [constant interaction of the] *Yang* and the *Yin*.”<sup>xxv</sup> *Yang* and *yin*, in turn, come through in Taoist alchemy as mercury and sulfur, the male and the female of the cosmic marriage. Awareness of this fact was supposed to inculcate in the artist painting a *shan-shui* “a worshipful attitude, making it a ritual act of reverence in praise of the harmony of Heaven and Earth.”<sup>xxvi</sup>

There seems a dualism in *yang* and *yin*, yet the *Tao Tê Ching* says they “produce oneness” and in the Taoist painting tradition this was called *i-bua* (one-painting or painting the oneness).<sup>xxvii</sup> Extrapolating from

this idea one could say that Bradshaw's Waterstones are an attempt to paint the oneness. The disintegrated state of entropy, the eating of water into stone, are symbols of dialectical reality, the abandonment of Identity and Excluded Middle – a glimpse of the other side of the crack.

Reflecting on these series of works Bradshaw realized that she was, in effect, exhibiting materials as themselves, without working them extensively – salt, stone, sulfur, water, mercury. An extreme example is



*Waterstones*, 1996, Stark Gallery, New York, 2001,  
12-inch limestone blocks, separatory funnels, water

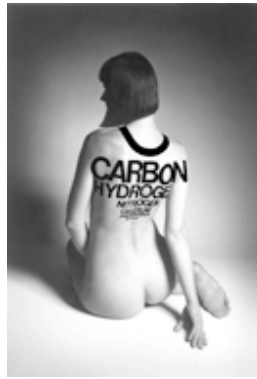
*Material/Immaterial* (2000), a series of seven out of a projected fifteen works erected in the Museum of Contemporary Art, Roskilde, Denmark, based on the Ryoanji Temple Garden in Kyoto, Japan.<sup>xxviii</sup> Here Bradshaw used a locally available stone, pairing spring and aged calcspar, rendering a white bleed onto a dark receiver stone, reversing the palette of the pyrite-on-marble pairs.



*Material/Immaterial*, 2000, *Anastasi Bradshaw Cage*  
Museum of Contemporary Art, Roskilde, Denmark

The next step in the increasingly materialist project involved focusing on the idea of elements, and how they impact upon the belief in identity or the self. As certain philosophers have observed, if the self can

be broken down into impersonal entities that leave nothing unaccounted for, then the idea of the essential identity of the person has been disproved: When the elements involved in the self are separated, it simply ceases to seem to exist. Bradshaw exhibited the elements found in the human body under the title *Self Interest* (1999). Using her 100-pound body as the reference, Bradshaw calculated the proportion of weight each element would have in a 100-pound combination, putting each in an appropriately sized laboratory flask. They were exhibited in a random distribution on a glass table. A related work is a photograph of a model's body on which the names of the elements are printed in their proper proportions, in diminishing order.<sup>xxix</sup>



*Herself In Her Element*, 2002, silver gelatin print  
Collection of the Metropolitan Museum of Art, New York

*Self Interest* functions as a synthesis of earlier tendencies: the use of laboratory flasks, the continuation of the alchemical thread, and the idea of moving art closer to the realm of science. It echoes the *vanitas* theme by denying the idea of the self as an essence. It breaks objects and selves down into fragments, thus denying identity or stressing its tendency to change. Yet, though it sums up numerous themes involved with the long-term development of Bradshaw's work, it has a new look; it is specifically and uniquely itself.

This moment in Bradshaw's oeuvre may be called mid-career. The first step toward indeterminacy occurred early in her development. Since then she has followed the path with concentration and integrity. Over 30 years she has worked out a synthesis of two diverging tendencies: on the one hand, the earthy, material, and heavy aspect of traditional sculpture; on the other, the identity-dodging or shape-shifting of Conceptual Art. In the process she has passed incrementally through the opening that led from the rigid grid of logic into the flowing indeterminacy of dialectic. Step by step, this quest has brought a full-throated voice into the open, conscious of itself and dedicated to working out its own implications.



*Self Interest*, 1999, installation view: Elements, Stalke Gallery, Copenhagen 2001

At mid-career Bradshaw's oeuvre is uniquely her own and bears little overt resemblance to the work of any other artist. Still, it is not an outsider oeuvre but works with themes and motifs that have occupied much of Modern and contemporary art and culture. It dwells, for example, on the project of tactically narrowing the traditional breaches between culture and nature, art and life. In this respect it could be contextualized among Late Modernists such as John Cage or Yves Klein (both discussed earlier) or Jannis Kounellis (who, among many other parallels, exhibited a living parrot as part of an installation in 1967). Bradshaw's still growing and evolving oeuvre relates meaningfully to the works of several artists more or less of her generation including Sigmar Polke (who has incorporated nature in the matrix of culture in many ways, some mentioned earlier). Kiki Smith (who among other points of resemblance, exhibited brass castings of various birds eggs in 1998). Meg Webster (whose works of the 1980's were always involves with natural processes and elements), and others.

In an age when nature and culture have seemed dangerously out of harmony with one another, Dove Bradshaw and these other artists have dedicated themselves to overleaping the forbidden Middle – that no man's land between nature and culture, life and art. Their hope is to repair the breach between the human project of civilization and nature's project of just being itself. Dove Bradshaw's work spiritedly affirms both these forces. Thanks in part to these efforts, today the self-sufficiency of nature has become a part of the work of civilization, or the other way around. There seems no other way to continue life upon the earth.

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<sup>i</sup> John Cage, "Composition as Process, II. Indeterminacy," in *Silence: Lectures and Writings by John Cage* (Hanover, New Hampshire: Wesleyan University Press, ND.), p. 35.

<sup>ii</sup> The problem is the conception of time. According to the Law of the Excluded Middle time must be either continuous—one unending moment—or discontinuous – made up of a series of separate moments. If time is continuous there can be no change – no matrix within which A will become not-A. If, on the other hand, it is discontinuous, or made up of separate moments, there is no accounting for a causal force carried over from one moment to the next to promote change. There must, in other words, be something between A and not-A – the Excluded Middle. Aristotle dealt with this problem by positing a realm in between being and non-being, which he called potentiality. This tactic, however, compromises the Law of Identity by asserting that something is both A and (potentiality) not-A.

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- <sup>iii</sup> The two images and the image of the artist wielding the camera were to be projected onto the two screens in various combinations. The film remains unrealized.
- <sup>iv</sup> John Cage and Thomas McEvilley, "A Conversation", in *Dove Bradshaw, Works 1969-1993* (New York: The Sandra Gering Gallery, 1993), pp. 12-13. See also below, beginning on p. 80.
- <sup>v</sup> Lagrange's *Chemistry*; se *OED* volume six, s.v. liver.
- <sup>vi</sup> The principle the same as when Andy Warhol, in 1977, and '78, urinated on canvases treated with copper.
- <sup>vii</sup> Reagan Upshaw, "Dove Bradshaw at Sandra Gering" *Art In America*, November 1993, p. 22.
- <sup>viii</sup> *Ibid.*
- <sup>ix</sup> Duncan McLean, "Change and Decay: Review of Dove Bradshaw at the Pier Gallery, Stromness, Orkney, Scotland", *The Scottish Press*, September 17, 1995.
- <sup>x</sup> *Ibid.*
- <sup>xi</sup> Stanley Redgrove, *Alchemy: Ancient and Modern* (New Hyde Park, New York: University Books, 1969), p. 29.
- <sup>xii</sup> C.G. Jung, *Mysterium Conjunctionis*, English translation by R.F.C. Hull, Bollingen Series XX, second edition (Princeton, New Jersey: Princeton University Press, 1970), p.113.
- <sup>xiii</sup> *Ibid.* pp. 113-114.
- <sup>xiv</sup> *Dove Bradshaw, Works 1969-1993*, p. 8.
- <sup>xv</sup> Collette Chattopadhyay, "Dove Bradshaw, Museum of Contemporary Art," *Sculpture* (Jan.-Feb., 1999), pp. 59-61.
- <sup>xvi</sup> Redgrove, *Alchemy*, pp. 25-26.
- <sup>xvii</sup> *Ibid.* p. 298.
- <sup>xviii</sup> "Reveries of Dove Bradshaw at Stalke Gallery," *Politiken* (Copenhagen), June 18, 1998.
- <sup>xix</sup> Cage, "Composition as Process, II. Indeterminacy," p. 29.
- <sup>xx</sup> Robert Smithson, "Entropy and the New Monuments," in Jack Flam, ed., *Robert Smithson: Collected Writings* (Berkeley: University of California Press, 1996), p. 11. Smithson saw the process as going only one way. "It's irreversible." He declared (*ibid.*). But that may not be totally or exactly the case. Entropy is primarily an exchange of energy between hotter and cooler bodies of matter. Some physicists and cosmologists have held that some day the whole cosmos will even out at one temperature and the exchange, and with it all change, will cease - much as Marx had said that history would end when the friction between higher and lower classes had leveled off. One well known version of the Big Bang theory holds that after a while the expansion of the universe will use up its momentum, slow to a stop, and reverse into contraction. In that case the entropic process will reverse. Bradshaw's view corresponds to this.
- <sup>xxi</sup> Arthur Waley, *The Way and Its Power A study of the Tao Tê Ching* (New York, Grove Press, 1958), p. 178.
- <sup>xxii</sup> Cage, "Indeterminacy," p. 36.
- <sup>xxiii</sup> Ursula Meyer, *Conceptual Art* (New York: Dutton, 1972), p. 174.
- <sup>xxiv</sup> Mai-mai Sze, *The Way of Chinese Painting* (New York: Random House, A Vintage Book, 1959), p. 17.
- <sup>xxv</sup> *Ibid.*, p. 99.
- <sup>xxvi</sup> *Ibid.*, p. 100.
- <sup>xxvii</sup> *Ibid.*, p. 101.
- <sup>xxviii</sup> Ultimately there will be 15 works in the garden using locally found stones, subjected to calcspar leaching at randomly determined intervals over a period of a hundred and ten years. The placement will be based on the hour, day and interval of years between the birth dates of members of her family.
- <sup>xxix</sup> *Elements* is a projected work, not yet realized, in which one ounce of each of the elements on the periodic chart will appear, each in a glass sphere 3 7/8 inches in diameter.