

Work Process: From the Blueprints to the Silkscreens on Plexiglass

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On April 9, 1951, the “Speaking of Pictures” feature in *LIFE* magazine announced “Blueprint paper, sun, lamp, nude produce some vaporous fantasies.” This article focused on cameraless photographs or photograms made by the husband-and-wife team of Robert Rauschenberg and Susan Weil, the first published acknowledgment of these young artists’ work [fig. 1]. The couple’s study the preceding year at Black Mountain College, where Bauhaus traditions of experimentation were taught, might have alerted them to the possibilities of the technique, which Weil had learned as a child.

Using large sheets of photo-sensitive blueprint paper, Rauschenberg and Weil laid their own or their friends’ nude (occasionally clothed) bodies on the blank surfaces, often adding found objects. With sunlamps, they exposed the paper to light, then developed the images with water in their bathtub. The resulting life-scale, ghostly figures seemed to float in watery or “vaporous” worlds. One blueprint features a double image of Rauschenberg’s body, with subtle differences in position, his form stacked so as to suggest performing acrobats [fig. 2].

By the time the article was published, the artists’ collaboration on the blueprints, begun in 1949, had ended. The photograms, however, made at the very inception of Rauschenberg’s career, are remarkably revealing—predictive, in fact—of concerns that would stay with him throughout his *oeuvre*.

Beginning with the blueprints, a technique of mid-19th-century origin that involves a one-to-one relation for transferring human bodies and objects to the paper, this inquiry

concludes some twenty years later with *Carnal Clocks* (1969), a technologically advanced series made in collaboration with engineers, which also involved bodily imagery. Although establishing a connection between the blueprints and *Carnal Clocks* may appear logical in retrospect, there was hardly a straight-line trajectory from one body of work to the other. The story of Rauschenberg's use of photographic images during the two-decade span is multifaceted, complex, and fascinating, with any number of starts and stops and engagement with various processes. Close examination of works produced during his journey—from the blueprints (1949-51) to the transfer drawings (1952 and 1958-69), Combines (1954-64), and first lithographs (1962) to the silkscreen paintings on canvas and then on Plexiglass (1962-69)—will reveal the essential role photographic images play in his art. While not didactic, his art demonstrates how to find order and connectivity in the apparently haphazard, discontinuous environment of the image-saturated world.

Characterizing Rauschenberg's work of the 1950s was an avoidance of traditional means of representation and conventional modes of spatial illusionism. Representation entered his work only through the inclusion of actual objects, photographs and reproductions, tracings and image transfers. In a 1972 article, art critic Leo Steinberg famously credited Rauschenberg with inventing a new pictorial surface—the “flatbed picture plane” (referring to the flatbed printing press)—literally any flat surface that served as a repository for objects and images appropriated from the environment and culture.¹

The human figures in the blueprints betray Rauschenberg's career-long commitment to performance and the performative, a passion enhanced by his connection to Merce

¹ Leo Steinberg, “Other Criteria,” in *Other Criteria: Confrontations with Twentieth Century Art* (New York: Oxford University Press, 1972), pp.55-91.

Cunningham and other dancers, stemming from their first encounter at Black Mountain. The action of bodies, real or implied motion, and a focus on human scale would be of continuing import, reflective of his desire to situate his work in space and time while addressing the body of the viewer standing before the work. Finally, concern with light and transparency extends throughout his *oeuvre*. Rauschenberg's nude images in the photograms, for example, stand as precursors to the X-ray of his body that appears in the lithographic print *Booster*, 1967.

Upon returning to Black Mountain College during the summer of 1951, Rauschenberg produced a series of multipaneled *White Paintings* in which housepaint was applied to canvas using a housepainter's roller [fig. 3].² Shortly after their completion, composer John Cage noted that their blank surfaces served as "airports for the lights, shadows, and particles,"³ meaning they were receptors of fleeting impressions of bodies and the environment—impermanent versions, as it were, of the blueprints.

Cage's interpretation is wholly convincing, as Rauschenberg went on to fill his paintings with the stuff of life. In extended series of *Black Paintings* (1951-53) and *Red Paintings* (1954), ripped and crumpled sheets of newspaper, heavily coated with paint, activated his paintings' surfaces. But as the *Red Paintings* progressed, radical changes occurred: the paintwork became at once more sparing and varied, and the *content* of collaged materials assumed major importance. In the final *Red Paintings* and the *Combines* that followed, photographic images

² The *White Paintings* series may have been initially conceived as a response to Barnett Newman's all-white paintings, such as *The Voice* and *The Name II*, the younger artist taking the removal of the self that was found in Newman's work to a further extreme. These paintings were exhibited in Newman's artist's second solo show at the Betty Parsons Gallery, 23 April-12 May, 1951, immediately preceding Rauschenberg's first solo show, 14 May-June 2, 1951. Newman's paintings, both executed in 1950, are in the Museum of Modern Art, New York, and the National Gallery of Art, Washington, D.C., respectively.

³ John Cage, "On Robert Rauschenberg, Artist, and His Work," in *Metro 2* (May 1961), p.43.

quite literally emerged both as carriers of meaning and as essential components of the artist's formal strategies.

In the Combines (1954-64), so called because they "combined" aspects of painting and sculpture, all manner of objects—taxidermically stuffed animals, automobile tires, bed pillows, and Coca Cola bottles—were brought together, intermingled with drips, splatters, and expressionistic brushwork. Photographic images appeared in abundance: old family snapshots, newspaper and magazine illustrations, reproductions of old master paintings, and Rauschenberg's own photographs. Functioning lightbulbs, clocks, and other electrical devices introduce actual light, time, and movement. Articles of men's clothing litter the surfaces of many Combines, evoking human presence and scale, while referencing the artist's (and possibly a male viewer's) body and self.

Rauschenberg aimed "to make a surface which invited a constant change of focus and an examination of detail,"⁴ a surface sufficiently rich in form and concept to reward scrutiny by both eye and mind. He maintained that, like listening, "Looking also had to happen in time."⁵ Although he worked spontaneously, inspired by objects and images at hand and his concerns of the moment, his was a highly self-conscious art in which innumerable formal and iconographical decisions were made in the process of working. Images taken out of context were juxtaposed with other displaced images, so as to generate complex interlockings of meaning and form. Like elements of a pictographic language, objects and images engage in an associative dialogue across the surfaces of works, their nonhierarchical clusters evoking a multiplicity of references.

⁴ Quoted in G.R. Swenson, "Rauschenberg Paints a Picture," *Art News* 62 (April 1963), p.45.

⁵ Ibid

The work remains multidirectional and open-ended, poetic and evocative; meaning is inherent but impossible to precisely pin down.

In 1957, Rauschenberg produced two demonstration pieces—near-identical Combines titled *Factum I* [fig. 4] and *Factum II*—not made sequentially, but simultaneously, so that one did not serve as the model for the other. A “factum” is the statement of a case or controversy, so these works offer public statements about the nature and intentions of his art, particularly revealing of his concept of the photographic image. Intermingled among hand-painted passages and touches in the *Factum* twins are only two-dimensional collage elements: photographs and reproductions with assorted papers and fabrics. Within this context, photographic images refer to real world people, places, and events; stimulate patterns of thought; and evoke movement and the passage of time. With their evocations of volume, space, depth, and perspective, photographs and reproductions further activate the compositions by punching illusionistic holes in the literally flat surfaces.

Among the photographs seen in *Factum I* are two images of Dwight D. Eisenhower, then President of the United States, that appear to be identical (or are they?), veiled with a rectangle of thin, transparent fabric. Below are two photographs of a building on fire taken from the December 2, 1957, *Daily News*. One represents a slightly later moment and a closer point of view. There is a color photograph (or possibly, a photo-realist image) on fabric of a pair of trees before a lake and cloudy sky. The work also incorporates a sheet of paper with several columns of handwritten numbers, pages from a printed 1958 calendar, and the red letter “T”. The “T” might be taken to stand for two (as in two trees, two “Ikes,” two photographs of the fire and the two different points of view), for “time” (note the calendar and sequential *Daily News*

photographs), and for “tree.” The shape of the “T” echoes that of trees and a contrast is thereby established between a flat, abstract sign and illusionistic representation of the natural world. A pronounced, horizontal white brushstroke overlaps the base of the trees, thereby countering recession in the image. *Factum I*, then, is involved with chains of association, with pairing or doubling, and with modes of representation and replication. The same issues are raised and the complexities and ironies multiplied when one encounters *Factum II*.

After 1960, photographic images all but disappeared from the Combines. In the final works in this series, which continued through 1964, Rauschenberg moved toward painterly painting on one hand and toward sculpture on the other, employing fewer, larger, more physically assertive elements of collage. During the same time, however, small, “vaporous” photographic images were proliferating in a different body of work commonly referred to as “transfer drawings.” While he first used this technique during a trip to Cuba in 1952, he did not begin to exploit it extensively until 1958, when he produced over two dozen such drawings, including the first six of his *Thirty-Four Illustrations for Dante’s “Inferno,”* which occupied him through 1960. Over the next decade, transfer drawings assumed an important role in his art. Rauschenberg referred to this body of work as “photo drawings,”⁶ testifying to the centrality of the photographic image.

The transfer drawings were an ingenious solution to the problem of how to translate the Combines’ juxtaposition of found objects and abstract markings into the medium of

⁶In a letter dated March 31, 1997, Rauschenberg declared, “The first photo drawings were done in Cuba in 1952 during a working vacation from Black Mountain, where I was studying with Albers (he never saw them).” The document is headed, “The following are my thoughts as I read the Rosalind Krauss essay for the Guggenheim retrospective catalog.” IMG_1638.JPEG, Robert Rauschenberg Foundation papers RRFA01.

drawings—onto a two-dimensional surface. To make these drawings, Rauschenberg moistened newspaper or magazine illustrations with a solvent (like lighter fluid or turpentine), placed the images face down on a sheet of drawing paper, then rubbed the back to impress the images onto the paper, where they were intermingled with watercolor, pencil, crayon, and gouache. The resulting images are reversed, ghostly versions of their originals. Unlike the Combines, which generally feature rectilinear, compartmentalized structures, the transfer drawings tend to be fluid in form. The gestural striations resulting from the frottage, expressionistic markings, recurrent images of figures in motion (e.g. horse, car, and bicycle races), and scattered words animate the works; together they often evoke a kind of electronic buzz that might be produced by a barrage of media-sourced information.

While rhyming and repetition of like and related images is common in the transfer drawings, their content often appears to be as generalized and free-floating as their form. Exceptions, however, abound, as seen in Rauschenberg's Dante illustrations and the commissioned *Portrait of Ethel Scull* (1962) [cat. 36873]. *Untitled (De Gaulle)* (1961) [cat. 36872] refers to a specific contemporaneous event: the French colonial war in Algeria. Among a host of things, this journalistic drawing features the French president's name, three images of his face, the word "Alger" or "Algerie" repeated four times, sections of a map of North Africa, and an image of army vehicles on the move.⁷

While the transfer drawings have a delicate, evanescent quality, the lithographs Rauschenberg began producing in 1962 are bold and graphic, with printers' ink used for the

⁷ Louis Kachur, "Five Rauschenberg Drawings and Their Times," in *Robert Rauschenberg: Transfer Drawings from the 1950s and 1960s*, exhibition catalogue (London: Offer Waterman, 2016), p.11.

transfer of photographic images and for broad swipes and touches of wash. Although Tatyana Grosman of Universal Limited Art Editions (ULAE) suggested several years earlier that he make prints, Rauschenberg resisted, famously claiming that “the second half of the 20th century was no time to start writing on rocks.”⁸ He went on not only to embrace the medium, but to expand its formal and technical possibilities, redefining what a print can be in terms of scale and the processes involved. In his first major prints, during the summer of 1962, the clusters of photographic images were impressions made on the lithographic stone by photoengraved plates from the picture morgue of *The New York Times*. The trio of *Stunt Man* lithographs (1962), printed in single shades of red, yellow, or blue [cat. 36488 and 36489], feature images of architectural structures, a horse race, crowds or people gathered together, men in a rubber boat (perhaps a space capsule rescue team), and a stalking cat. While the series title is generally said to refer to the stunt of mixing colors, in *Stunt Man III*, multiple images of a baseball player are used to portray an acrobatic stunt, a somersault. The form resulting from his implied movement echoes that of the pentagon (an impression of a tool or stencil) alongside it in a play of representation vs. abstraction.

On September 18, 1962, Rauschenberg visited the studio of Andy Warhol, where he saw Warhol’s first silkscreen paintings made from mass-media photographs. By October, Rauschenberg had begun his own silkscreen paintings (1962-64), working first in black and white, then in June 1963, moving to color.⁹ For Rauschenberg, silkscreening in an artistic context

⁸ Robert Rauschenberg, “Works Notes on Lithography,” 1962, published in *Rauschenberg: XXXIV Drawings for Dante’s Inferno*, exhibition catalogue (Geneva: Galerie G rald Cramer, 1968), n.p.

⁹ The silkscreen painting process began with Rauschenberg sending illustrations taken from such magazines as *LIFE*, *Time*, and *National Geographic* and some of his own photographs to the screenmaker. A light-sensitive emulsion applied to silk or similar material would enable the transfer of the photographic image to the cloth, which enclosed in a wooden frame could then

was a revelation. It offered the solution to the problem he had been trying for some time to solve: to translate the language of photographic images that he had developed in the transfer drawings to the scale and presence of paintings.¹⁰ In particular, he could specify the sizing of images to the screenmaker. Like a photographic negative, the screen can be reused and images repeated any number of times. In contrast to Warhol, who used a grid format and declared he wanted to “be a machine,”¹¹ in Rauschenberg’s hands the mechanical process of silkscreening was gestural and open to improvisation. Silkscreen enabled him to move from the collage-based aesthetic of his early years to the photography-reliant one that would stay with him for the rest of his life.

Rauschenberg stated his intentions in an article entitled “Random Order,” published in the short-lived periodical *Location* in Spring 1963, a few months after beginning the Silkscreen Paintings. The article featured a collage in which Polaroid snapshots by the artist were crudely affixed with tape and interspersed with passages of text written in Rauschenberg’s characteristic all-capitals scrawl [fig. 5]. The collage is largely devoted to lessons in perception with regard to looking at photographs—to heightening visual and spatial awareness. Among the images is one of rooftop water towers seen during the daytime, below which is inscribed, “Every night from

minute to minute the skyline that in day remains more or less as we know it, changes and

serve as a stencil or screen. To print, the screen is placed face down on a canvas and ink is pushed through the open weave with a squeegee.

¹⁰ Among Rauschenberg’s experiments in this regard was *Calendar* (early 1962), in which he applied the techniques used in the transfer drawings to a canvas measuring 1.83 x 1.83 meters. He was dissatisfied with the results and took this approach no further, perhaps because the images were small, pale, and hard to read when applied to a large canvas. Around the same time, he made several attempts to photosensitize canvas, but these too proved unsuccessful.

¹¹ Andy Warhol, quoted in Gene Swenson, “What is Pop Art? Interviews with Eight Painters (part 1),” *Art News* 62, November 1963. It may be noted that Warhol’s statement and Swenson’s interview with Warhol as a whole is scrutinized in Jennifer Sichel, “‘Do You think Pop Art’s queer?’ Gene Swenson and Andy Warhol,” *Oxford Art Journal* 41, issue 1, March 2018, pp.59-83.

redefines the space, distorting our common sense of view [sic]..." He notes that with the setting of the sun, a collection of cylindrical water towers positioned on separate rooftops may unite in a single flat silhouette. Elsewhere, a fragment of a photograph of a potted plant appears twice. In one the leaves read white against a black ground, in the other black against white; the question "Looking again?" is inscribed above the images. Here the artist's concern was to manipulate variation within repetition and to discern differences among paired things. Also included is this statement: "Air volume can be compressed and flattened to the extent that a brushload of paint can hold it to a picture surface." This is the principle illustrated in *Factum I* and *Factum II*, in which the illusion of depth elicited by the image of trees is countered by the white brushstroke at its lower edge.

Images of the water towers darkly inked and flattened, as though seen at night, and of the two plants appear in the silkscreen painting, *Almanac* (1962) [cat. 36632]. The rooftop structures, seen in the upper left, unleash chains of association with regard to other photographic images in the work. Water towers, of course, hold water, and images of the open sea (one clearly labeled "SEA") recur in the work, as do images of a glass of water, which may be used to water the plant that was seen in both its positive and negative states. A vertical stroke made with a loaded brush at the painting's center echoes a vertical swipe Rauschenberg made with his squeegee when depositing one of the images of the sea that appears to its left, setting up a game of opposites: predominantly white vs. predominantly black, abstract vs. representational, and assertion of surface vs. photographic illusionism. In the upper right, is a faintly inked double image of bent, space-enclosing fingers, the shape of each hand echoed by vigorous black brushstrokes just above. Returning to the water towers, seen in front of their

black, flattened forms are air conditioning units that stand out in stark white. These white shapes engage with the white space capsule that appears directly above and to which they offer jumps in both scale and depth. In *Night Light* (1962) [cat. 37279], the forms of the air conditioning units are likened to those of mosquitoes.

After winning the First Prize for Painting at the Venice Biennale in June 1964, Rauschenberg called an assistant in New York and asked him to destroy the screens used to make the silkscreen paintings so that he would not repeat himself, but rather be challenged to move on to something new. One of the directions he would pursue led him to be one of the four co-founders in 1966 of E.A.T., Experiments in Art and Technology, an organization geared to bringing artists and engineers together so as to harness technology to creative ends.¹² Working in collaboration with engineers, Rauschenberg produced several works that featured silkscreened images on Plexiglass panels with electronic components responsive to visitors' sounds and movements or that could be variously manipulated by them.¹³

¹² E.A.T. was founded in New York in 1966 by Rauschenberg, artist Robert Whitman, and engineers Fred Waldhauer and Billy Klüver. The latter, a Bell Laboratories engineer whom Rauschenberg first met in 1960 when Klüver was working with Jean Tinguely on *Homage to New York* for the Museum of Modern Art, was to become Rauschenberg's close friend and longtime collaborator. For more on E.A.T. see the website, <https://www.experimentsinartandtechnology.org/>

¹³ Among the works that anticipated the new direction in Rauschenberg's art was the small wall relief, *Dry Cell* (1963), made in tandem with an engineer during the course of the original Silkscreen Painting series. When visitors speak or make sounds into a tiny microphone positioned on the face of a plexiglass sheet silkscreened with images, a small clump of metal is activated to spin like a propeller, engaging in a dialogue with a screened image of a helicopter. In *Shades* (1964), a reinterpretation of an artist's book published as a multiple by Univeral Limited Art Editions, viewers are invited to rearrange the order of multiple, image-laden Plexiglass sheets and to decide whether to leave the integrated lightbulb on, off, or in blink mode, so that movement and a performative element would be intrinsic to this ever-changing work.

Rauschenberg explored actual movement, time, light, transparency, and reflections in the *Carnal Clocks* series (1969) [fig. 6], reinterpretations of timepieces in which the viewer played a different and rather startling role. This series consists of a group of 15 unique, freestanding metal boxes, each measuring 1.524 x 1.524 meters. Lights behind mirrored Plexiglass surfaces illuminate the hours and minutes according to a complex mechanism. Instead of numerals, images of the nude bodies and genitals of Rauschenberg's close friends appear, intermingled with assorted images (including of animals and fruit) that reinforce the erotic tone. Spectators simultaneously see both the sexually suggestive images and their own reflections, becoming unwitting participants whose physical selves have become part of the work's dialogue.

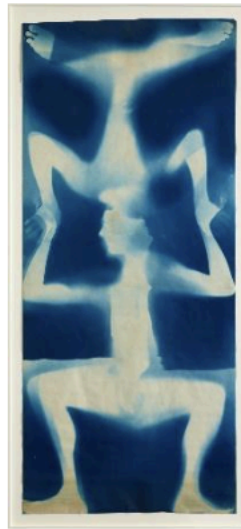
Viewers momentarily caught on illuminated surfaces printed with images of naked men and women bring us back full circle to the nude figures fixed on paper in the early Blueprint photograms. Lines of continuity appear with the artist's interest in light, transparency, self, the human form, and the performative, as well as in the conception of the picture surface as a flat receptor of impressions and things of the world. The journey Rauschenberg traveled from one body of work to the other over nearly twenty years was one of continuing renewal, experimentation, and change, involving engagement with a variety of artmaking techniques and processes, the artist always seeking to challenge himself and the viewer in fresh encounters with objects, images, and materials. Through it all, the photographic image assumed a central role as his primary tool with which to access the viewer's body, eye, and mind.

Fig.
1



“Speaking of Pictures...Blueprint paper, sun lamp, a nude produce vaporous fantasies” *Life*, vol. 30, n.º 15, April 9, 1951, pp. 22-24

Fig.
2


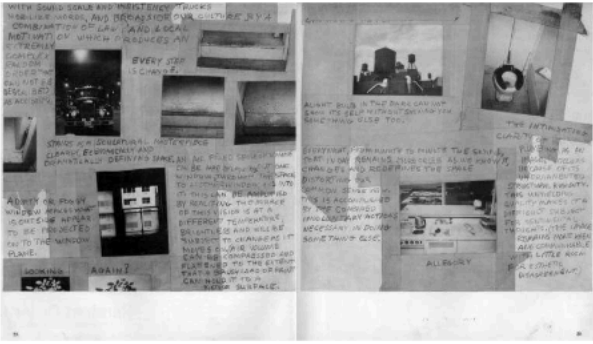



Robert Rauschenberg
Y Susan Weil, *Untitled [Double Rauschenberg]*, 1950. Cyanotype, 209,6 x 92,1 cm. Collection of Cy Twombly Foundation

Fig.
3



Robert Rauschenberg,
White Painting, 1951,
installed at Robert
Rauschenberg Foundation.
House paint on canvas,
182,9 x 320 cm. Robert
Rauschenberg Foundation,
New York

<p>Fig. 4</p>		<p>Robert Rauschenberg, <i>Factum I</i>, 1957. Oil, ink, graphite, crayon, paper, fabric, newsprint, printed reproductions, and printed paper on canvas, 155,5 x 91 cm. The Museum of Contemporary Art, Los Angeles. The Panza Collection</p>
<p>Fig. 5</p>		<p>Robert Rauschenberg, "Random Order", <i>Location</i>, vol. 1, n.º 1, Spring 1963, pp.28-29. Robert Rauschenberg Foundation, New York</p>
<p>Fig. 6</p>		<p>Robert Rauschenberg, <i>Augur (Carnal Clock)</i>, 1969. Mirrored Plexiglas and silkscreen ink on Plexiglas in a metal frame with hidden electric lights and clockwork movement, 170,2 X 152,4 x 45,7 cm. Robert Rauschenberg Foundation, New York</p>