RICE UNIVERSITY

TEARING A CLEFT IN THE CONTINUOUS SURFACE OF REALITY

by

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ABSTRACT

"Tearing a Cleft in the Continuous Surface of Reality"

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My thesis investigates representation and manipulation of spatial conditions intrinsically linked to the visual perception of materials and surfaces. Trying to develop architecture from visual relationships between materials, light, and the eye has required that I circumvent the objective viewpoints of models, plans, sections, and elevations. I have constructed photographs directly from compositions of surfaces and light. The images are photographs of spaces which one perceives as inhabitable, spaces which are no longer tied to the size and scale of the compositions from which the images were derived.
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My thesis investigates representation and manipulation of spatial conditions intrinsically linked to the visual perception of materials and surfaces. Trying to develop architecture from visual relationships between materials, light, and the eye has required that I circumvent the objective viewpoints of models, plans, sections, and elevations. I have constructed photographs directly from compositions of surfaces and light. The images are photographs of spaces which one perceives as inhabitable, spaces which are no longer tied to the size and scale of the compositions from which the images were derived.

With this method, I am developing an architecture that resists and is able to transcend a purely perspectival and figure/ground understanding, an architecture that implies spaces beyond their own physical limits. Its surfaces consist of pigment, aluminum, steel, glass, and plastic laminate, but have multiple readings when seen in different light and from different vantage points. Sometimes these surfaces dematerialize while at other times they are objectively recognizable, ever changing in our perception over time and over space. The images suggest moments of material transcendence where surfaces stop being seen only as definitive limits to space. The architectural planes become visually spatialized while views of the landscape and horizon, when present, give one a perspectively understood space within which to posit themselves. This architecture is activated by its subjects and their optical interrogation of surfaces, resulting in a complex relationship between viewer and space.
Marfa

One of the more compelling aspects of Donald Judd's installation spaces in Marfa, Texas is that, unlike most museums, he does nothing to maintain even lighting. The two barracks, which house the 100 rectangular aluminum boxes, are physical enclosures but have floor to ceiling glass walls which maintain the viewer's visual contact with the landscape/horizon. The bright west Texas light's penetration into the buildings results in an ever changing perception of the sculptures with the movement of the sun and shifting weather patterns. The sculptures never appear exactly the same to the viewer twice as the light is ever in flux.

Under certain lighting conditions and certain viewing angles, Donald Judd's aluminum sculptures in Marfa appear to be "spacial" beyond their actual physical limits. The sculptures' physical surfaces which can be easily located by sense of touch resist visual location and appear to dematerialize, becoming a "color field". Like the sky which has no apparent visual limit, no visually locatable surface, and no perceived materiality, a color field, although created by a material surface, appears to be infinitely deep and "spacial". At times the aluminum sculptures seem to float above the ground, at other times they look like bright lights, and, at others times still, they appear more like glowing glass boxes. Given a different viewing angle or light condition, they are recognizably aluminum cubes. As ethereal and disorienting as it may be focusing one's vision on the individual sculptures, the viewer is able to definitively locate the landscape, the horizon, and the building, reestablishing their ability to make sense of the space around them.

The 100 aluminum boxes are all the same size; their volume is defined by sheets of mill finish aluminum with one or two open sides. The interiors of the boxes are all configured differently, subdivided by aluminum sheets at varying angles. Apart from their subtle physical differences, they all appear differently based on their proximity to the windows and the way light renders them inside and out. Only certain cubes or certain surface planes will dematerialize at a time dependent on their location and the light they receive, making those sculptures stand out from the rest. Because this optical experience is not guaranteed or maintained, you happen upon it when walking through the space. The Judd sculptures allow multiple visual understandings of material while objectively remaining physically unaltered. The objects (sculptures) are visually dematerialized within their container/building which remains visually fixed and quantifiable along with the landscape/horizon.
Influences

Judd’s body of work can be seen as but one among many spanning several disciplines working with and formulating questions about the perception of surfaces/forms/colors. His work is inseparably linked to that of Mark Rothko, Agnes Martin, James Turrell, Robert Wilson, Merleau-Ponty, Henri Bergson, Rudolf Arnheim, and Mies van der Rohe. Architecture would seem to benefit from the methods and means utilized in these bodies of work on surface, and its perception although generally most of it requires a museum like environment, a single viewpoint, and manifests itself only at the scale of a canvas, a discrete sculptural object, an installation, or a theater set.

Maurice Merleau-Ponty discusses perception as being “centered” in the body. All our perceptual senses are coordinated to each other and in turn to our bodies motor functions. We can locate objects/surfaces visually and then reach out and touch them because our vision and our touch are independent senses which are all calibrated to locate our physical bodies in relation to objects/surfaces. Studies were done that tested the connections between our senses by altering people’s visual perception through the use of mirrored glasses that flipped the world upside down. The studies conclusively showed that the human mind could realign the senses when altered. Within a couple of days, the people’s motor functions and other senses got re-synchronized with their altered vision to the point where they could function normally (they were able to locate an object visually and reach out and touch it.) When the mirrored glasses were finally removed, the people’s senses had to again re-synchronize to their restored vision so that they could again locate themselves as well as objects in space.

Mies van der Rohe’s Barcelona Pavillon strips architecture back to simple articulations of planes and structure with a limited palette of materials creating stunning architectural spaces. The power of the spaces results from a combination of the preciousness of the materials used (onyx, travertine, marble etc.), the visual beauty of the materials used, the emptiness of the spaces, and Mies’s composition and juxtaposition of these materials. He uses the materials in a “monolithic” manner, minimizing the joints between the materials, de-emphasizing their construction. The reflecting pools and the carpet are used as architectural surfaces for spacial definition as successfully as the onyx wall or gypsum ceiling plane. Water and carpet become stunning and rarefied in the Barcelona Pavillion, defining spaces as opposed to just mediating between them.

Mark Rothko paintings transcend their own material commonality and become understood as precious objects. Objectively the paintings are painted canvas surfaces yet, like the
Judd sculptures, they appear spatial when seen in very even, dim light, making color fields that are like immense windows through the wall or like what one sees when they close their eyes. When unevenly or brightly lit, the paintings’ surfaces, or at least parts of them, appear to flatten back out and return to being perceived as painted canvas surfaces that one can visually locate in space. They always retain a graphic beauty but are understood very differently in these different visual states.

Rosalind Krauss writes about Agnes Martin’s paintings in terms of a review written in the 70’s discussing the change in their appearance from three distances: close, medium, and distant. Up close the pencil lines are clear as is the tooth of the canvas and the brush strokes of the gesso. The grid is unwavering. From a middle distance, the surface turns atmospheric, seemingly detached from the canvas’s surface similar to a color field. The grid is still perceived but comes in and out of focus. From a distance, the grid disappears and the paintings appear to be flat and of a solid color. Their surfaces are only read as spatial from the middle viewing distance.

James Turrell’s projection installations create visually complex spaces that make light appear solid and able to have a formal volume. For this to be possible, Turrell must create highly controlled environments that a viewer enters, stands in a specified spot, and looks in a specified direction. The experience is highly specific and consistent as the installations are fixed and completely reliant on artificial light. To work properly requires they be in a museum-like setting closed off from fluctuating light sources, limiting their potential use in programmed spaces.

Robert Wilson’s theater work focuses on the visual experience of that medium. His work is designed through small pencil and charcoal perspective drawings that look like film stills where he sets up compositions of furniture, figure, and set pieces. In his pieces, he often uses a scrim as a back drop that, when lit, creates a color field of infinite depth against which the actors and set objects are read. The lighting is always highly complicated and is used to make major visual shifts in one’s spatial understanding of the sets which are otherwise quite minimal.

These bodies of work raise questions about what can be considered spatial and how space is created and perceived by the human body. It is architecturally liberated...
ating that a surface can be inherently spatial as opposed to relying only on physical form, plan, and section as tools to create space, and, as architects are commonly trained to think, always as figure/ground with the wall understood as a solid and the space between walls, wall openings or glass windows as voids.

PROBLEMS IN REPRESENTATION

The artists mentioned above inherently understand/understood that their work is reliant and activated by the perception of the subject. The art object always presupposes the viewing subject while the architect who designs from only plan, section, and elevation, designs from vantage points perceptually impossible to the human subject. Plans, sections, and elevations are drawing conventions that explain buildings in abstract terms that have nothing to do with the human subject’s perception. These drawing conventions are suited to representing architecture in objective terms for its construction, but they have limited value as design tools for a building that posits a subject as its primary concern, especially given the pre-eminence of vision in our culture over the other senses.

Perspective drawings posit a subject but create a completely artificial, monocular image with no link back to any material surface other than the paper on which it is drawn/printed. It gives the impression of representing 3-dimensional space, but like the material surfaces it renders, it presupposes and is not directly linked back to any true 3-dimensional space. It can only aim at representation of materiality and material surface, like the computer, which can render light and material as opposed to capturing or recording its image as a camera does. The perspective drawing is never subject to gravity or actual light as the architecture it tries to portray will be. It rarely can transcend being perceived as a drawing or computer image which blocks its viewer from becoming its subject. More often than not it remains just a drawing on a wall to its viewers, not a window into a space.

The camera cannot replace the human subject either or recreate their perception verbatim as it sees/records space very differently. Some of the more glaring differences are its monocularity; its fixing of RGB color into a smaller and the limiting gamut of color pigments (CMY) that are possible in the photographic image; the fixing of one image onto photographic paper from the duration of the cameras exposer; its objective capture of the subtle color tones of light and colors; the angle of view and distortion of the image inherent to photographic lenses; as well as the relative inconsistency of the physical/chemical processes involved that impact the photographic image.

Most importantly, the camera cannot pair its pure perception with memory as discussed by Bergson in Matter and Memory. Unlike a drawing or computer image though, it does presuppose and is dependant and therefore directly linked to a material world of surfaces, gravity, and light. A photograph offers a 2-dimensional image displaying the indexical recording of an optical perception of surface/space/object made possible by reflected light waves. Unlike a perspective drawing, a viewing subject sees the photo-
graph as a real space/object because of its supposed direct link to the material world and the assumed objectivity of the camera. The photographic image reveals a pure perception and is enhanced by its viewer's subjectivity or according to Bergson, their pairing of pure perception (the photographic image) and their subjectivity/memory. With the advent of easily manipulated digital images, viewers are immediately suspicious of an image's locus, yet if the image is reasonably convincing, it doesn't change how one relates to it.

**PROCESS**

Polaroids lack the precision of other photographic methods at capturing objectively realistic and detailed visual recordings of "things". Polaroid photographs degrade the image to nearly unrecognizable because they are not developed under controlled conditions. Precision in photography requires that the chemical developing processes take place at specific temperatures for specific increments of time. With polaroid photography you have little or no control over temperature and developing time. As a result, Polaroid photography dislocates the image/s created from the "thing" photographed while still capturing its essence or basic form. In effect it creates a new image. Other photographic methods for photographing architectural models capture them too precisely, a cardboard "wall" remains a piece of cardboard in the image, never letting it transcend the scale and materiality of the original object.

![SX-70 Polaroid Photograph](image)

The enlarging of this image changes the medium again, dislocating it from being a "polaroid" to becoming a photographic image. The jump in scale and medium makes its viewer more able to "enter" the image, able to shed the connotations of the original "object" that was photographed as well as shed the connotations of the "polaroid".

A photograph of the interior of a scale model becomes an image of a full blown space given the ability to read a scale into the image (a figure, relative vantage point, or landscape elements) and given the ability for the modeling materials to transcend their diminutively scaled materiality and instead become scale-less expressions of specific surface qualities. In photograph form, the space is understood because we are subconsciously literate as a culture in how a camera renders a space or what a space looks like in a photograph. We can translate the photographic image into how we would see the space through our own eyes at full scale. Computer rendering packages have even started to mimic photographic images by applying a limited focal range to the image which helps them have an apparent depth of field through the blurring of the background.

**OTHER INFLUENCES**

German painter/photographer Gerhard Richter's "photorealistic" paintings exploit the relationship between the image and the viewing subject by, in the Bergson sense, allowing the viewer to become engaged with the image portrayed (which are generally derived from photographs taken by other people) through the large scale of the image which fills up the viewers entire visual field, and the lack of surface
to become an image of pure perception. The blurring of the image leaves it on the edge of objectively recognizable yet invites the viewer to work to interpret the image, and, in so doing, they meet the image half way having had to supply a lot of the missing information from their own imagination/memory.

David Levinthal's Mien Kampf series are large (20”x24”), blurry color photographs of little, plastic figurines set in elaborately staged war scenes. They verge on appearing real, almost like enlargements from stills of a documentary film or video. Their indeterminacy, like the Richter paintings, pull you into the space portrayed more than if they were vividly detailed and precisely focused. The figurines and scaled trains transcend being seen as “toys”; becoming understood as full scale with the blurring out of the materiality of their surfaces in favor of pure form. The viewer attaches materiality to the forms in the images from memory as if they were full scale and “real”: flesh, metal, dirt, paint, blood, wood, uniforms, barb wire, guns, canvas, clouds, etc., replacing the real materials: plastic figurines and trains, back drops etc... which were used to create the scene
"Even the photograph is not a really adequate substitute for the intelligent eye. The photographer, with the most flexible tools he can find or devise, has nothing more than light with which to convey the sense of space with all the complex elements contributing to it: perspective, sound, movement, atmosphere, and all of its ephemeral qualities. Limited as the photographer's medium is, it is far superior to the written word, which can only use the photograph as an illustration. Perhaps the primary element in this complex equation is the need for a sensitive eye on the part of the viewer."

Ezra Stoller from Less is More

INTENTIONS / MANIFESTO

Photographing model vignettes with a polaroid, I am able to investigate an architecture of surface. It starts with a choosing of model materials for their surface qualities. A saturated blue cardboard because the color blue, having the shortest wave length, naturally seems to recede in space like the sky. Aluminum has reflective qualities making it visually responsive to and determined by its environs and lighting. Flat white can appear solid like a wall or can be surfaceless like looking into a light source. A reflective titanium white enamel surface appears cool and mirrors the other surfaces. Translucent mylar optically dissolves the figures/objects/surfaces behind it relative to their distance from it while still transmitting light. Glass is transformed from transparency into a highly reflective opaque surface dependant on the angle at which it is seen and the relative lighting either side of it. A figure gives a sense of scale to the otherwise scaleless spaces and a landscape/horizon connects the spaces to a place and creates a perspectively perceived visual depth in the images.

I am interested in an architecture that resists a purely perspectival understanding. The surfaces of architecture should not be understood only as absolute limits to space because they too can be spacial like a Rothko painting and like a Rothko painting, they shouldn't necessitate exotic, expensive materials or forms to profoundly impact the subject. A surface might be made of pigment, aluminum, steel, glass, or plastic laminate but have multiple readings. Like Judd's sculptures in Marfa, architectural surfaces should be subject to and optically determined by the ever changing exterior light conditions, ever changing in our perception and never appearing the same twice. Architecture should be designed from the standpoint of a subject's perception of the surfaces that create and enclose space. Architectural surfaces should be subject to a multiplicity of perceptions and distances like an Agnes Martin painting, none of which considered to be empirically better than the others.
BIBLIOGRAPHY


Thesis Presentation
12 - 15"x15" photographs
figure, wall, landscape series: untitled 01 - 12
Untitled 01
15"x15" c-print
Untitled 03
15"x15" c-print
Untitled 10
15"x15" c-print
Untitled 11
15"x15" c-print