# TACTILE FOCUS: The Reciprocality of Painting & Architecture

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Architecture design pedagogy often asks students to analyze projects by isolating, delaminating, or exploding overlapping systems of information in order to unravel complex spatial experiences. The images above (from the practices of the authors) belong to two different classifications of drawing but share principles of spatial acuity that should be reciprocal between two-dimensional composition and projections into three-dimensional design. The line drawing on the left is a representation of architectonic volumes striving to achieve the notion of *'simultaneous perception'* where multiple spaces can be sensed at the same time; it is an illustration of an imagined physical reality—an exegesis of a design concept. The abstract painting on the right is in itself a forum for the back and forth of systemic interplay. With color as a key generator of visual depth, overlapping forms in this mode of abstract painting can invoke multiple spatial readings, parallel to the perceptual layering of an architectural sequence.
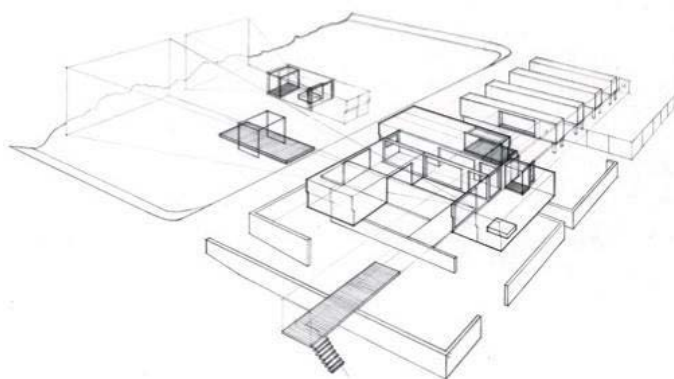
Fig. 1 The exploded axonometric on the left (Lin) and the abstract painting on the right (Collier) both exemplify the notion of *'simultaneous perception [where] space not only recedes but fluctuates in a continuous activity'* (Rowe & Slutzky, 1983).

This paper will discuss an interdisciplinary studio elective that uses the idiom of abstract painting as an analog for analyzing, distilling, and manipulating three-dimensional space.[1] The confines of a painting prove to be fertile ground for structuring and composing space, or the illusion thereof. Students are able to grapple with the optical push and pull of color, value, and figure/ground relationships in a

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1 It is acknowledged by the authors that a substantial portion of the history of abstract painting has been concerned with distancing itself from notions of three-dimensional or illusory space, determined to posit only the flat surface of the picture plane. Within the purview of this paper and the interdisciplinary course, the authors have primarily focused on approaches to abstraction that foreground the spatial behavior of color, contrast, line, shape, scale, etc.

manner congruent to formal and spatial design. The tactile pleasure of working with paint also offers architecture students a focused reprieve from digital media and indispensable practice with gravity and patience.

COLOR, TACTILITY, SLOWNESS

The beginning design student is no stranger to surface; those with a fascination for the arrangement of forms on a two-dimensional plane or in a three-dimensional space have likely been attentive to surface constitution since early age. These individuals have scrolled, flipped, felt, gazed, held, marveled, scanned, and scrutinized an immensity of superficies. Yet, what happens when these same students are charged with producing a visual sophistication that uses the spatial behavior of color and the materiality of paint as a means of exploring their preoccupations?

In order for architecture students to pursue abstract painting, lessons rooted in color theory (often omitted in contemporary design curricula in deference to ever-expanding digital tools and processes) are vital components of a vast and delicate skill set. In this course, students begin their color study by creating two color wheels from a set of warm primaries and cool primaries, with all secondary and tertiary colors comprised of the attentive mixture of only these primary colors. Subtractive color mixing heightens sensitivity to hue identity in ways that simply selecting a color cannot: students slow themselves in considering whether a tertiary color favors too heavily the primary or secondary parent color. Students learn that mixed secondary and tertiary colors reduce in purity from parent colors and have to adjust their color usage accordingly. The acute sensibility necessitated and developed by mixing with only primary colors cultivates an appreciation for the color which is crafted rather than chosen from a drop-down menu.

Fig. 2 Architecture students in this course must humble themselves to the materiality of paint and learn to mix every color from only primaries. Physically crafting a color rather than simply selecting them invites slowness and deliberateness in the design process.

With color mixing comes the awareness that color is a social animal, wildly influenced by peers and environment. A given color can appear reticent and subdued in one context, and boisterous and brash in another. Students in the course encounter the intoxicating nature of color dependency and color play, where the labels of *'pure'* or '*recessive'* or '*warm'* color are exposed as deeply relative and relational coinings. Students learn that missteps in color mixing can occur on both the palette and in the placement of the color within a painting; one can make adjustments to a given color just by adjusting its surroundings. Simply stated, color is relative (Albers, 1963).

Lectures and readings extemporaneously extend studio instruction beyond the contextual behavior of color into the vast range of cultural associations that color usage can yield. For example, the expansive role of the color white is associated with burial and mourning in the far East while in Western culture, similar events are typically signified with sharp, constricting black hues (Itten, 1970). Color combinations and schemes are also highly indicative of certain eras: divorced from representational subject matter,

students will, unprompted, identify certain color combinations in a geometric abstraction with their grandparents' bathrooms, a childhood book sack, or a contemporary fast food restaurant. These associations undoubtedly influence the way that students use and read color.

In addition to exploring color variables, students learn that paint is a material—a temperamental one whose properties respond to light, air, speed, and gravity. Studio art, architecture, and design students frequently begin projects with keen observation and testing of a material before it is deployed; working with paint is no different. When a student desires to establish and orchestrate the spatial play of forms and colors through an abstract painting, they discover that the materiality of paint has histories and proclivities that demand acknowledgement. Handling paint requires a student to be attentive and responsive to a variety of relationships as the process unfurls, all the while promoting technical facility, slowness and deliberateness in real time. Material play with paint is not always the merry gambol that students anticipate. Rigorous reflection on formal decisions invites conceptual inquiry into this generative process that lacks the luxury and ease of an 'Undo' command. Every passage of an abstract painting requires equal consideration in order to facilitate the interplay of figure/ground reversals, resonant with architectural forms and perceptual experiences. Abstract painting, more so than its 'picture as window' counterparts, has the binary ability to both summon and refuse the illusion of depth. Paint, with its varying viscosities and opacities, is the perfect tool for picturing the physical realities of line, plane, volume, and texture while also inviting consideration of negative, recessive, and atmospheric space.

FORM, COLOR, ORGANIZATION

Once students have a working knowledge of color mixing and recognize the rules and illustrations of simultaneous or complementary contrast tendered by Johannes Itten and Josef Albers, they embark upon the analysis and reconstitution of a preexisting painting. Distilling layered systems of spatial information from a two-dimensional document is a critical skill architects need before they can generate nuances of three-dimensional space. Using Rowe and Slutzky's seminal article *Transparency: Literal and Phenomenal* as a springboard for defining the interdependency between space and form, students are asked to analyze canons of abstract painting by delaminating layers of visual depth. Analysis exercises are introduced with a thorough consideration of Paul Klee's oeuvre, using Fire in the Evening (1929) as an index of reference elements.
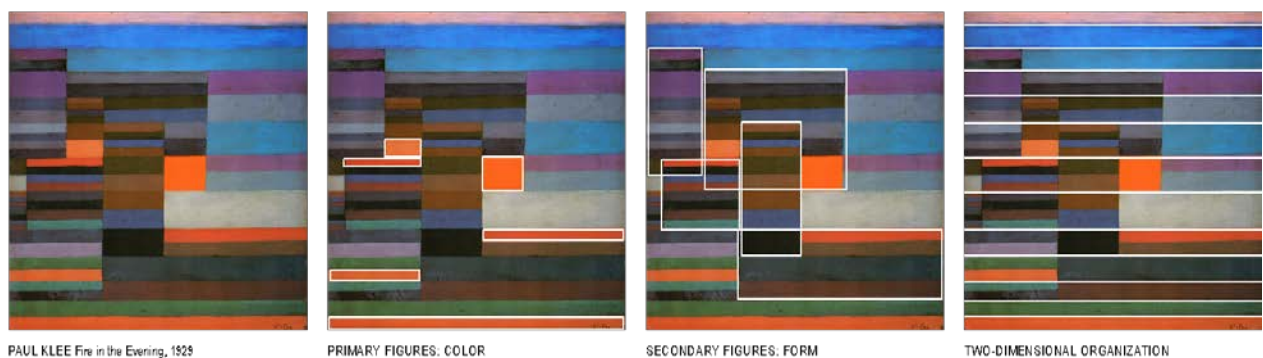

PAUL KLEE Fire in the Evening, 1929   PRIMARY FIGURES: COLOR   SECONDARY FIGURES: FORM   TWO-DIMENSIONAL ORGANIZATION

Fig. 3 Paul Klee's Fire in the Evening (1929) is used as the source for mining layers of spatial reading in an abstract painting.

The series of diagrams above describes layers of spatial reading within Klee's painting that can be isolated and considered independently. This example clearly reveals how color, form, and organization act as separate systems working autonomously and simultaneously to create a fluctuation of space,

producing the effect of *'simultaneous perception'*. As six red-orange rectangles advance toward the viewer, their presence as the purest and warmest color is announced against a field of cool, neutral colors. Secondary to the prominence of the red-orange forms are five substantial rectilinear shapes, comprised of multiple colors that interrupt or counter the consistent horizontal bands spanning the entire width of the painting. The irregularity of the scale and positioning of these blocks create a distinguishable and delectable variety amidst the unity of horizontal banding that supplies the organizational structure of this modestly scaled painting on cardboard. While the body of Paul Klee's work is largely abstract in spirit, his skillful manipulation of shape and color often produces atmospheric suggestions of depth and dimension beyond the painted surface. His celebrated statement, *'Art does not reproduce the visible, rather, it makes visible'* is particularly germane to this line of inquiry where abstract painting is posited as an explicator of spatial design (Gale, 2013).

For the painting analysis project, students are first asked to produce a series of distillation diagrams that identify individual layers of information at play within a selected precedent painting. From the diagram overlays (Fig. 4), they are then tasked with producing a triptych that foregrounds distinct spatial phenomena in each panel. The selection of representational paintings as subjects for analysis—rather than already abstracted works—was recommended because they include an additional component of figuration (a person, a chair, a landscape) that can either be amplified or denied in each distilled version. Slowly unraveling the spatial layers of an existing painting serves as a parallel to the practice of analyzing an architectural sequence. Reimagining the spatial play of these paintings allows students an immediate, self-constructed final form: the painting is not a hypothetical projection or bound to future realization or materialization.
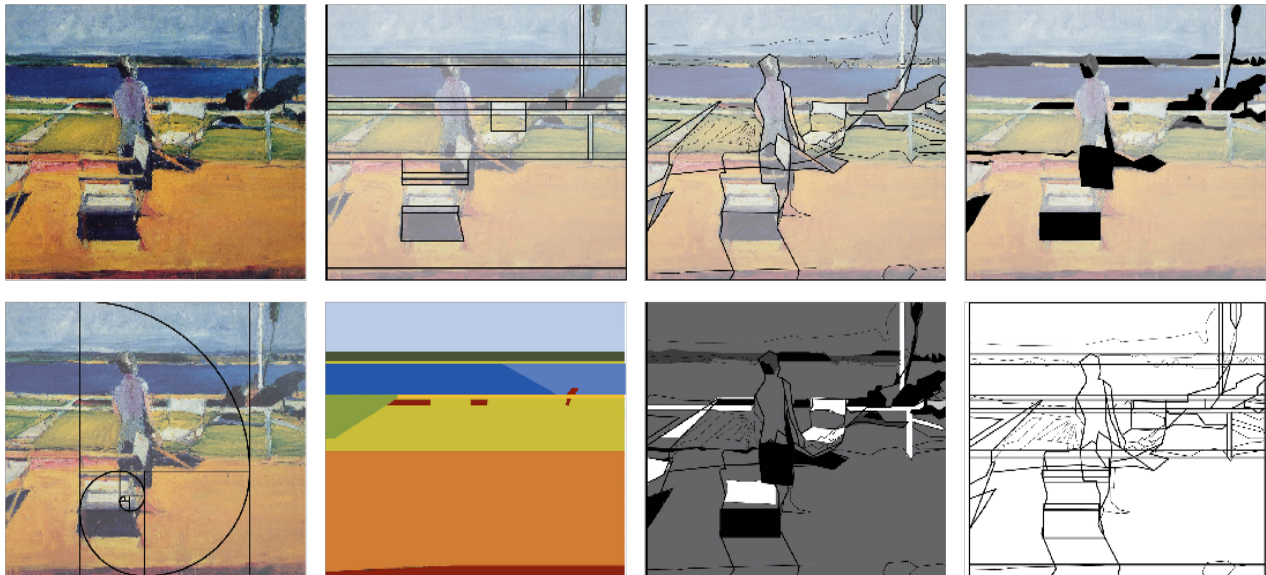
Fig. 4 Richard Diebenkorn's Figure on a Porch (1959) is used as a source for mining layers of spatial information within a figural painting. Form, color, organization, proportion and contrast are isolated as autonomous layers that work independently and simultaneously to produce multiple spatial readings.

PAINTING AS ARCHITECTURE

In the analysis of precedent architecture, canonical paintings, and the work of their own hands, students are encouraged to consider form, color, and organization as primary contributors to a map of three-dimensional space. Paint endures as an optimal medium for building figure/ground correlations as it requires each area of the canvas (the site) to be addressed with equal attention. Training a student to have an intuitive sensibility to formal and spatial composition continues to be a primary hurdle in beginning design studios.

To complete this course, students are challenged with using abstract painting as a vehicle to explore their architecture design studio project. Whether in plan, site plan, section or elevation, students utilize the skill of painting to examine their own architectural processes—the overwhelming majority of which are digital. Unlike digital media, a painting can bear the physical record of turnover rather than amendment or revision being hidden, deleted, obscured, or forgotten in final output. Having to account for and physically enact change in a painting leads the student to make more cautious and prudent formal decisions and to be more strategic and economic in revision. To *'Edit'* and *'Undo'* in a painting requires expenditure of the finite resources of time and material, leading the student to either disavow nonchalance or expertly incorporate its causatum. In the same way that repetitions initiate growth in weight training for athletes, these types of *reps* produce responsibility, ownership, and resolve in concrete decision making.

Fig. 5 Student project: Allison Conn, B.Arch c/o 2019, uses Edward Hopper's Camel's Hump (1931) to produce three abstract paintings that distill the source painting into panels that focus on form, color/proportion, and striation.

Fig. 6 Student project: Elliot Petterson, M.Arch c/o 2018. This series of diagrams and paintings is exemplary of student projects that were able to incorporate spatial painting into their architectural design processes and studio proposals. Diagrams b, c, d describe the porosity between physical and perceptual boundaries created in the site plan. Paintings e, f, g use a monochromatic palette to relate figure to ground, and form to space in multiple variations.

RECIPROCALITY AND PROJECTION

The goal of this curriculum is to train a flexibility of mind by interjecting painting into an architectural design pedagogy. The visual competency students gain from learning to decipher spatial complexity within surfaces, images, and representations works to enrich their design process, and also has the reciprocal consequence of empowering students to access—and hopefully value—abstract painting. More than the gross characterization of merely offering gestural whirls of color, abstract paintings can express poetic intricacies of a concept more readily than a set of architectural drawings.

A cursory view of the painting *Where Light is as Thick as Darkness* (Fig. 7) leads to an encounter with an energetic array of painterly marks characteristic of gestural abstraction. If one is to slowly *read* this painting like an architectural document, however, distinct layers of spatial order begin to emerge—each defined by brushstroke and color, interlaced in a delicate, rhythmic assembly. Figure 8 seeks to isolate three key spatial devices present within the painted surface. First, a foreground is described with flowing white marks that advance toward the picture plane with their brightness and contrasting value. Slow, translucent drips on this layer offer a vertical striation that organizes spaces behind, recording gravity's pull on the fluid medium—introducing an element of spontaneity into an otherwise restrained palette and choreographed composition. The second frame highlights a contiguous figure, shaped by a tinted red-orange ribbon that extends to the bottom edge. The purity of this hue (seen only as such relative to the muted blue-grey palette behind) emphasizes a structural hierarchy in the painting that helps to anchor, organize, and unify faint layers of fluttering color passages to the right of the canvas. The final frame identifies darker brushstrokes hovering just beyond the surface, reinforcing verticality and dynamic movement across the canvas from left to right. This painting articulates essential concepts of spatial design yet remains open to a myriad of connotations and interpretations; it is not fixed to a singular reading. Abstract painting can *'stage a dynamic conflict between seeing and knowing… [with its] fundamental resistance to settle as image or submit to description'* (Müller, 2017). The ability to imagine multiple realities and embrace non-fixedness is a key component to creativity and a generative design process. Robin Evans underscores the importance of this type of *'projection'* in his influential text, *The Projective Cast* (2005):

> *'The first place anyone looks to find the geometry in architecture is in the shape of buildings, then perhaps in the shapes of drawings of buildings. These are the locations where geometry has been, on the whole, stolid and dormant. But geometry has been active in the space between and the space at either end. What connects thinking to imagination, imagination to drawing, drawing to building, and buildings to our eyes, is projection.'* (Introduction xxxi)

As the discipline of Architecture aspires to push beyond the territory of building, abstract painting can serve as the ideal channel for both conceiving and conveying spatial concepts that provoke thought, emotion, tactility, and *'simultaneous perception'*. Painting presents a creative process that does not require a mass of verbal or text-based justifications. A painting, in its staticity and muteness, is ultimately beheld by a viewer without apology or qualification from the painter; it is free from any program, site, budget, or contextual responsibilities of the architectural project. The painting stands in its final form as an act of creative autonomy. By yielding themselves to the material process of painting, students generate out of limitation, in contrast to floundering before digital infinitude. Painting builds both confidence and humility, allowing students to operate within self-defined obstruction as a future strategy for any *and all* making.

Fig. 7 Aaron Collier. Where Light is as Thick as Darkness. 2015. Flashe on canvas. 48 x 60"
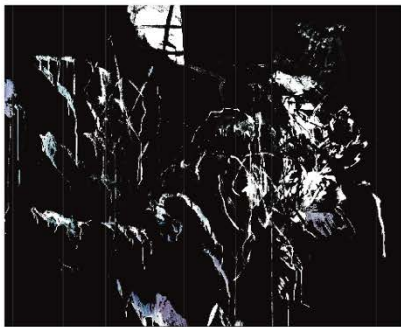
FOREGROUND : CONTRAST : STRIATION

PRIMARY FIGURE : COLOR PURITY

MIDDLE GROUND : ATMOSPHERE

Fig. 8 Three distilled frames strive to isolate key layers of spatial depth within Collier's painting.

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