

Influence of Color: Luis Barragán and Josef Albers

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Fascinated and intrigued by the pre-Hispanic and folk art they saw during their first trip to Mexico in 1936, Josef and Anni Albers made thirteen additional visits from 1937 to 1967. It was indeed this art that inspired most of Albers's most significant work, mainly related to the use of color: the series *Variants on a Theme* and *Homage to the Square*. Their visits coincided with the period when Luis Barragán was developing some of his most outstanding work and introducing his signature use of color (*Casa Barragán*, *Casa Prieto-López*, *Capilla Capuchinas*, *Casa Gálvez*, *Las Arboledas*, and *Establos San Cristóbal*). However, it is not clear if the artists and architects ever met in Mexico.

Given Albers's and Barragán's interest in and use of color, and mutual friends, it would seem likely that the two men met in Mexico. However, there is no evidence that they met before their encounter at the Alberses' New Haven studio in 1967. So, what triggered their interest in color? And more importantly, did one have an influence upon the other?

This paper studies the relationships between the work of Albers and Barragán, the possible influences and inspirations at play, and the student work from the seminar "Luis Barragán: Light, Color, and Water," a course that helps better understand Barragán's use of color.

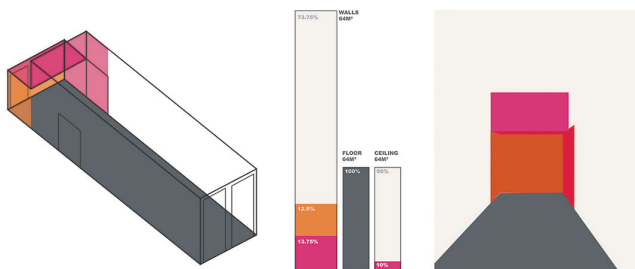


Figure 1. Casa Gálvez: Plan oblique, color analysis, and abstracted perspective view to study relationship with Albers's *Homage to the Square* (Fall 2015 - Student: Dylan Impink).

"[Luis Barragán's gardens] are the greatest new garden architecture we have ever seen,"¹ Josef Albers wrote to Jean Charlot on September 9, 1947, after visiting them during his sabbatical in Mexico. He was most likely referring to the gardens of *El Cabrío* and *Las Fuentes*, both from 1943-44, where Barragán experimented new ideas prior to developing *Jardines de El Pedregal de San Ángel* in 1945. At the time, *Jardines* was well under construction, and Barragán was soon to start working on *Casa Prieto-López* (1947-1948), where he introduced his signature use of color. Albers, on the other hand, was completing his first series exploring the interaction of color—*Variants on a Theme*, also known as *Adobes*—that led to his renowned oeuvre, the series *Homage to the Square*.

The Alberses's fourteen visits to Mexico (1936-1967) have led many scholars to believe that they probably met Barragán in the 1950's and that the painter's use of color was influential to the architect.² These ideas dismiss other possible influences, such as the muralist-painter José Clemente Orozco, a close friend of Barragán since 1931, who inspired him to consider the use of planes to represent the "flow of time and evoke a different reality,"³ rather than using Mexican history like other compatriot muralists. Or the use of color in Le Corbusier's *L'Esprit Nouveau Pavilion*, *Villa Stein*, and *Villa Savoye*, all projects Barragán visited shortly after completion.⁴ Or, the self-taught painter Jesús Chucho Reyes, whom he met in 1938 and who, in Barragán's own words, "made us understand Mexican color best, and definitively influenced our taste."⁵ Likewise, it disregards the influence that Mexico, particularly Mesoamerican art, had on Albers's work.⁶

Although they had common acquaintances and friends,⁷ other than a few photographs from 1967, and an exchange of letters between 1967 and 1968, there is no evidence that can help date when they met.⁸ However, they likely knew, and admired each other's work from the late 1940s. This explains Anni Albers's reference to Barragán as "a kind of Mexican Mies" when she presented the idea for an exhibition of his work to the director of the MoMA in 1967.⁹ Similarly, Barragán's appreciation for Albers's work is revealed in the letter he wrote to thank him for the copy of his book, *Interaction of Color*, in 1967, when he had already completed most of his projects. He wrote: "[I have profound] respect for your work, a lifelong process from which many people, now so bound to improvisation, would learn the steadiness of a profound insight."¹⁰ Rather than one man

influencing the other, I propose that the similarities in their work are the result of their shared interest in: a. new ways to produce modern art/architecture by distancing themselves from explicit historical references; b. the colors and textures from vernacular architecture and folk art; and c. the effects color has on space and in creating the illusion of space.

These facts set the premise for the semester-long assignment for the seminar “Luis Barragán: Light, Color, and Water.” With virtually no writings, no light or color studies from the laureate, we are left with multiple unanswered questions: What interested him in color? How did he make his color choices? How did he estimate the effect of light on color and the reflective effect of water? How does our perception of space—particularly when curated through the eyes of a photographer—influence how much color we see? Is there an interaction of color in the work of Barragán? Rather than requiring a research paper, I opt for engaging students in my investigation and ask them to develop original research. Arguing that by drawing one can see aspects of a problem impossible to understand through other means, students are asked to build a digital model to analyze a project and the carefully composed—sometimes abstract—photographs that Barragán (and others later) commissioned for publications (see Figure 1).

This paper studies the relationships between the work of Albers and Barragán, the possible influences and inspirations, and the course assignment that will contribute to a better understanding of Barragán’s use of color.

LUIS BARRAGÁN AND JOSÉ CLEMENTE OROZCO’S “NEW WORLD, NEW RACES AND NEW ART”

In a 1962 interview, when asked about significant friendships in his early years, Barragán remarked having met Orozco in 1931.¹¹ During the three months he spent in New York, the architect and muralist spent hours together “in lively discussions of aesthetics and architecture.”¹² Critical of Mexico’s mural movement since the mid-1920s, particularly the work (and influence) of Diego Rivera, Orozco moved to New York in 1927. In 1929, he published “New World, New Races and New Art,” an essay in which he explored new ways of making Mexican art. “The Art of the New World cannot take root in the old traditions of the Old World nor in the aboriginal traditions represented by the remains of our ancient Indian peoples,” he wrote, “[i]f new races appeared upon the lands of the *New World*, such races have the unavoidable duty to produce a *New Art* in a new spiritual and physical medium. Any other road is plain cowardice.”¹³ In his artwork, he sought to produce physical expressions of these ideas. When including built form, rather than using pre-Hispanic imagery like his counterparts, Orozco abstracted vernacular architecture into simple geometric volumes and colored them with the vivid hues characteristic of these constructions.¹⁴ These pieces demonstrated, as Frank Lloyd Wright noted, Orozco’s “complete command of architecture.”¹⁵ In *Casas y grupo de mujeres. Pueblo mexicano* (1930)—an enlarged copy of this lithograph hangs in Barragán’s living room—Barragán identified “a great architecture lesson.”¹⁶ Orozco had synthesized the vernacular architecture the young architect admired, and

possibly triggered his “desire to arrive to something that could be taken to a modern house.”¹⁷

Encouraged by Orozco, in his 1931 visit to Paris, Barragán focused his attention on the ongoing developments of modern art and architecture. He met with actors, poets, artists, and architects, including Le Corbusier, who helped him visit his most recent projects: *Villa Stein*, *Villa Savoye*, and most likely, Carlos de Beistegui’s apartment. In his unpublished “Notes from Paris. Ideas about Contemporary Architecture,” Barragán wrote:

I am far from understanding everything that is happening. The past and the present are still fighting. Here, modernity advances very rapidly.

I want to take this spirit in my heart and revise this art. Once all this noise is far from me, the ideas will be more evident [to me]. They may help me [to develop] a line of art, distinct from the long-time stagnant one.¹⁸

Barragán found himself overwhelmed with the idea of building again since, in his own words, he did “not know where to start.”¹⁹

Back in Mexico, he continued to reflect on Orozco’s—and Le Corbusier’s—ideas. “I want to speak differently,” he wrote in 1932, explicitly regretting having “borrowed words from the ancients,” referring to his use of Colonial and Mediterranean references in his work in Guadalajara (1927-1931).²⁰ He acknowledged a new spirit, “purity,” and rephrasing Orozco’s words, he wrote: “[t]he beauty of an era must emerge from the solidarity of art with this spirit [of purity]. It is regrettable that artists have fled their time. We must return to our present.”²¹ And so he did. For the design of *Casa Harper de Garibi*, *Casa Carmen Orozco*, and *Casa calle Rayón 121* (1933-1934), Barragán eliminated the use of tile and decorative wood elements, so characteristic of his earlier work. Instead, he investigated developing simple volumetric compositions and using shifting planes, ideas found in Orozco’s abstraction of vernacular architecture.²² Moreover, he had the houses carefully photographed to evoke Orozco’s work.²³ This incipient step towards the minimalist architecture that characterizes Barragán’s oeuvre was put to a halt during his early years in Mexico City (1936-1940) when he experimented Le Corbusier’s five principles in over twenty Corbusian apartment buildings. In 1940, disappointed with this work, he abandoned architecture for a couple of years to work on personal projects until he found new directions.

Barragán expanded on Orozco’s idea that mural art is the only form of art that “is one with the other arts.”²⁴ Consequently, he believed that the integration of the arts could only be achieved when “sculpture, painting and architecture are together, fused to the extent that they are a single ensemble.”²⁵ He may have seen in Le Corbusier partnership with the painter Amédée Ozenfant an answer to his own interest in the integration of the arts. At the time Barragán met Le Corbusier, the Swiss-French architect had completed his manuscript *Polychromie architecturale. Étude faite par un architecte (mêlé d’ailleurs, à l’aventure de la peinture contemporaine) pour des architectes*,

“an instruction manual and illustration of his thoughts about architectural polychromy.”²⁶ Additionally, Barragán had seen the application of these principles at *Villa Savoye*: “limitation of colors to the ‘mural color values’ of the *grande gamme*, orientation of colors in accordance with the wall’s exposure to the sun, *camouflage* through color, and a *ton* local as an essential element in creating a unity of the plastic work.”²⁷ Consequently, when Barragán returned to architecture in 1945, he teamed up with two artists for the design of the residential complex *Jardines de El Pedregal*: the sculptor Mathias Goeritz, and the self-taught painter Jesús Chucho Reyes. Reyes was known for his paintings of traditional subjects using almost exclusively local pigments over plain *papel de china*, a local tissue paper used for Mexican traditional papercut banners.²⁸ According to art-historian Lily Kassner, Reyes continuously encouraged Barragán to be bold, and recalls him saying: “bump it up Luisito, do not be afraid, paint it yellow, yellow.”²⁹ Color had always been an interest for Barragán; in his early work, he applied color to architectural details such as beams, doors and door jambs as well as colored glass to tint light. With Reyes as his color consultant, Barragán began incorporating color to larger surfaces, and understanding how color modifies the perception of space.

Close to the completion of *Jardines*, he designed *Casa Prieto-López* (1947-1948), the first house where he incorporated color fully. With his design, he aspired to express his love for vernacular architecture and to make the user feel she/he “is in Mexico and in a residence.”³⁰ His goal was to produce “modern works, realized in accordance with the site, the program, and the building material.”³¹ Regarding the use of color, Alejandra “Jana” Prieto, Mr. and Mrs. Prieto’s daughter, recalls the discussions between Barragán and Reyes on “the colors of the walls, the proportions of the furniture, the placement of certain objects.”³² Initially shy about using Reyes’s vivid color palette, the exterior color scheme recalls Orozco’s *La nube* (1948) combined with Reyes’s signature pink.³³

For Barragán, color is a complement to architecture. It can “widen or shorten [the perception of] a space. It is also useful to add that touch of magic that a space needs.”³⁴ Explaining the color selection process, he said:

I use color, but while I am designing, I am not thinking about it. Commonly, I define it once the space is built. I then visit the place repetitively, at different hours of the day, and I begin to ‘imagine the color,’ to imagine colors, from the wildest ones and incredible ones. I return to my art books, to the of the [work] of surrealist, particularly to De Chirico, Balthus, Magritte, Delavaux and to Chucho Reyes.

I review the pages, imagine the images and the paintings, and suddenly, [I] identify a color I had imagined, I then select it.

Later, on a large piece of cardboard, I ask the master painter to copy these so that we can put the cardboard over the colorless walls. I leave these [cardboards on the walls] for days; finally, I select what I like.³⁵

Though he does not claim this, it appears that Reyes was the master painter in charge of developing the color samples; several of these were found in Barragán’s studio. Unlike traditional paint samples that display flat colors, Reyes’s samples conveyed the effect of light on a colored textured surface, a more realistic appearance of the color once applied on a wall. He achieved this by using a broad dry brush to apply the selected hue over large surfaces of *papel de china* of a contrasting color, allowing parts of the surface to show. Studying colors on site must have allowed Barragán to test the effects of light, the reflection of water, and the impact on the perception of space.

JOSEF ALBERS AND HIS “TRUTHFULNESS IN ART [AND WITH MATERIALS]”

The Alberses’s travels to Mexico had a significant impact on their work. In a letter to Wassily Kandinsky towards the end of their second trip to Mexico, Albers wrote that Mexico “is truly the promised land of abstract art. For here it is already 1000s years old. And still very much alive in folk art.”³⁶ Despite his admiration and love for pre-Hispanic artifacts and architecture, like Orozco—and consequently Barragán—Albers opposed Rivera’s and others’ use of pre-Hispanic forms, describing their work as “disgusting erotic landscapes, real trash.”³⁷ Instead, Albers wanted to understand what made pre-Hispanic artifacts and folk-art abstract art. In a 1937 lecture at Harvard, he unveiled his findings. Showing slides of “Mexican Indian plastic [artifacts],” as he called them, he elaborated on the enormous respect Mesoamerican sculptors had for materials. The artist, he said, “never leaves us in doubt about the material. All stonework is definitely stony, all clay work remains clay-like, every stone is obviously carved and never tries to compete with painting or drawing.”³⁸ There laid the first lesson: “Be truthful with materials.”³⁹ Sharing some of his formulations, he explained the need to be truthful to art:

Art in its nature is anti-historical
because creative work is looking forward.

It can be connected with tradition
but grows, consciously or unconsciously out of an artist’s
mentality.

Art is neither imitation nor repetition
art is revelation.⁴⁰

While drawn to using the vivid colors of Mexico in works like *Mexican* (1936), *b and p* (1937), *Together* (1939—where he carved the wood panel to separate colored surfaces), *Open (B)* (1940), and *To Mitla* (1940), he found himself in a dilemma. By mixing colors, he felt he was “potentially obscuring the materiality of color.”⁴¹ This may explain why, from 1937 to 1946, he moves away from the use of color to produce work in mostly black, white, and greys.⁴² Moreover, in a 1944 series of wood and lino etching, he purposely reveals the material of the etched surface.

It was during their seventh trip, a year-long sabbatical in Mexico (1946-1947), when Albers found the answer to be truthful to

color. In the near 100 studies for *Variants on a Theme* (also known as *Adobes*), he used “the strictest diet that I can impose on myself: only unmixed colors—except for pink and rose—and all in certain geometrically related quantities. [...] All the colors in a primary application, without any underpainting or overpainting.”⁴³ The color palettes borrow from vernacular architecture, “the highly colored painted exterior walls of flat roofed Mexican houses, their tall windows framed with contrasting, sometimes clashing, hues and set against the intense blue sky”⁴⁴ that the Alberses had witnessed in their extensive travels throughout Mexico.⁴⁵ The series did more than offer an answer to his ongoing challenge of being truthful; it allowed him to study the interaction of color. In a letter to Franz Perdekamp, he described how “colors change one another according to the proportions and quantities [I use] ... I’m especially proud when [I can make] colors lose their identity and become unrecognizable. Greens become blue, neutral grays become red-violet, and so on.”⁴⁶ This technique of applying color directly from the tube on the canvas (a sheet of Masonite) was perfected in the over 2,000 studies of his renowned series *Homage to the Square* (1950 to 1976).⁴⁷ However, it is essential to note that with few exceptions—*Homage to the Square, Guarded* (1952) among them—from 1950 to 1957, Albers used grays, whites, and blacks and progressively began incorporating blue, green and yellow. It was not until after 1957 that Albers develop the “exuberant compositions of brilliant yellows, oranges, reds and pink.”⁴⁸ By 1954, referring to his ongoing series *Homage to the Square*, he celebrated color “as a means of a plastic organization.” For Albers, it was color that made his squares:

move forth and back, in and out,
and grow up and down and near and far,
as well as, enlarged and diminished.⁴⁹

THE SEMINAR: “LUIS BARRAGÁN: LIGHT, COLOR AND WATER”

Could Albers’s series *Variants* and *Homage to the Square* have been influential to Barragán? Unlikely. As seen above, Barragán’s use of color was primarily a result of: a. his alignment with Orozco’s ideas on producing *New art/architecture* that did not borrow from foreign or pre-Hispanic forms; b. his sincere appreciation for vernacular architecture—from which he borrowed forms, colors, and textures—and as a response to

the ongoing question on the integration of the art; and c. his interest as an architect on the effects of color in the perception of space. It seems more appropriate to propose that their work ran in parallel to each other, sometimes coinciding, others times, one ahead of the other. For example, by the time Albers began his *Variants* series in January of 1947, Orozco had been using vivid hues in his paintings for over a decade, and Reyes had been collaborating with Barragán since 1945. Similarly, the bright colored *Homages* we are most familiar with, were, for the most part, produced after 1957. By then, Barragán, likely following Reyes’s recommendations, had employed Reyes’s pink in *Casa Prieto-López*, *Casa Gálvez*, and in the central hall in his own house. To corroborate these historical facts, students in the seminar “Luis Barragán. Light, Color and Water,” analyze the use of color in Barragán’s projects.

As mentioned in the introduction to this paper, with virtually no writings, no light or color studies from the laureate, we are left with multiple unanswered questions on his decision-making process regarding the use of color. Rather than assigning a paper that relies heavily on existing research, that in the case of Barragán describe his work mostly through evocative photographs and scarce architectural drawings, I require students to analyze one of Barragán’s projects through drawing. Specifically, students are asked to reproduce the effects of light and color captured in photographs of one of Barragán’s projects, and analyze the perception of color and the effects of light in a space (or sequence of spaces).⁵⁰ The assignment is divided into three stages: a. building a digital model; b. color and light analysis; c. presentation documents.

To build the model, students collect plans, sections (if any), and photographs of the selected project. To better understand the building before building the model, they identify the position of the camera for each of the photographs. To overcome the limited amount of drawings available, students use the photographs to derive any missing plan and section by reversing the perspective construction process. Using this information, they build a three-dimensional model and test its accuracy by putting the software’s camera (and adjusting the lens) in a place that will allow them to obtain the same view as in the photographs they have been studying. Once completed, the model is used to derive a final set of plans and, more importantly, sections indispensable to fully understand Barragán’s work (see Figure 2). At this stage, students are exposed to the editing process



Figure 2. *Establos San Cristóbal*: Digital model, sections--derived from model, and color analysis (Fall 2019 - Students: Maryam Karimé and Jessica Weiner).

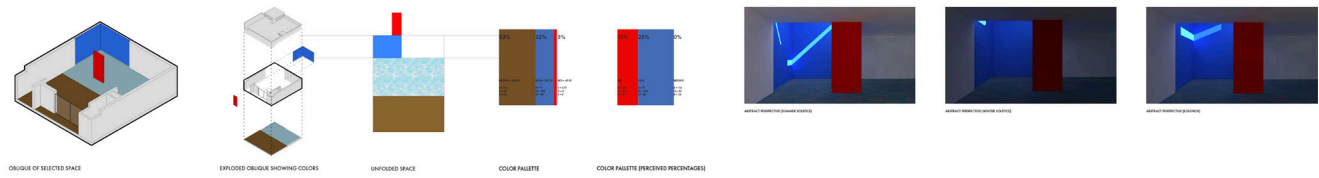


Figure 3. *Casa Gilardi*: Digital model, color analysis, and light effect during the summer and winter solstices, as well as the equinox. (Fall 2017 - Students: Austin Marshall and James Popin)

used in architectural publications that involves choosing the appropriate lens to the process of selecting what to crop out of an image. This process is particularly interesting considering that Barragán “lavished great care on the photographic representation of his work, choosing his photographers carefully, working closely with them to achieve certain image types and qualities.”⁵¹

With the model positioned in its precise geographic location, the students test light conditions to identify the approximate date and time of the year of the shooting of the photograph they are studying. In doing this, they can see the different light conditions on each surface: direct light, reflected light, core shadow, and cast shadow. (See Figure 3) Similarly, they can see a full range of tones on each of the surfaces. These gray tone images reveal the areas where we can best see the actual color, based on the amount of light affecting a surface. Using an application (Photoshop, Illustrator, or Pantone studio), students identify the colors from photographs, including the different hues found in wood or stone elements. Important to note here is that students are alerted to consider that some publishers may have edited the images to saturate colors; therefore, they are advised to consider using these specific images with caution. Once the colors are recognized, they apply them to the model to test their accuracy in perspective views and make the necessary adjustments to find the actual color.

With the color palette identified, they study the color scheme and contrast them with those from Albers’s paintings to see if there were any influences. Furthermore, students study the scale, the proportion, and the position of each color both in analytical and perspective drawings. They begin by producing a plan oblique of the space on which they map the colors, as well as an unfolded plan oblique. They then calculate the proportions

of colors from two images: a. the unfolded plan oblique to measure the actual area of each of the colored surfaces; b. the “photograph” of their model to measure the areas of colors perceived by the viewer. This part of the assignment allows them to better understand the effect of spatial perception and our reading of color (see Figure 4). These analyses on proportion are then compared with Albers’s work. To complete the analysis, they write a brief paper on their findings.

While it is still too early to arrive at definitive conclusions on possible principles Barragán may have considered for the application of color, the students’ analyses have shown:

- the color schemes are limited to three to four colors—one to two warm colors and one neutral (generally on the floor plane);
- other than the color of floor surfaces, all colors (other than white) are applied on at least two perpendicular surfaces. In doing so, the color is intensified due to its reflection from plane to plane;
- the walls with the most saturated hues tend to be exposed to direct sunlight, allowing for color to reflect on the other surfaces;
- the walls with the most saturated hues, with few exceptions, tend to occupy less than 20% of all the surfaces of the space, but our perception suggests that they occupy over 50% of the surfaces.

The use of digital models has allowed us to discover that the light effect captured in one of the most well-known photographs of *Capilla Capuchinas* (1952-1953) is not the effect of daylight. The shadow of the freestanding cross on the wall of the altar can only be achieved with the use of additional light sources (see Figure 5).

In regards to the assignment’s impact on learning, the visual assignment presented here has shown the following advantages:

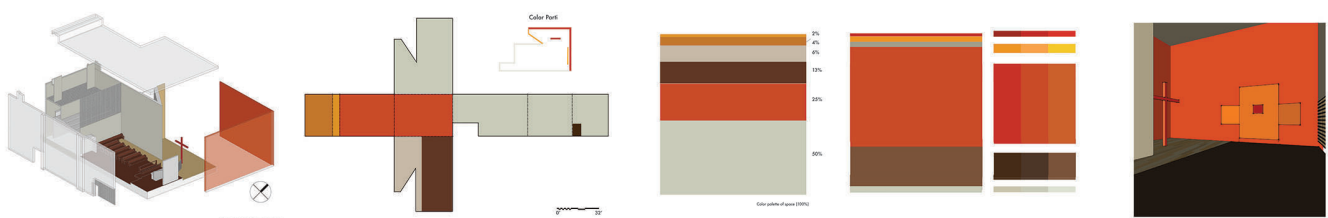


Figure 4. *Capilla Capuchinas*: Digital model, and color analysis (Fall 2017 - Students: Ryan Cooper and Max Hodge)

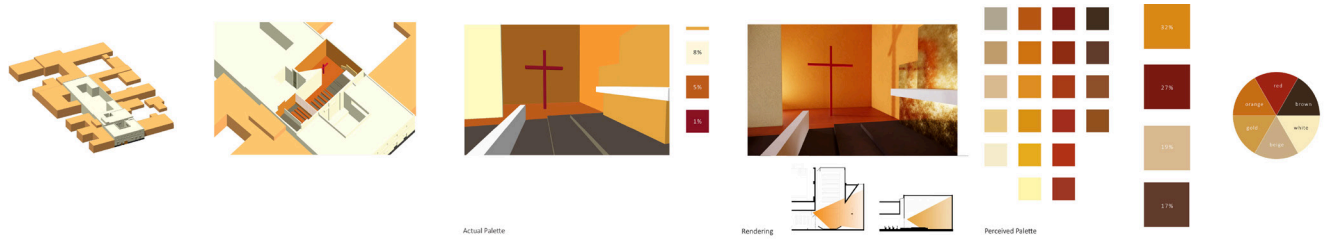


Figure 5. *Capilla Capuchinas*: Digital model demonstrating that the light effect is achieved with the use of a lamp. (Fall 2019 - Student: Trevor Healy)

- it allows students to put into practice their analytical abilities which otherwise would have been restricted to the literature they could find;
- it allows the group of students to observe commonalities and differences in the use of color among the projects studied up until now;
- it allows students to arrive at conclusions that are based on a scientific method;
- it exposes students to the importance of questioning the sources of their images and information.

ENDNOTES

- Josef Albers's letter to Jean Charlot, September 9, 1947. Jean Charlot Collection, Hamilton Library, University of Hawaii at Manoa, cited in Brenda Danilowitz, "We are not Alone." Anni and Josef Albers in Latin America," in *Anni y Josef Albers. Viajes por Latinoamérica*, (Lima: MALI, 2007), Exhibition Catalogue, 225-232, 230.
- In Sotheby's catalog description of Albers's *Red Wall* (1947-1956), part of Albers's *Variants* series, auctioned in 2017, the art auction house noted that Barragán "considered Albers one of the great influences in his architecture." To prove their point, they included a photograph of Barragán's *Casa Prieto-López* (1948-1949) painted in a similar color scheme as the painting at auction. See, Catalog Entry 116 Josef Albers, *Red Wall*, in "Contemporary Curated featuring works from 'In Its Own Light: Property from the Collection of Ed Cohen and Victoria Shaw,'" accessed on June 1, 2019, <http://www.sothebys.com/en/auctions/ecatalogue/2017/contemporary-curated-n09622/lot.116.html>.
Similarly, Patricia O'Learly suggests that Barragán's use of colors "could be explained by his two-decade friendship, in the 1950s and 1960s, with artist, educator and color authority Josef Albers. Important to note is that her source, Javier Gómez Álvarez Tostado, has no publications on Barragán. See Patricia O'Learly, "Barragán's Homage to Albers," Trina Deines (Ed.), *83RD ACSA Annual Meeting Proceedings, Architecture: Material and Imagined*, 115-120, 115.
- Antonio Riggen Martínez, *Luis Barragán. Mexico's Modern Master, 1902-1988*. (New York: The Monacelli Press, 1996), 126.
- Barragán visited *L'Esprit Nouveau Pavillion* in 1925, and *Villa Stein* and *Villa Savoye* in 1932.
- Elena Poniatowska, "Luis Barragán. Entrevista" (November, 1976), (First published in *Diario Novedades*, México, D.F., November 28-29, December, 2, 4 and 5, 1976), cited in, Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, (Madrid: El Croquis Editorial, 2000), 105-123, 119. The translation is mine.
- In regards to the influences of Mesoamerican architecture in the work of Josef Albers, see, Joaquin Barriandos, "Devouring Squares. Josef Albers in the Center of the Pyramid," in Lauren Hinkson (Ed.), *Josef Albers in Mexico*. (New York: Guggenheim Museum, [2018]), Exhibition Catalogue, 34-47.
- The Cuban designer Clara Porset was the person responsible of the Alberses's first visit to Mexico. Porset not only lived in one the apartment buildings Barragán had designed in the 1930s, but also collaborated with him in the design of the furniture for several of Barragán's buildings. Two German émigrés who moved to Mexico in the late 1930s were Barragán's collaborators: the sculptor Mathias Goeritz—a former Bauhaus student—and the architect Max Cetto.
- The photographs were taken when Luis Barragán and Ricardo Legorreta travelled to New Haven to invite Anni Albers to prepare a piece for the Camino Real Hotel, then under construction. See, photograph in *Anni y Josef Albers*, 183.
- Anni Albers's letter to Luis Barragán, March 29, 1967, in Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, 154-155, 155.
- The Josef and Anni Albers Foundation, no title, Facebook, October 26, 2016, <https://www.facebook.com/AlbersFoundation/posts/868343623302808/>
- Alejandro Ramírez Ugarte, "Los jardines de Luis Barragán" (México D.F., November, 1962) (First published in *México en el arte. Nueva Época*. INBA), in Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, 72-89, 78.
- Alma Reed, Orozco, (México D.F., 1983), 160, cited in, Antonio Riggen Martínez. *Luis Barragán. Mexico's Modern Master*, 125.
- José Clemente Orozco. "New World, New Races and New Art," *Creative Art*, 01, 1929. xlv-xlvi, xlv.
- See, *Soldiers* (Guache, 1930), Colección Eduardo F. Constantini, Buenos Aires; *Casas y grupos de mujeres, Pueblo Mexicano* (Lithograph, 1930), in Clemente Orozco, *José Clemente Orozco: Graphic Work*, (Austin: University of Texas Press, 2004), 49.
- Id. ant., 48.
- Barragán was not the first to refer to Orozco as a source for architecture. In fact, in 1943 he was accredited by the Sociedad de Arquitectos Mexicanos. See, Clemente Orozco, *José Clemente Orozco*, 48.
- Alejandro Ramírez Ugarte, "Los Jardines de Luis Barragán," 75. The translation is mine.
- Luis Barragán, "Apuntes desde París. Ideas sobre la arquitectura contemporánea" (1931), in Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, 17. The translation is mine.
- Ibid.
- Luis Barragán, "Sobre Ferdinand Bac y Guadalajara" (1932), in Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, 18-19, 19. The translation is mine.
- Ibid.
- Louise Noelle, *Luis Barragán. Búsqueda y creatividad*, (México, D.F.: Universidad Nacional Autónoma de México, 1996), 48-49. All three houses were built on the site of the former Escobedo Jail in Guadalajara.
- See photographs of the houses for Carmen Orozco and Mrs. Harper Garibi, in Juan Palomar Vereá, "Recintos de confluencia. El alquimista de la memoria," *En el mundo de Barragán, Artes de México*. No. 23, Third Edition, 1999, 18-25, 20-22.
- José Clemente Orozco. "New World," xlv.
- Clyve Bamford Smith and ADIN, "Luis Barragán. Entrevista sobre el cuestionario" (January 24, 1968), in Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, 91-102, 93. The translation is mine.
- The book was intended to accompany the launching of the Salubra I collection. See, Barbara Klinkhammer, "After Purism. Le Corbusier and Color," *Preservation, Education, and Research*, Volume 4, 2011, 19-38, 25.
- Ibid.
- Interesting to note is the fact that Reyes's personal art dealer was Inés de Amor, the same gallerist of the Alberses. See, Tejada, Roberto, "Sybarite's Monastery: 9e Reyes Residence, Mexico City" (2003). *Art History Research*. 3, 81-85, 84. Accessed on September, 2019, https://scholar.smu.edu/arts_arthistory_research/3
- Hilda Trujillo Soto, "Chucho Reyes y su lugar en la plástica mexicana," in, *Del arte a la arquitectura. El México de Chucho Reyes y Luis Barragán*, (México, D.F.: A Editores, 2012), 155-199, 159. The translation is mine.
- Alejandro Ramírez Ugarte, "Los jardines de Luis Barragán," 80. The translation is mine.
- Luis Barragán, "Gardens for Environment. Jardines del Pedregal," *Journal of the American Institute of Architects*, April 1952, 167-172, 171. The text is from a speech Barragán gave before the California Council for Architects and the Sierra Nevada Regional Conference, Coronado, California, Oct. 6, 1951. The translation is mine.
- Alejandra Hernández Gálvez, "Otro Barragán," in, *Del arte a la arquitectura*, 61-79, 65. The translation is mine.

33. To see Orozco's "La nube," see, Danièle Pauly. *Barragán. Space and Shadow, Walls and Colour*, (Basel: Birkhäuser, 2008), 133.
34. Mario Schjetnan Garduño, "El arte de hacer o cómo hacer arte. Entrevista," (Extracts from interviews from 1980-1981. First published in *Revista Entorno*, Vol. 1, Year 1, January, 1982), in Antonio Riggen (Ed.), *Luis Barragán. Escritos y Conversaciones*, 124-127, 126. The translation is mine.
35. Ibid.
36. Josef Albers letter to Wassily and Nina Kandinsky, August 22, 1936. Cited in Nicholas Fox Weber and Jessica Boissel (Ed.), *Josef Albers and Wassily Kandinsky: Friends in Exile. A Decade of Correspondence, 1929-1940*, (New York: Hudson Hill Press in association with Josef and Anni Albers Foundation, 2010), 89-91, 89.
37. Josef Albers letter to Bobbie Dreier, August 19, 1937, Dreier Correspondence 296, JAAFA, cited in Lauren Hinkson, "Ruins in Reverse. Josef Albers in Mexico," in Lauren Hinkson (Ed.), *Josef Albers in Mexico*, 14-33, 20. The Alberses met Rivera in the summer of 1936.
38. "Truthfulness in Art" (1937), Unpublished lecture given at the Harvard Graduate School of Design, Robinson Hall, December 11, 1937, in *Josef Albers. Minimal Means, Maximum Effect*. Exhibition Catalog Fundación Juan March, March 26-July 6, 2014, 236-239, 238.
39. Ibid.
40. Id. ant., 238-239.
41. Joaquin Barriendos, "Devouring Squares. Josef Albers in the Center of the Pyramid," in Lauren Hinkson (Ed.), *Josef Albers in Mexico*, 34-47, 39.
42. See his series *Graphic Tectonic* (1942), a series of eight lithographs where the artist only uses black lines over a white background; the series *Bipolar* for which he calculated the surface of each shape, and his untitled explorations prior to 1947. Important to note is that after *Variants* and before developing *Homage to the Square*, Albers returned to the use of only grey tones.
43. Josef Albers's letter to Will Grohmann (February 22, 1948), cited in Jessica Csoma. "A Chronology," in *Anni y Josef Albers*, 262-268, 265. Ten of these *Variants* were left at Ines Amor's Galeria de Arte Mexicano, the most important gallery of its time. See, Brenda Danilowitz. "We are not Alone," 231. He began this exploration in January of 1947. Josef Albers's letter to Franz Perdekamp, September, 1947, cited in Brenda Danilowitz, "From *Variants on a Theme to Homage to the Square: Josef Albers paintings 1947-1949*," in *Anni y Josef Albers*, 246-247, 246.
44. Id. ant., 230. In addition to Mexico being influential, the landscape of North Carolina must have also impacted Albers's work. In a letter to Kandinsky, Albers describes the fall as "indescribably colorful. Just as the green stays green much longer, and stays much more vividly green, and does not go grey, so the fall colors are bright red and bright yellow." And describing the winter colors, he added "the mountains are reddish violet in winter, an indescribable, indefinable color. Everything is different here." This may explain the use of dark reds, and purples in some of his early colored pieces. See, Josef Albers's letter to Wassily Kandinsky, November 1, 1936, cited in Nicholas Fox Weber and Jessica Boissel (Ed.), *Josef Albers and Wassily Kandinsky*, 91-94, 91 and 92.
45. Lauren Hinkson, "Ruins in Reverse," 14.
46. Josef Albers's letter to Franz Perdekamp, 246.
47. Jeannette Redensek, "On Josef Albers' Painting Materials and Techniques," in *Josef Albers. Minimum Means, Maximum Effect*, 21-[42], 36.
48. Id. ant., 38. For an early example of Albers's use of pink, see *Homage to the Square Guarded* (1952), (Catalog piece 64), in *Josef Albers. Minimal Means, Maximum Effect*, 127.
49. Josef Albers, "On my Homage to Squares" (1954), in *Josef Albers. Minimal Means, Maximum Effect*, 279.
50. The assignment for this seminar was first introduced in spring 2015, it was revised in fall 2017, and it has been further adjusted to achieve more accurate results in fall 2019. To date, students have studied *Capilla Capuchinas*, *Casa Gálvez*, *Casa Gilardi*, *Las Arboledas*, and *San Cristóbal Stables*.
51. Keith L. Eggner, *Luis Barragán's Gardens of El Pedregal*, (New York: Princeton Architectural Press, 2001), 64.