

## ***The Pan American Unity Mural, A Multifaceted Move.***

### **PEDAGOGICAL INTRODUCTION**

This lesson was created for my Latin American art history students (Art 106 at City College of San Francisco) as well as for San Francisco Museum of Modern Art and my hope is that it offers key questions and attempts to provide answers regarding the *Pan American Unity* mural's gigantic size and its paradoxical portability.

1. Introduction to the mural and brief general historical context (1930's to 1940's)
2. What is a mural?
  - a. What is a mural?
  - b. Two deep cultural cradles of mural making & Diego Rivera's relationship to them.
  - c. Types of paints and methods (advantages - disadvantages).
  - d. Types of support.
3. What were the technical and conceptual stepping-stones that led Diego Rivera to create a gigantic, yet portable mural?
  - a. *Market Scene*, 1930.
  - b. *Almond Blossom*, 193.
  - c. Series of portable murals commissioned by the Museum of Modern Art in New York, 1931.
4. Are "portable murals" a good move?
  - a. Disadvantages.
  - b. Advantages.
5. Why has the *Pan American Unity* mural been a "mural on the move"?
6. What did the relocation to San Francisco Museum of Modern Art entail?
  - a. Gathering data in view of the move.
  - b. De-installation.
  - c. The move redux.
7. Conclusion

### **ASSIGNMENTS**

At the end of this paper, you will find assignment ideas including:

- One general class critical thinking discussion
- Four assignments designed for students to complete.

Each assignment was designed with varied learning modalities<sup>1</sup> in order to meet students' multifaceted ways of learning, each student is expected to choose three assignments that best suit their learning style.

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<sup>1</sup> These assignments are analytical - text based, conceptual, visual - kinesthetic, creative and metacognitive as well as creative and aural.

## ***The Pan American Unity Mural, A Multifaceted Move.***

### **1. Introduction.**

A 1940 fresco of titanesque proportions, 4 by 22 feet and 15 tons strong, created by Diego Rivera was paradoxically built to be transported. What moved the Mexican artist to create such a monumentally sized mural and, in particular, in the United States? The idea of this lesson is to explore the steps that led Diego Rivera to create this enormous portable mural and to see how it was studied and analyzed by conservation teams and finally how it was transported again in 2021. Other Mexican muralists such as José Clemente Orozco and David Alfaro Siqueiros also created portable murals in the United States from the late 1920's to the 1940's, however, our primary focus is to understand "why" and "how" Diego Rivera did so while looking at the contexts from which the *Pan American Unity* mural emerged from. We are also engaging in this mental exercise and research process because, let's face it, murals created by Rivera in San Francisco do move and inspire us.

In fact, Rivera's murals became true cultural beacons that pointed the way to the future and created a sort of cultural ripple effect. His work on the West coast in particular, created a cultural zeitgeist that energized the creation of countless murals by varied US artists in California and especially in San Francisco, where other such Public Works Administration art projects from the Great Depression were created as well as contemporary murals located in the Mission district painted by a wide constituency of Latinx and Chicanx artists in particular. But first, let us examine the nature and physicality of what a mural is.

### **2. What is a mural? And how is it made?**

#### **a) What is a mural?**

A mural is usually a very large sized two dimensional work painted on a wall of a building.<sup>2</sup> Therefore, murals are created within a given location and often make references to the context where they are situated, as if "married" to the actual space that they exist in and its sense of cultural place. Murals can be painted in varied mediums, several of which Diego Rivera employed, such as encaustic mineral pigments and mineral pigments mixed with nopal cactus sap.

#### **b) The two deep cultural cradles of mural making & Diego Rivera's relationship to it.**

What are the cultural roots of mural making? The two deepest cultural wells of muralism savoir-faire were ancient Mesoamerica and Italy. Some of the most ancient

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<sup>2</sup> The word mural comes from the Latin muralis, from murus "wall' ". Oxford English Dictionary. <https://languages.oup.com/dictionaries/#oed>

Mesoamerican murals date to 1,200 to 600 B.C at the site of Oxtotitlán, in the Mexican state of Guerrero. As for Italy, what comes in mind are the countless murals produced during the Italian Renaissance<sup>3</sup> (in the 14<sup>th</sup> and 16<sup>th</sup> centuries). Now, we should also mention Mexico's cultural renaissance that took place in the 1920's where the creation of murals truly abounded in numbers and in creative gumption. The Mexican Renaissance murals were often sponsored by and associated with governmental institutions such as the 1921 Secretary of Education murals painted by Diego Rivera. Therefore, historically we could say that murals are "rooted"; digging their roots into a building and thriving within a supportive cultural institutional context.

Given the rootedness and ostensibly unmovable nature of murals, why would Diego Rivera ever create *portable* ones? Let us examine the advantages and disadvantages associated with the creation of portable murals while investigating the artistic, technical and political context from which this idea emerged. But first, let's go over a brief review of the types of paints that can be used for mural making, so that my technical explanations of paint interaction with support will make more sense, once clarity and knowledge is gained. But before we do so, I would like to make an important parenthesis and speak about Diego Rivera's source of inspiration. Rivera traveled in Italy in 1921 to learn the buon fresco technique on a grant by the Mexican government. As mentioned in a SFMOMA interview for the creation of their audio guide, professor Monica Bravo said "*Rivera during the revolution had traveled around Italy and had made many drawings of the Italian Renaissance frescoes that he saw there.*" And underlining that "*So, really ... The muralism movement was itself a kind of mestizaje. It shows the coming together of this indigenous pre-Columbian art form together with this Italian Renaissance*" After his investigation of Italian techniques and painting his first mural in Mexico (*Creation*, 1921) Diego Rivera travelled in the Tehuantepec region of Oaxaca. This was a trip prompted and organized by José Vasconcelos the Mexican secretary of Education, spearhead of Mexican muralism's impetus. As Gerardo Murillo - AKA Doctor Atl, an artist of the time said: "*Licenciado Vasconcelos feeds, organizes and develops*" So thanks to Vasconcelos, Diego Rivera was able to immerse himself in Mexican indigenous cultures. These trips acted as a fertile ground for Diego's cultural rebirth, and allowed him to ultimately fuse what he learnt and developed in Europe notably abstraction and cubism with Mexican indigenous aesthetics as well as savoir-faire so his oeuvre could take roots and grow. Now, let's have a look at the types of paints used and the implications each choice has in relation to archivalness for mural making.

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<sup>3</sup> *Soñar Con Los Ojos Abiertos*, Patrick Marham, page 199.

### c) Types of paints.

CASEIN is a paint derived from milk in fact the liquid similar to serum or whey that rises above yogurt after sitting in the refrigerator for a while with color pigment added to it <sup>4</sup>.

TEMPERA is a color pigment plus a water and egg yolk mixture.

OIL PAINT is the color pigment mixed with some type of oil base such as that from linseed or poppy seed for instance.

ENCAUSTIC is made by mixing the color pigment in melted wax and applying the mixture onto the paintable surface while still hot.

All the paints listed above are made from organic materials and thus can decay more easily by developing fungi, which in turn leads to an internal or external deterioration from a number of environmental factors. The end result to the integrity of the murals is that they can melt, bubble up, and chip or fall off more easily as they literally sit on top of the paintable surface.

Classical mural painting as created by Pre-Columbian Maya and Aztec artists, as well as the Renaissance Italians, is called *buon fresco*.<sup>5</sup> It is created with silicate mineral paints that react with lime, a point we will expand on later on.

The first mural created by Diego Rivera, *Creation* <sup>6</sup> (1921 in the Simn Bolvar Theater Mexico City) was painted using the encaustic technique, which is completely different from *buon fresco*.

All the paints listed above are applied onto the surface of the wall. And while the encaustic medium is thicker and more antifungal than the other paints, it is still applied onto a support. The paint adheres to the support but it is not chemically fused into it, resulting in the artwork being less archival and possibly enduring melting or cracking.

Contrary to encaustic, the *buon fresco* method used for the *Pan American Unity* mural is made with mineral lime paint which is a medium much less susceptible to degradation because the paint is precisely mineral (as opposed to organic) and it thus becomes chemically part of the support material itself. This happens because the wet plaster onto which the mineral paint is applied immediately and continuously reacts thus becoming chemically fused and physically meshed as one. As explained by Kiernan Graves (consulting conservator for the Pan American mural at SFMOMA) *buon fresco*

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<sup>4</sup> Pigments are often used in loose powder form in traditional mural making and then added to a binder.

<sup>5</sup> *Fresco-secco* is the dry method counterpart of *buon fresco*. The paint is applied onto dry plaster = pigment mixed with lime water applied on top of plaster.

<sup>6</sup> So *Creation* was an opportunity for Diego Rivera to try his hands at mural painting techniques and experiment with topics and designs that were strongly influenced by Italian Renaissance artist Giotto di Bondone that Rivera studied when in Padua during his 1920-21 trip sponsored by a Mexican government grant.

allows for the paint to be “*bound within the matrix of the paint.*”<sup>7</sup> This results in a final layer of paint that is much more resistant to water and also has antifungal properties given that it is mineral. So, the final layer of the mural’s paint fuses with the wet plaster lime and while it is extremely thin (between 10 and 20 microns), it is very resistant. In short, buon fresco withstands best the test of time; something that can still be observed in most Mesoamerican murals’ bright colors.

So given the archival durability of buon fresco, and Diego Rivera’s trip to Italy in 1921 and his Mexican cultural background, he would jump at the occasion of using the *buon fresco* technique. But he did not. Instead, he used encaustic for his very first mural. But why was that the case? Several assumptions can be made but two of the most plausible suppositions are the following:

- Encaustic is a painting method that can be a one-man job.
- The utilization of melted wax might feel more familiar to an artist with extensive oil painting know-how<sup>8</sup>.

So, when Rivera came back from spending years abroad in Europe creating oil paintings, using encaustic made sense to him because it was intuitive and he most likely did not have yet a chance to organize an entire crew of assistants necessary to paint with the buon fresco technique. Additionally, encaustic would give him complete personal control over the medium at a time when he was venturing back to Mexico and getting acquainted with a collective art making method.

#### **d) Types of Supports Used In Mural Painting.**

Murals are usually made on a layer of materials. First - comes the cement<sup>9</sup> to create the structure of the wall, then a steel mesh that is used to give grit and body to the cement itself unto which a generous coat of plaster mixture is laid on top. Then, the final plaster coat is added. It is called the *giornata*<sup>10</sup> a plaster mix that is applied and kept wet<sup>11</sup>. The idea of keeping the plaster wet is to allow the mineral paint applied unto it to react chemically and fuse with the plaster itself.

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<sup>7</sup> Presentation and interview of Kiernan Graves, Paco Link and SFMOMA’s conservation staff, April 21<sup>st</sup> 2021.

<sup>8</sup> Let us not forget that Diego Rivera was an expert easel painter for the first part of his life working for years in France and Spain.

<sup>9</sup> Presentation and interview of Kiernan Graves, Paco Link and SFMOMA’s conservation staff, April 21<sup>st</sup> 2021. Also, in the case of the Pan American mural the portable panels are made of Portland cement containing somewhat coarse aggregate (which is a ground marble of sand like texture). The mixture also contains natural vegetable fiber added to the mix, in order to allow the mixture to retain humidity longer so that evaporation happens slowly without creating cracks. The mural then has the layer of the giornata coated on it (giornata = Italian word that means the days’ worth of work that will be painted) and it consists of a first layer of Portland cement and lime of 3/4 inch while the two upper layers (increasingly finer ingrain) are just 1/4”. The total thickness of the painted layer (not the wall itself) is close to one inch. Interview of Kiernan Graves, Paco Link and SFMOMA’s conservation staff and their respective presentations during talk, April 21<sup>st</sup> 2021.

<sup>10</sup> The giornata is the term used to describe the amount of work that can be done in one day of mural painting handled by the master. This term comes from the Italian word “day”.

<sup>11</sup> Ibid. Drying retardants can be vegetable fibers or goats’ hair for instance.

### 3. Stepping Stones Towards the Creation of the Titanesque *Pan American Unity Mural*.

Two Small Moves: *Market Scene*, 1930 and *Almond Blossom*, 1931 constitute the baby steps towards the enormous *Pan American Unity* mural.

#### a) **The First Portable Mural: *Market scene*, 1930.**

Rivera was invited by the US ambassador, Dwight Morrow to create a series of murals in the Palacio Cortés located in Cuernavaca, Mexico where he lived during the length of his diplomatic service. Morrow's patronage was important and I would say that it was in fact crucial in the long run because it allowed Rivera to showcase his creative and technical abilities to potential American patrons visiting the ambassador's residence. The completion of this gorgeous Cuernavaca *in situ* mural series was a momentous event for both Diego artistically wise and for Morrow as he assiduously worked on a rapprochement of the two countries. This success was commemorated privately by Mrs. Elizabeth Morrow when she decided to commission Rivera for the creation of a portable mural for her husband's birthday. This portable mural referred to a similar scene in the Cuernavaca mural's segment where an indigenous woman offers a bowl of fish soup to a conquistador as a form of tribute, a gesture filled with symbolic and historical implications<sup>12</sup>.

This artwork was a technical stepping-stone for Rivera because it was his first mural that was liberated from the architecture and it thus allowed him to mentally switch and convert the mural paradigm as something transportable. The painting was made on lime plaster and it was sustained by a metal structure grid with perpendicular bars (which incidentally creates more tension and vibration at the corners, thus presenting issues in regards to transportation).

It is also important to note that this artwork was not only separated from the walls of the Morrrows' residence but also from Mexican institutions while being offered to a US private patron. In a sense, the portable mural leaped from both the walls and the collectivity into the private sphere. Whether this was a calculated "move" by Diego Rivera or not, the market scene tribute was created to fit a capitalistic model of offering and ownership.

#### b) **The Second Portable Mural, *Almond Blossom*, 1931.**

This mural was also created for a private American patron also as a gesture of

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<sup>12</sup> Interestingly enough, a tribute is a form of coerced commercial and diplomatic practice where goods are given by the people at the bottom of hierarchy to the people at the top of hierarchy. Therefore, this symbolic scene has often been interpreted by art historians as Diego's wink of the eye regarding Mexicans' position vis a vis the United States. At the time, the Mexican government and economic elite structure were in the process of opening Mexico to foreign trading and were doing so to the detriment of the Mexican working class' economic future. So this scene has a double entendre historical aspect.

gratitude. When Rivera came to San Francisco to paint the *Allegory of California* at the Pacific Stock Exchange building and then paint another *in situ* mural *The Making of a Fresco Showing the Building of a City* (in May 1931) at the California School of Fine Arts (now the San Francisco Art Institute) he and Frida Kahlo were graciously hosted by Rosalie Stern at her Atherton home in San Mateo County<sup>13</sup>. So Diego did a kind gesture and undertook the creation of a medium sized portable mural created onto a movable structure upon request of Rosalie Stern. It was entitled *Almond Blossom* and represented some of the host's family members. This mural painting was a portable work encased into a metallic structure (160 cm x 265 cm) painted on a one inch thick slab of cement framed within metal structure. Inside the portable mural's body was a metal structure made of perpendicular steel bars onto which the wire mesh was held. Both the metal structure and the cement made this moderately sized artwork very heavy. Additionally, the fact that the metal was steel as opposed to galvanized steel (which does not corrode) proved to be an engineering weakness along with the perpendicular bars which as mentioned before increase tension. But the artist learned from these portable mural experimentations and improved his structural designs when he created portable murals for his 1931 New York Museum of Modern Art solo show, and he then perfected the methods with the giant sized *Pan American Unity* mural in 1940.<sup>14</sup>

### c) **The Bigger Move: Museum of Modern Art's One Man Show, 1931**

Diego Rivera was invited by the New York Museum of Modern Art to paint seven frescoes, with two of them possibly focusing on topics specific to the United States. Rivera completed eight frescoes on panels that were hung slightly recessed within the walls so as to pretend the effect of *in situ* murals and give that special flair.

But the most important innovation in this MOMA exhibition was the fact that Diego Rivera made the murals of plaster and steel mesh held together with galvanized steel frameworks and braces. While the MOMA portable mural's artistic designs were simply permutations of previous murals that Rivera had created in Mexico,<sup>15</sup> the truly inventive changes were primarily technical ones. For one, Diego created frescoes on panels made of plaster as opposed to heavy cement and, second, the mesh that was surrounded by a steel frame had diagonal beams instead of perpendicular ones<sup>16</sup>. This was a smart move because it advantageously distributed the tension and vibrations when the mural would be transported, thus reducing potential damage. So, not only was the issue of corrosion addressed with galvanized steel, but also that of weight by using plaster, as well as panels' internal structural soundness with oblique beams.

Essentially, this series of New York portable frescoes became the technical foundation

<sup>13</sup> From database Arte Mural Moderno

[https://www.mural.ch/index.php?kat\\_id=m&sprache=spa&prozess=1&submitted=2&submitted2=2](https://www.mural.ch/index.php?kat_id=m&sprache=spa&prozess=1&submitted=2&submitted2=2)

<sup>14</sup> Presentation and interview of Kiernan Graves, Paco Link and SFMOMA's conservation staff, 21<sup>st</sup> 2021.

<sup>15</sup> Except for four new designs created with the United States in mind: a design depicting pneumatic drilling (now lost) another one named *Electric Power* and the most famous one entitled *Frozen*

*Assets*, "a potent critique of the city's economic inequities" as explained in MOMA'S website <https://www.moma.org/collection/> while the rest was a "recalentado" as Mexicans say (meaning something, reheated to eat quickly, not something quite inventive or original but rather practical ).

<sup>16</sup> Same presentation as listed in footnote 14.

from which Diego Rivera would build a 1600 square feet gigantic *Pan American Unity* mural, one of titanesque proportions. But aside from the technical and archival aspects, there were cultural and economic implications as well, so let us explore them next.

#### 4. Were Portable Murals a Good Move?

##### a) Disadvantages.

Bringing murals to the U.S. public proved problematic. When portable murals were introduced to the United States it was done with the desire to present them to a large public. At that point, Diego Rivera had painted many murals in Mexico and had created the ones here in San Francisco ("*Allegory of California*" in 1930 at the Pacific Stock Exchange and "*The Making of a Fresco Showing the Building of a City*"<sup>17</sup> in 1931).

Although the American public at large had the occasion to learn about Mexican arts through varied exhibitions, most notably at the California Palace of the Legion of Honor in 1930 displaying the artworks of over a hundred artists and the "Mexican Arts" exhibit and at the Metropolitan Museum Art in 1930, the US public had not been introduced to in situ murals yet, aside from documentary photographs displayed in Mexican art exhibits<sup>18</sup> generating much interest. But those documentary photographs did not give the Mexican murals justice, as people could not experience the true sense of their monumental scale, nor could they assess their artistic materiality.

Still, the reputation gained by Mexican arts and crafts as well as Diego Rivera's public persona generated much press in the United States. The public was curious about Mexican murals and had a desire to see them take shape in the United States. So being able to see murals by Diego Rivera became a reality for the US public, when he created his portable series for the New York Museum of Modern Art.

But topically wise Rivera's portable MOMA murals were historical vignettes that were separated and hung within the walls which re-depicted some of Rivera's favored topics such as the *Agrarian Leader Zapata* or *Indian Warrior*<sup>19</sup>. In addition to these Mexican themes, new portable murals were created to suit U.S. and international political sentiments, such as one panel about people demonstrating, another two panels about American industry and a mural entitled *Frozen assets*, hinting at the U.S. stock exchange crash.

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<sup>17</sup> Interview Chris Carlson, *Shaping of San Francisco Archive* @found sf.org [D. Rivera in San Francisco](#)

<sup>18</sup> Indyck-López, A, *Muralism Without Walls, Rivera, Orozco and Siqueiros in the United-States, 1927-1940* University of Pittsburgh Press, 2009. Page 77.

<sup>19</sup> The designs for these were originally conceived for the Palace of Córtez in Cuernavaca, as well as murals located in the Secretaria de Education, Mexico City). See the images of the 1931 MOMA portable frescos exhibit here: <https://www.moma.org/audio/playlist/259>

And however interesting these fresco panels were, overall they lacked narrative continuity and felt utterly divorced from the Mexican cultural context, as explained by professor Anna Indych-López in her excellent book entitled *Muralism Without Walls*. As such, a critic from the evening post noted “*Grateful as we are for the effort, we must admit that it is not the whole mountain which was moved, but only isolated peaks. For the sample frescoes, torn from their companions and from the original settings, which must mean so much to them, remain ‘samples’, out of place and isolated.*” So, as good as these portable mural panels were, they felt like fragmentary surrogates. In other words, murals were created and plopped in place but, sadly, they were divorced from the cultural context and community that allowed them to be culturally rooted.

In addition to the portable murals created by Diego Rivera for MOMA, it is important to underline that many artworks in other mediums were also created by Mexican muralists and exhibited during key Mexican-inspired shows in the 1930’s and 1940’s.<sup>20</sup> Those artworks and shows, according to professor Anna Indych-López, essentially paved the way for critics and museum goers alike to reflect about Mexican art’s revolutionary ethos. Additionally, I would stress that these shows also allowed Diego Rivera himself to reflect on his own practice within the United States, something very important in regard to the *Pan American Unity* mural.

Yes, portable murals were not only disconnected from the walls, but they were also disengaged from the cultural and governmental institutions. Additionally, it must be noted that the murals’ cultural de-contextualisation further allowed U.S. galleries and museums to present them in a rather depoliticized manner, lacking the collective revolutionary elan present in Mexico. The portable murals, however committed to certain revolutionary ideals or to indigenismo, were ultimately museologized and monetized. Yet, as much as portable murals may seem antinomic and uprooted, they nonetheless nourished a deep seated reflection about what Mexican muralism could offer here in the United States at large and left a rich legacy.

### **b) Advantages**

Portable murals generated a zeitgeist favorable to their construction because they became powerful vectors of cultural transmission. As antinomic portable murals might have been, they created a rich cultural zeitgeist in regards to Mexican arts which was part of a broader 1920’s and 30’s cultural phenomenon where arts and crafts south of the border were wildly trendsetting, as discussed by Helen Delpar in her book “*The Enormous Vogue of Things Mexican.*” Indeed, portable murals became a vector through which the U.S. public became familiar with Mexican muralism and as a technique at large. Anna Indych-López effectively summed it up as she states in her book that “*portable frescoes intervened as conduits through which the public grappled with the artist’s legacy, therein establishing a critical dialogue between the murals*

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<sup>20</sup> Indych-López, A, *Muralism Without Walls, Rivera, Orozco and Siqueiros in the United-States, 1927-1940* University of Pittsburgh Press, 2009.

*produced in Mexico and the artist's production in the United States.*” So, while the portable murals might have had tentative beginnings and faced thematic, iconographic, and technical limitations, they nonetheless allowed for the growth of an increasingly savvy U.S. public.

Additionally, the showing of Mexican art and Mexican muralism in the United States also reaffirmed U.S. artists' desire to search for an identity of their own and that meant an American cultural identity separate from Europe. Mural works by Diego Rivera essentially fortified the spirit of U.S. muralism and Pan Americanism. And today, the Pan American cultural fusion and rich shared history is painted on the walls of San Francisco and the Bay Area at large. Indeed, the region owns many New Deal era murals, as well as contemporaneous ones such as the women's building mural on 18<sup>th</sup> Street *Maestrapeace*, by Juana Alicia's 1994-1996 and another six other "mujeres muralistas" and other key Bay Area artist like Johanna Poethig. In short, the rich legacy of Mexican muralism would have not been possible without these antinomic and out of place portable murals created by Diego Rivera.

## 5. Why A Mural On The Move?

The creation of the *Pan American Unity* mural was preceded by many discrete first steps and was born in flux from the get go. First, the mural was created in 1940, something we can define as an historical crucible, where Europe was at war, and when the American people debated U.S. neutrality. Second, the mural was made for an international exhibition: the 1940 Golden Gate International Exposition that showcased a cultural show-and-tell called “Art in Action” where the grand public could watch Diego Rivera paint the *Pan American Unity* mural in situ at the Treasure Island fair. The idea was for the mural to be housed permanently at the San Francisco Junior College’s library. However, new war time regulations put a stop to non essential buildings and the mural was then put in storage for decades. Finally, in 1961 the project to show it was revived and it was moved again and installed in 1961 in the new performing arts theater building’s lobby<sup>21</sup>, being shown there for six decades. Then in June of 2021 it was moved to the San Francisco Museum of Modern Art, who is hosting it now.

It is ironic to think that as big as this mural was (a 15 tons monster, that ultimately doubled its weight with the protective structures added to it by conservators) was moved and installed twice. As such, San Francisco City College and admirers of this unique mural are very grateful to the SFMOMA’s conservation team and crews of international experts for having worked over two years to prepare for the 2021 move, a setting very complex agenda, work structure and experts to not only move it and install it but also to document every aspect of it at great lengths.

## 6. What Did the Relocation of Such Monumental Artwork Entail?

### a) Gathering Data Before the Big Move

First, the move of the mural (ten panels in total) required a transnational cooperation between Mexico and the U.S.A., more specifically between a team of engineers and engineering students from the Universidad Nacional Autónoma de México (spearheaded by Doctor Ramírez-Reivich)<sup>22</sup> as well as SFMOMA’s conservation team headed by Michelle Barger and her team, along with the two key consultants Paco Link (SFMOMA’s consulting Diego Rivera Mural Project manager) and Kiernan Graves (Consulting Mural Conservator), both gifted with tremendous experience, skills, and a passion for this artwork and Mexican muralism at large.

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<sup>21</sup> : San Francisco City College, docent program. <https://www.ccsf.edu/campus-life/arts-ccsf/pan-american-unity-mural>

<sup>22</sup> New York Times article, How Do You Move a 30-Ton Diego Rivera Fresco? Very Carefully. June 26, 2021, by Carol Pogash. Section C of the newspaper. <https://www.nytimes.com/2021/06/22/arts/design/diego-rivera-mural-sfmoma.html>

But before moving the mural, the crew worked for two continuous weeks around the clock by analyzing the pigments<sup>23</sup> with different forms of imaging<sup>24</sup> in order to generate multifaceted data to better conserve the mural. Then vibration studies were made by the mechanical engineering UNAM<sup>25</sup> team to understand the effects of vibrations in real time. For this, the UNAM team analyzed the mural at City College and then reconstructed a full scale three-dimensional replica in Mexico City at their UNAM engineering quarters.

#### **b) De-installation of the Mural**

Each of the mural's panels was de-installed separately and coated with a waxy organic material called cyclododecane in order to protect the mural's surface. As explained by Kiernan Graves, this organic compound is gifted (in my mind) with a quasi-magic ability. Cyclododecane is able to sublime! What that means is that it essentially disappears from the surface over time. Additionally, each panel was affixed with surface sensors connected to microprocessors that enabled the conservation crew to visually see real time imaging while recording this data for further study. As explained by the SFMOMA conservation team, the idea was to use optimal thresholds of safety. Therefore, the rule applied to all the methods was to use three to four times more safety than the known current safe level. Additionally, engineers gave the artwork a rest and stopped drilling as well as pushing or pulling whenever deemed necessary. And before the lifting of each panel even began, the UNAM crew had prepared and rehearsed lifting scenarios with their real life replica in order to identify the optimal grabbing method that would exert the least tension possible. Then, each panel was delicately dislodge separately and rolled safely onto a steel armature while monitoring the vibrations in real time.

But if the mural panels were designed to last for centuries, the building and the construction of the architectural holding methods at San Francisco City College hosting the mural were not<sup>26</sup>. The way the mural was initially installed presented added difficulties to the crew, such as the metal structure which had fused to the back of the mural at one spot in particular making the de-installation much more complicated as well as lengthy.

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<sup>23</sup> Presentation and interview of Kiernan Graves, Paco Link and SFMOMA's conservation staff, April 21<sup>st</sup> 2021

<sup>24</sup> The UNAM and SFMOMA teams used UV imaging, false color infrared, multispectral imaging, X Ray fluorescence spectroscopy along with high tech tools such as a fiber optic microscope used for analyzing the surface. To learn more about imaging, consult Chi Cultural Heritage Imaging's website on this project. <https://exhibits.stanford.edu/rivera/feature/2d-color-and-shape-from-3d-data>

<sup>25</sup> UNAM stands for Universidad Nacional Autónoma de México.

<sup>26</sup> Presentation and interview of Kiernan Graves, Paco Link and SFMOMA's conservation staff, April 21<sup>st</sup> 2021

### c) The Move Redux

The method of transport of the *Pan American Unity* mural was also carefully planned and calculated, as Paco Link (project manager) puts it, is like transporting “a 70-foot eggshell”, a risky business, for sure. The moving and transport involved a rigging crew with plus 30 years of experience, engineers, and a truck equipped with wire rope isolators<sup>27</sup> going at snail pace of five miles per hour displacing just one panel per day<sup>28</sup>. As aptly as the New York Times article puts it: “*How Do You Move a 30-Ton Diego Rivera Fresco? Very Carefully.*”<sup>29</sup>

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<sup>27</sup> These industrial coils are built to specifications depending on the mass of the object to be

transported, such coils are used for satellites when they need to gently nestle into space rockets. The wire rope isolator /coils allow for gentle release as they reduce vibrations.

<sup>28</sup> These coiled isolators are built based on the objects’ shape, weight and other specifics to permit optimal isolation. Same presentation as listed in footnote 14.

conservation staff, April 21<sup>st</sup> 2021.

<sup>29</sup> New York Times article, *How Do You Move a 30-Ton Diego Rivera Fresco? Very Carefully.* June 26, 2021, author Carol Pogash. Section C of the newspaper.

<https://www.nytimes.com/2021/06/22/arts/design/diego-rivera-mural-sfmoma.html>

In conclusion, when we think of the *Pan American Unity* mural it is a work of paradoxes. It is an antinomic mural made to move, yet a delicate giant. It is a Mexican mural in the United-States, yet clearly rooted in the Americas and still it is a mural without a wall.

But as full of contradictions as the *Pan American Unity* mural may appear to be, it is rooted in our Pan American histories. It is firmly grown in the Bay Area where Mexican muralism set an important historical legacy in motion and became an inspirational model for the Great Depression's Work Progress Act. Both Mexican and American murals provided a sense of local as well as Latinx and Chicanx pride while nourishing our own brand of muralism here in San Francisco, and particularly the Mission District. In short, the *Pan American Unity* mural is not only thematically rich but also complex in its technical development and history. It is at the heart of San Francisco City College's existence and thus we are its collective guardians. It does not cease to inspire us as we continuously study it and share its artistic and technological power through lesson plans such as this one and through our varied Latin American themed courses<sup>30</sup> and initiatives such as the Diego Rivera Mural docent program.<sup>31</sup>

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*I would like to express my gratitude to San Francisco Museum of Modern Art's staff at large but in particular to the conservation team and their deputy director Michelle Barger head of Conservation (generous as always), special consultants, Paco Link and Kiernan Graves as well as the director of public engagement Tomoko Kanamitsu and Claire Bradley, Senior Program Associate, Public Talks and Tours for allowing me to access important data and generously responding to my many questions with patience and insightfulness. Finally, a special thanks is due to Nicole Oest, art history professor at San Francisco City College, for her guidance and support in this project.*

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<sup>30</sup> San Francisco City College courses: ART 105: Ancient Art and Architecture of Latin America. ART 106: Latin American Art History. LALS 14 - Diego Rivera; Art and Social Change in Latin America. For a complete list of these multifaceted Latin American focused courses, please consult the CCSF course catalog.

<sup>31</sup> San Francisco City College Mural Project is directed by Nicole Oest and animated by spirited student docents. <https://www.ccsf.edu/campus-life/arts-ccsf/pan-american-unity-mural>

# Curriculum Related Ideas

## ENTIRE CLASS ONLINE DISCUSSION

**QUESTION 1:** *Opinion question mental and affective warm-up*

What ideas, events or facts marked you the most in this lesson in regards to the *Pan American Unity* mural? Define clearly, do not regurgitate the lesson, but instead think critically, reflect, share a little more about your own personal thoughts, spell check, highlight the sustained vocabulary.

*Minimum of 2 to a maximum of 3 fleshed out paragraphs*

**QUESTION 2:** *Analytic thinking*

It seems that portable murals are illogical and that trying to transplant a Mexican cultural experiment into a different cultural context (the USA) would be ridden with multifaceted difficulties along with concepts, and cultural richness lost in translation, so to speak.

Please, counter-argument this statement \* in a critically constructive way and tell us why all this undertaking by Diego Rivera was a valuable challenge? ( Please, make sure to also document yourself and also mention the title of a couple different murals (between 1920's and 1940's) that were created in the United States by one of the other "Tres Grandes" = other than Rivera and please, provide us with their date and location too).

*Illustrate your post by embedding a couple thumbnail images of other "Tres Grandes" murals produced in the USA*

1. *Include a minimum of 3 reasons.*
2. *Minimum of 2 to a maximum of 4 fleshed out paragraphs.*

8 points

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Now, you might decide that *you do not want to counter the argument and that in fact you agree with the above statement (in blue)*. So in that case, please go for it, be critical but back up your position too. Please, explain why portable murals are illogical and a failed experiment that contains inherent and irreconcilable limitations that are very negative both in the short and long run.

( Please, make sure to also document yourself and also mention the title of a couple

different murals (between 1920's and 1940's) that were created in the United States by one of the other "Tres Grandes" = other than Rivera and please, provide us with their date and location too).

*Illustrate your post by embedding a couple thumbnail images of other "Tres Grandes" murals produced in the USA*

1. *Include a minimum of 3 reasons.*
2. *Minimum of 2 to a maximum of 4 fleshed out paragraphs.*

Same points....

### **QUESTION 3:** *Analytic thinking*

The title of the lesson is "Pan American Unity Mural, A Multifaceted Move" and it means several things at once. Your goal here is to analyze and define what this title means in order to explain it.

1. Please, explain how this title is related to transportation, cultural transmission, emotion, relocation and all other sorts of "moves"...
2. Please, explain why the adjective "multifaceted" is used in this title and might suggest.
  - *Minimum of 3 to a maximum of 4 fleshed out paragraphs.*
  - *Illustrate your posts with a couple of different images of your choice demonstrating the idea of transportation, cultural transmission, emotion, relocation, make the right move. Avoid being literal in your search and choice of images or symbols. Think creatively!*

### **THREE REPLIES TO PEERS:**

Compose three different replies to peers of your choice.

*1 to 3 fleshed out paragraphs each.*

## **FOUR ASSIGNMENTS**

Students must complete 3 assignments in total, one of which must be conducted solo.

Duo style assignments will be rewarded by an extra 3 points each time. So for instance, a student might decide to do everything solo, or then they might decide to do just the one required solo and do two duos.

### **SOLO ONLY**



#### **ASSIGNMENT 1 -- CROSSWORD PUZZLE**

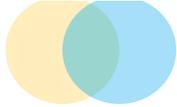
*Analytical text based learning*

Make a list of sustained vocabulary that ought to be retained from this short lesson (a minimum of 10 words) and use a website site to generate a crossword puzzle or invent your own and share with indications and empty and then the solution too.

The list below is for the teacher

1. Pan americanism
2. Antinomic
3. in situ
4. Mesoamerica
5. Casein
6. Tempera
7. Encaustic
8. Buon fresco
9. Antifungal
10. Sublimation
11. Giornata
12. Galvanized
13. Rope coil isolator
14. Pre columbian
15. Fresco secco
16. Cyclododecane

**DUO IS OK...**



**ASSIGNMENT 2 -- MAP IT OR TIMELINE IT!** *This assignment can be undertaken with a peer, in that case the grade will be shared by both.*

*Conceptual, visual and kinesthetic learning.*

Create a diagram of influences and relationships or a timeline of sorts that includes the list following events and people shown below (the list in blue below appears scrambled on purpose.)

1. First, de-scramble the events.
2. Then, create a diagram, thinking map or timeline of sorts including bubbles or footnotes. Use a minimum of 4 different symbols such as the ones shown below.
3. Draw it wherever you want, however you want, so long as all its parts are visible = invent your own solution... And also make sure to use a minimum of 4 different symbols such as the ones shown below.

You can manually draw the thinking map on brown butcher paper (2 to 4 paper bags flattened) or use any computer program of your choice. In either case, I suggest that you create a draft first to organize your facts and ideas. The final result will need to be legible, colorful, visually appealing, include icons, illustrative pictures and symbols.

Feel free to group together a series of events should it make more sense but overall strive to think in broader terms and synthetically, pondering about relationships, cause and effects, influences etc...

Symbols:

= Equal

≈ More or less equivalent

≠ Different

⇒ This provokes that

↔ Reciprocal relationship

This < is less than that

This > is more than that

Increase ↗

Decrease ↘

### **Scrambled List of Events**

1. Pre columbian mural making
2. Diego and Frida Kahlo are invited to stay at the Stern House in Atherton, San Mateo county

3. The mural is displayed at San Francisco Museum of Modern Art
4. The theme of pan American solidarity as being urgently needed to put a front against Nazi tyranny takes shape in Diego's mind because the USA was initially neutral
5. The Great Depression uses Mexican muralism as a model for cultural revival
6. Diego investigates the work of Italian Renaissance artist Giotto di Bondone
7. Diego travels to the Tehuantepec region of Oaxaca
8. *Almond Blossom* is created
9. Renaissance Italian mural making
10. *Market Scene* is created
11. Charlie Chaplin *Great Dictator* movie
12. US enters WWII
13. The mural is housed in theater and Performing arts building at San Francisco City College
14. Diego is invited to paint *The Making of a Fresco Showing the Building of a City*, now housed at the San Francisco Art Institute
15. The *Allegory of California* mural.
16. Jose Vasconcelos Mexican Secretary of Education sets in motion mural making by hiring Diego Rivera to paint "*Creación*" and then for him to paint the lion's share of the Secretaría de Education murals
17. Mrs. Elizabeth Morrow decides to offer her husband a mini mural after the completion of the Cuernavaca murals
18. Treasure Island Fair and art in action exhibit
19. Encaustic painting method allowed him to have total control and single person handling
20. MOMA portable murals shows
21. Vasconcelos thinks that Mexican artists should probably decolonize their mind and organizes a trip to Oaxaca, a very indigenously identified region.
22. The new library of San Francisco City College cannot be built because of war time regulations
23. Diego weighs techniques and thinks that buon fresco, albeit good, does require an entire crew of people working together, so decides not to opt for it...
24. The Pan American mural is stored and put in a crate.
25. The mural gets housed in theater and Performing Arts building at San Francisco City College
26. Diego uses buon fresco painting technique for the first time (and has a crew helping him).
27. Diego completes "*Allegory of California*" mural in San Francisco
28. The *Pan American Unity* mural is painted,
29. Golden Gate International Exposition
30. The mural is carefully studied before its displacement to the San Francisco Museum of Modern Art
31. The mural is re-installed and shown to the public at large.

*DUO IS OK...*



### **ASSIGNMENT 3 -- IMAGINE WHAT COULD AN INTERDISCIPLINARY INTERNSHIP DEALING WITH THE *PAN AMERICAN UNITY* AT A MUSEUM WOULD BE LIKE...**

*Creative and metacognitive learning*

Think about the technology associated with the *Pan American Unity mural*. We often think of the arts as a field that is separated from science or technology, but it is obviously not as we have seen in this lesson.

Strive to remember and make yourself a list of the varied techniques, technologies and/or professions or special skills that involved:

- The making of the mural
- The studying of the mural in preparation for removal (data collection, imaging, testing...)
- The protecting and conserving the mural
- The transporting of the mural
- The reinstallation of the mural

After doing this list, you will surely be reminded how this Pan American was such a very STEAM undertaking ... STEAM stands for Science - Technology - Engineering - Arts and Mathematics. for a project or ways of thinking that integrates. STEAM ways of thinking are interdisciplinary and interconnected and privilege creativity, inquiry, observation, problem solving, as well as going back and forth between theory and practice (informing one another).

So, write a bulleted list of at least 10 techniques, technologies and - or professions or roles that were related to sciences, technology or engineering skills and organize them in thematic groups of your choice with a descriptive title each.

Now, imagine that somehow, somewhere a museum dealing with and moving an artwork of titanesque proportions like the *Pan American Unity* mural would create a couple of *interdisciplinary* museum internships for junior college students to apply to.

This intern would work with the museum's staff and key consultants with all sorts of diverse professional STEAM backgrounds including large project managers and the museum's conservation team too!

### ***What could these two internships be?***

Think through two different types of dream internship descriptions that would interest you. Feel free to inspire yourself with varied internship descriptions that you found online (and if you did so, then provide the links.)

### **Please include the following in your description of each internship:**

1. Title of internship
2. Information regarding what departments or professionals the student would work with.
3. Description of some of the intern's tasks and responsibilities, including a suggested way that the internship would culminate to a closure, a project (in short something special.)

3 to 5 fleshed out paragraphs

Conclude by explaining which one of these two internships would be of best interest to you and why?

If undertaken as a duo, then each person must respond to this last question separately (same uploaded document OK...)

200 to 500 words explanation

### **SOLO ONLY**



### **ASSIGNMENT 4 -- DEAR DIEGO...**

*Creative and aural learning*

Imagine that you get to write a letter that would reach Diego Rivera beyond the grave so you can tell him what an interdisciplinary, collaborative and pan American feat it was to move and rehouse his mural.

Write a 2-page letter starting with: "Dear Diego, If you only knew..."

- Make sure to incorporate interesting and accurate details from the lesson as well as the New York Times' article.
- Make it informative and also fun!
- Tape your letter orally in the discussion forum with the Canvas recording tool, so that an audio will be created for your peers to listen to.

Reply to a peer's letter for extra credit.

- 2 to 3 fleshed out paragraphs
- Or you can impersonate what Diego would say (briefly tape a reply of no more than 2 minutes). In that case, preface your reply with a photographic portrait of Diego (and please, no fake Mexican accent!)

