DIEGO RIVERA'S *CREATION*: SYNTHESIS FOR A NEW NATION

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Creation, 1922–23. Encaustic with gold leaf. Anfiteatro Bolívar, Antiguo Colegio de San Ildefonso (formerly Escuela Nacional Preparatoria), Mexico City

Diego Rivera left Mexico for Spain in 1907 and went on to spend more than a decade in Paris, experimenting with Symbolism and Pointillism before emerging as a leading cubist painter.[1] By the time he returned to Mexico, in June 1921, he had abandoned abstraction for the "return to order" that shaped so much postwar French painting; his novel figurative approach would combine aspects of his cubist experiments, his close study of the work of Paul Cézanne and Pierre Auguste Renoir, and his exploration of how the Italian masters had deployed the golden ratio in their compositions.[2] Before returning home, Rivera traveled through Italy for three months, studying fresco painting and noting the color and spatial relationships in Etruscan and Byzantine art, as well as in Renaissance works by Titian and Tintoretto, among others.[3] That study trip was financed by the Mexican government through the educational and cultural program directed by José Vasconcelos, then rector of the Universidad Nacional de México.[4] In a letter to Vasconcelos, Rivera noted the "crucial importance" of his travels: "Here one feels, sees, touches, and apprehends how the diverse materials manipulated by the different crafts unite, collaborating with, merging within, and exalting each other; until they make of the whole—building, city—a sum total that is function and expression of life itself, a thing born of the soil."[5]

Using the durable medium of encaustic, Rivera painted *Creation* in the Anfiteatro Bolívar, the auditorium of the Escuela Nacional Preparatoria, between March 1922 and March 1923. A close technical and iconographic study of the mural, along with related sketches, drawings, and cartoons, has revealed new insights into Rivera's meticulous approach and creative process, and into the mural's specific meanings.[6] The title and iconography allude to the creation of the world in the biblical sense, and to intellectual or artistic invention at a crucial moment following the Mexican Revolution. Most importantly, Rivera based *Creation* on the concept of synthesis, visual and symbolic, spatial and conceptual. His program referenced diverse historical precedents, from the Byzantine mosaics of Ravenna to Mexico's folk art traditions, all filtered through his avant-garde perspective. This complex approach not only reflected theories fundamental to the Parisian avant-garde (such as Synthetic

1. Leading sources on this early period are Ramón Favela, *El joven e inquieto Diego María Rivera (1907–1910)* (Mexico City: Museo Estudio Diego Rivera, INBA, Editorial Secuencia, 1991); Ramón Favela, *Diego Rivera: The Cubist Years,* exh. cat. (Phoenix: Phoenix Art Museum, 1984); and Olivier Debroise, *Diego de Montparnasse* (Mexico City: Fondo de Cultura Económica, 1979).
2. I discuss the 1917–21 period in Sandra Zetina, "Pintura mural y vanguardia: *La Creación* de Diego Rivera" (PhD diss., Universidad Nacional Autónoma de México, 2019), 132.248.9.195/ptd2019/junio/0790256/Index.html. This study, currently being revised for publication, is based on a close technical examination as well as historical analysis, situating *Creation* as a foundational work of the Mexican avant-garde rather than the end of Rivera's Parisian period.
3. On this trip, see Clara Bargellini, "Diego Rivera en Italia," *Anales del Instituto de Investigaciones Estéticas* 17, no. 66 (1995): 85–135; Clara Bargellini, "Diego Rivera e l'arte etrusca," in *Studi in onore di Michele D'Elia: Archeologia, arte, restauro e tutela archivistica,* ed. Clara Gelao (Matera, Italy: R&R Editrice, 1996); and Jean Charlot, "Diego Rivera in Italy," *Magazine of Art* 46, no. 1 (January 1953): 3–10; available at the Jean Charlot Foundation website, jeancharlot.org/english-texts.
4. Rivera and Vasconcelos were introduced by Alfonso Reyes and Alberto J. Pani, Mexican ambassadors in Madrid and Paris, respectively. For the mural, Rivera was paid two thousand pesos in gold. José Vasconcelos to the Treasurer of the Nation (telegraphic authorization), November 24, 1920, Archivo de la Secretaría de Educación Pública, Archivo General de la Nación (hereafter Archivo SEP).
5. Rivera to Vasconcelos, January 13, 1921, translated in Jean Charlot, *The Mexican Mural Renaissance, 1920–1925* (New Haven, CT: Yale University Press, 1963), 128. The original letter is in the Archivo SEP.
6. Prior studies include Julieta Ortiz Gaitán, "El pensamiento vasconcelista en el mural *La Creación,*" and Alma Lilia Roura, "Aguas Diego, ahí viene Lupe: Las modelos de Diego en San Ildefonso," in *Memoria: Congreso internacional del muralismo: San Ildefonso, cuna del Muralismo Mexicano: reflexiones historiográficas y artísticas* (Mexico City: Antiguo Colegio de San Ildefonso, 1999), 91–105; Dina Comisarenco Mirkin, "*La Creación* by Diego Rivera," *Aurora: The Journal of the History of Art* 7 (2006): 35–61; and Juan Rafael Coronel Rivera, "Una historia esencial del hombre," in *Diego Rivera: The Complete Murals,* ed. Luis-Martín Lozano and Juan Rafael Coronel Rivera (Cologne: Taschen, 2008), 9–33. See also Justino Fernández, *Arte moderno y contemporáneo de México* (Mexico City: Imprenta Universitaria, 1952), 314–17; and Olivier Debroise, *Figuras en el trópico, plástica mexicana 1920–1940* (Barcelona: Océano, 1983), 37–43.

Cubism) but also Vasconcelos's theorization of a new Mexican culture based on a blending of local and universal forms and meanings.

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Although the contract for *Creation* has not been located, the French-born painter Jean Charlot, one of Rivera's assistants on the mural, later recalled that Vasconcelos asked Rivera to provide written descriptions before giving his final approval, revealing that the mural's iconographic program emerged in close collaboration between artist and patron.[7] Rivera's texts, one published by the Secretaría de Educación Pública in 1923 and another in the journal *El Arquitecto* two years later, are essential to deciphering the meanings of many of the allegorical figures in the mural, which bear none of their traditional attributes.[8] The former also provides a succinct description of his overall theme: "the relationship between Mankind and the Elements, that is to say, the origin of the Sciences and the Arts; in a manner of speaking, a kind of essential abbreviation of man."[9]

Rivera's texts describe the composition from bottom to top, starting with the figures of Man and Woman—perhaps representing Adam and Eve—who vertically divide the mural into allegorical figures Rivera associated with "feminine" virtues (on the left) and "masculine" virtues (on the right). On the feminine side are muses representing the performing arts (Music, Song, Dance, and Comedy), along with the spiritual or theological virtues (Charity, Hope, and Faith). Grouped together on the masculine side are the intellectual arts (Knowledge, Fable, Erotic Poetry, Tradition, and Tragedy), accompanied by the cardinal virtues (Continence, Fortitude, Justice, and Prudence).[10] On the uppermost level, two floating figures embody the highest forms of intelligence: Science on the masculine side, Wisdom on the feminine.[11] These angelic figures flank an abstract image of divinity, a cosmic circle not unlike those found in the Byzantine churches Rivera had seen in Ravenna (figs. 1 and 2). A golden spark illuminates the celestial dome with constellations in the form of a pentagon and a hexagon; the cosmic whole is encircled by a rainbow.

This arched composition is placed above a shallow acoustic shell that originally housed an organ. Here, equally inspired by Byzantine mosaics, Rivera placed a nude man with open arms, which he referred to as the Pantocrator, the all-powerful Christ, accompanied by a tetramorph showing the four emblems of the evangelists: cherub (Matthew), eagle (John), lion (Mark), and ox (Luke). On the side walls of this section, which are not visible from the seats, is another tetramorph featuring animals typical of Mexican tropical rain forests: pink egret, harpy eagle, puma, and jaguar.[12]

The dense, hierarchical arrangement of the figures in *Creation* may reflect Rivera's study of Raphael's Stanza della Segnatura (1508) in the Vatican or similarly tiered compositions created by other Renaissance artists for libraries. Like Raphael, Rivera inserted portraits of his contemporaries into an otherwise timeless and abstract world where the muses and virtues represent the cosmic scales of knowledge, which progress from human to divine: men are found at ground level,

Fig. 1 Angels with medallion, mid-6th century. Mosaic. Basilica of San Vitale, Ravenna, Italy

Fig. 2 *Creation,* 1922–23 (detail). Encaustic with gold leaf. Anfiteatro Bolívar, Antiguo Colegio de San Ildefonso (formerly Escuela Nacional Preparatoria), Mexico City

7. Charlot wrote that Rivera's "lengthy explanation" was "redacted for Vasconcelos' approval," revealing an "intellectual planning as thoughtful as any known in more scholastic ages." Charlot, *Mexican Mural Renaissance,* 136. Charlot's firsthand account remains the foundation for all later interpretations.
8. Diego Rivera, "Las pinturas decorativas del Anfiteatro de la Preparatoria," *Boletín de la Secretaría de Educación Pública* 1, no. 3 (January 18, 1923), republished in Diego Rivera, *Obras*, vol. 1, *Textos de arte,* ed. Xavier Moyssén (Mexico City: El Colegio Nacional, 1996), 39–42; and Diego Rivera, "El Anfiteatro de la Escuela Nacional Preparatoria," *El Arquitecto* 2, no. 4 (September 1925), republished in Rivera, *Textos de arte,* 74–76.
9. Rivera, "El Anfiteatro de la Escuela Nacional Preparatoria," 74.
10. Although Rivera never referred to these figures as muses, parallels are easily drawn: on the feminine side, Comedy/Thalia, Dance/Terpsichore, Song/Calliope, Music/Euterpe; on the masculine side, Tradition/Clio, Tragedy/Melpomene, Erotic Poetry/Erato, Knowledge/Urania, Fable/Polyhymnia.
11. In his annotations to sketches for the mural, Rivera used the French word "Sagesse" to describe this figure.
12. Rivera painted the jungle scene after he interrupted the project to travel to the Yucatan with Vasconcelos; see Oles, "From Murals to Paintings: Scenes of Everyday Life," in this volume.

muses appear atop Mount Parnassus, and virtues are raised to celestial heights.[13] But Vasconcelos's ideas on aesthetics and pedagogy, drawn from sources as diverse as Pythagoras, Anatoly Lunacharsky, Rabindranath Tagore, and Leo Tolstoy, are also of central importance here.[14] Vasconcelos believed that true revolution and resistance to the cultural dominance of the United States could be achieved through the arts, both as cosmic pedagogy and a means to create a new culture, national as well as universal.[15] By revisiting the Neoplatonic concept of the cosmic scales of knowledge, blending pagan and Christian elements in an ascending hierarchy, Rivera underscored his patron's particular understanding of creativity itself.

Creation is marked by a second and equally fundamental idea formulated by Vasconcelos—that a new and universal Mexican Classicism would combine the best artistic elements from the classical world, Europe, America, and Asia.[16] Rivera thus drew on the Hellenic past, the Italian Renaissance, Mexican folk culture, and Buddhist meditation postures (mudras), among other sources. He also referenced Vasconcelos's theories of racial diversity and the generation of a new synthetic "cosmic" race by showing individuals with characteristics then associated with Mexico's different regions, placing them on a chromatic scale ranging from figures with almost greenish complexions and blond hair to those with brown skin and dark hair. The masculine figure at the center represents the "ideal" synthesis of this notion of racial and cultural diversity, set within a lush Mexican landscape.

Rivera portrayed Mexican women of different social classes in *Creation,* a strategy that complicates his depiction of race. He associated profession, social origin, and political position, as well as physical traits, with the specific virtue or art represented by each allegorical figure. Some of the women who modeled for these figures were well-known feminists or contributors to the creation of a post-revolutionary culture as artists, dancers, composers, writers, comedians, poets, philosophers, or lawyers, exemplars for the new Mexican woman.[17]

For his models on the feminine side of the mural, Rivera chose stage performers or musicians renowned for their beauty. María Dolores Asúnsolo, who was born to a wealthy family and then became a dancer and later the movie star Dolores del Río, posed for Music (pl. 3). The model for Comedy was the actress and comic soprano Lupe Rivas Cacho, dressed in the mural—albeit subtly—as a *china poblana,* as she appeared playing street vendors and maids in performances at the Teatro Lírico.[18] Dance is embodied by Julia Alonso de Dreffes, an organ player and composer who taught at the Escuela Nacional Preparatoria and practiced what was known as the *fe solidarista,* a cult led by her husband that combined theosophical

13. On the concept of the cosmic scales of knowledge, see Ernst Gombrich, "Raphael's Stanza della Segnatura and the Nature of Its Symbolism," in *The Essential Gombrich: Selected Writings on Art and Culture,* ed. Richard Woodfield (London: Phaidon, 1996), 485–514; and Jean Seznec, *The Survival of the Pagan Gods: The Mythological Tradition and Its Place in Renaissance Humanism and Art* (New York: Pantheon, 1953), 139–40.
14. Claude Fell, *José Vasconcelos: Los años del águila (1920–1925): Educación, cultura e iberoamericanismo en el México postrevolucionario* (Mexico: Universidad Nacional Autónoma de México, 2009); and Fabio Moraga Valle, "Las ideas pedagógicas de Tolstoi y Tagore en el proyecto vasconcelista de educación, 1921–1964," *Historia mexicana* 65, no. 3 (2016): 1341–1404.
15. José Joaquín Blanco, *Se llamaba Vasconcelos: Una evocación crítica* (Mexico City: Fondo de Cultura Económica, 2013), 71.
16. In the Secretaría de Educación Pública, the site of Rivera's next mural, sculptural reliefs by Manuel Centurión feature philosophers and spiritual leaders from all over the globe: Buddha (Asia), Plato (Greece), Quetzalcoatl (Mexico), and Bartolomé de las Casas (Spain).
17. Rivera identified five of these models: Guadalupe Marín, Nahui Olin, Lupe Rivas Cacho, Luz Jiménez, and Dolores del Río. Loló de la Torriente, *Memoria y razón de Diego Rivera,* 2 vols. (Mexico City: Editorial Renacimiento, 1959), 2:175–76. To identify the other models in the mural, I consulted photographs and other documentary sources from the period. See Zetina, "Pintura mural y vanguardia," 66–108. Amado de la Cueva and David Alfaro Siqueiros both posed for the lone male figure, whose face is concealed. David Alfaro Siqueiros, *Me llamaban el Coronelazo* (Mexico City: Editorial Grijalbo, 1977), 199.
18. Rivas Cacho said in 1920 that her favorite character was the *garbancera*—an Indigenous or mestiza person who worked in domestic service. Alberto Dallal, "Lupe Rivas Cacho, socióloga," *Revista de la Universidad de México* 506–7 (March–April 1993): 43.

ideas and disciplinary practices from the East.[19] She also appears as Charity, a figure Rivera derived from Donatello's sculpture of the Penitent Magdalene, with the added gesture of nursing, characteristic of Roman allegories of charity. Hope (pl. 4) was personified by the incendiary María Luisa Marín, an anarchist and feminist leader who helped launch a major protest by renters in Veracruz in early 1922.[20]

The figures on the masculine side of the mural were represented by women known as writers, poets, or academics. Science is Gabriela Mistral, a Chilean teacher and poet whom Vasconcelos had invited to Mexico City in 1922 to collaborate on his educational and cultural program;[21] Knowledge is Palma Guillén, the first woman to obtain a doctoral degree in the humanities in Mexico; and Justice is Esperanza Velázquez Bringas, a lawyer who was then director of the Biblioteca Nacional. The poet and artist Nahui Olin modeled for Erotic Poetry with a teary-eyed gaze (fig. 3), while Julieta Iglesias, the wife of critic Jorge Juan Crespo de la Serna, posed for Prudence.[22]

Two women appear in multiple guises on both sides of the mural. Rivera's favorite muse was his wife Guadalupe (Lupe) Marín, a native of Guadalajara with connections to that city's Círculo Bohemio, whom he saw as an embodiment of mestizaje. Rivera was fascinated by her face but even more by her hands (see pl. 165), which, according to the painter, had a "strange and extra-human beauty whose effect verged on horror."[23] He also described her using animal metaphors, many associated with pre-Hispanic culture, such as an Olmec-Zapotec mask with a feline mouth; the body of a mule, kangaroo, mare, or tiger; or the claws of a bird of prey or the black, flaring mane of a horse.[24] Marín posed nude for the figure of Woman, a robust Eve with mestizo features. Unlike fin-de-siècle stereotypes of femininity that featured delicate, pale, passive women, Rivera's Marín is a force of nature, representing the instinctual qualities sought by so many modernists: she bares her teeth, and her wide hips and strong legs recall the abstract forms of his friend Amedeo Modigliani's archaic caryatids (fig. 4).[25] Rivera also depicted Marín as Song and emphasized her masculine aspect in Fortitude, where she appears with the cropped hair and sword of Joan of Arc.

Another important model was Luz Jiménez, an Indigenous woman from Milpa Alta who spoke an ancient variant of Nahuatl that connected her directly to the ancient Mexica (or Aztec) civilization.[26] In *Creation* Jiménez represents concepts that Rivera and his contemporaries associated with Mexico's Indigenous population:

Fig. 3 Study for *Creation* [Head of the figure of Erotic Poetry], 1921. Chalk and charcoal on paper, 24 13/16 × 18 7/8 in. (63 × 48 cm). Museo Frida Kahlo, Mexico City

Fig. 4 Amedeo Modigliani, *Caryatid,* 1914. Gouache and ink on paper, 22 3/4 × 18 1/2 in. (57.8 × 47 cm). The Museum of Modern Art, New York, bequest of Mrs. Harriet H. Jonas

19. Rosendo Salazar, *Las pugnas de la gleba,* 2 vols. (Mexico City: Partido Revolucionario Institucional, 1972), 1:207–8.
20. On María Luisa Marín (no relation to Guadalupe Marín), see Andrew Grant Wood, "Postrevolutionary Pioneer: Anarchist María Luisa Marín and the Veracruz Renters' Movement," *A Contracorriente: Revista de historia social y literatura de América Latina* 2, no. 3 (2005), acontracorriente.chass.ncsu.edu/index.php/acontracorriente/article/view/83. Marín was famous for the two blonde braids with which she is depicted in the mural, although the related drawing (pl. 4) shows a woman with dark hair. The drawing is dedicated to "Mme. Proal"; the use of Marín's married name further confirms her identity here.
21. Mistral participated in the cultural missions, visited rural schools, and collaborated on SEP publications like *El Maestro* and the anthology *Lecturas para mujeres*. Fabio Moraga Valle, "'Lo mejor de Chile está ahora en México': Ideas políticas y labor pedagógica de Gabriela Mistral en México (1922–1924)," *Historia mexicana* 63, no. 3 (2014): 1181–1247.
22. The drawing identified as that of the left hand of Fable (pl. 12) presents something of a dilemma, as the position of the hand is slightly different from that in the mural. Perhaps this is due to an assistant's error, or it is possible that the hand was drawn in the studio and not used, since as Rivera signed the drawing, the hand position is inverted vis-à-vis the mural.
23. De la Torriente, *Memoria y razón de Diego Rivera,* 2:180–82.
24. De la Torriente, *Memoria y razón de Diego Rivera,* 2:182.
25. The deeply problematic ideas of savage beauty and of woman as natural force were central to cubist practice, allowing artists—in a world shaped by colonialism—to reconnect with what they believed to be their own primal instincts. See Patricia Leighten, *The Liberation of Painting: Modernism and Anarchism in Avant-Guerre Paris* (Chicago: University of Chicago Press, 2013), 86–93.
26. Jiménez was an "informant" for various scholars, ethnographers, and anthropologists studying Nahuatl. See Miguel León Portilla, "Lecturas de la palabra de doña Luz Jiménez," *Estudios de Cultura Náhuatl* 23 (1993): 343–59. See Oles, "Luz Jiménez, Weaver," in this volume.

Fig. 5 Edward Weston, *Guadalupe Marín de Rivera,* 1923. Gelatin silver print, 8 3/16 × 7 1/16 in. (20.8 × 17.9 cm). Iris & B. Gerald Cantor Center for Visual Arts at Stanford University; The Capital Group Foundation Photography Collection at Stanford University

Fig. 6 Preliminary sketch for *Creation,* 1921 (detail, pl. 1). Escuela Nacional de Artes Plásticas, Universidad Nacional Autónoma de México, Mexico City

Faith, Tradition, and Wisdom. The artist aged the model's features to add drama to the image of Faith, which was greeted with amazement and enthusiasm by critics.[27]

The portraits that appear in *Creation* would become a constant in Rivera's later work. His use of recognizable models served a radical avant-garde strategy, elevating the Indigenous figure to the realm of allegory. Rivera's greatest provocation was to depict heroic figures with traits considered mestizo or "purely" Indigenous, characteristics that were then barely visible in modern Mexican art, much less in idealized form on public walls. Such was the power of these images that, shortly after *Creation* was painted, photographer Edward Weston used some of the same models—Luz Jiménez, Lupe Marín, Nahui Olin—to create heroic portraits, sometimes echoing the expressions they held in Rivera's mural (fig. 5). In *Creation,* Rivera thus began to contemplate the construction of a new ideal body of the nation; in subsequent works, especially his murals in the Secretaría de Educación Pública, figures with Indigenous traits would become far more central.

Rivera's choice of technique for *Creation* further relied on the notion of synthesis. He chose encaustic because the heated wax combined with pigments allowed a brilliant palette. The medium had been known since antiquity, and he appears to have consulted various artists' treatises, given that his sketches, drawings, and cartoons employ compositions in the manner prescribed in painting handbooks by Cennino Cennini and Francisco Pacheco. At the same time, Rivera "nationalized" the wax-based formula used by classical artists by adding Mexican copal resin to the mix, while modernizing the process by applying the paint to reinforced concrete, which had been used for the walls of the auditorium.[28]

Surviving preparatory drawings reveal Rivera's creative process as he approached mural making for the first time, assisted by Jean Charlot as well as Carlos Mérida, Xavier Guerrero, and Amado de la Cueva. Rivera began with simple sketches in pencil, made with quick, loose gestures.[29] Then, using a square and a compass, he created more-precise drawings, annotated with measurements and other observations, that allowed him to create a harmonic composition based on the golden ratio (fig. 6 and pl. 1). In the margins of one drawing, Rivera composed a small diagram of the golden ratio and added notations to mark the golden points: "SO," referring to the French *section d'or,* and "P.H.," alluding to the Greek letter phi (φ) associated with the golden ratio. Because the drawing was to scale, it could be used to transfer the design to the wall through a technique known in Mexico as *cordonazo,* in which a string covered with powdered chalk or pigment was snapped against the wall to replicate the square and compass, with no need for a grid.

Rivera created around forty full-size cartoons for *Creation*: seventeen are studies of faces and twenty-three of arms and hands, all of which required more careful elaboration than the drapery-covered bodies. These were done in a temporary studio set up in November 1921 at the nearby Colegio de San Pedro y San Pablo.[30] The cartoons were drawn on thick paper that resists tearing, since they

27. The poet José D. Frías was astonished by the "cartoons with powerful and expressive Indian heads, where hands of amazing strength and vigorous intention that nobody could dream of, give us the impression of our race. They have a monumental character, as if made of hard obsidian stone; they recall the tumultuous and quiet life of the stone ornaments at Teotihuacan, where serpent heads seem to emerge from the pyramids." Juan del Sena [José D. Frías], "Notas artísticas: Diego Rivera en el Anfiteatro de la Preparatoria," *El Universal Ilustrado* (Mexico City) 5, no. 257 (April 1922): 26, 47.
28. The Anfiteatro Bolívar (1910, architect Samuel Chávez) forms part of an addition to the eighteenth-century Colegio de San Ildefonso, which housed the Escuela Nacional Preparatoria. On the role of copal, see Diego Rivera and Juan O'Gorman, *Sobre la encáustica y el fresco* (Mexico City: El Colegio Nacional, 1993), 19; and Sandra Zetina, "Diego Rivera's Revival of Encaustic Painting: The Use of Wax in Mexican Avant-Garde Painting," in *Expression and Sensibility: Art Technological Sources and the Rise of Modernism: Proceedings of the Seventh Symposium of the ICOM-CC Working Group on Art Technological Source Research,* ed. Christoph Krekel, Joyce H. Townsend, Sigrid Eyb-Green, Jo Kirby, and Kathrin Pilz (London: Archetype, 2018), 58–65.
29. For early sketches, see *Diego Rivera: 50 años de su labor artística,* exh. cat. (Mexico City: Instituto Nacional de Bellas Artes, 1951), 317; and *Diego Rivera: The Complete Murals,* 11.
30. De la Torriente, *Memoria y razón de Diego Rivera,* 2:166–67.

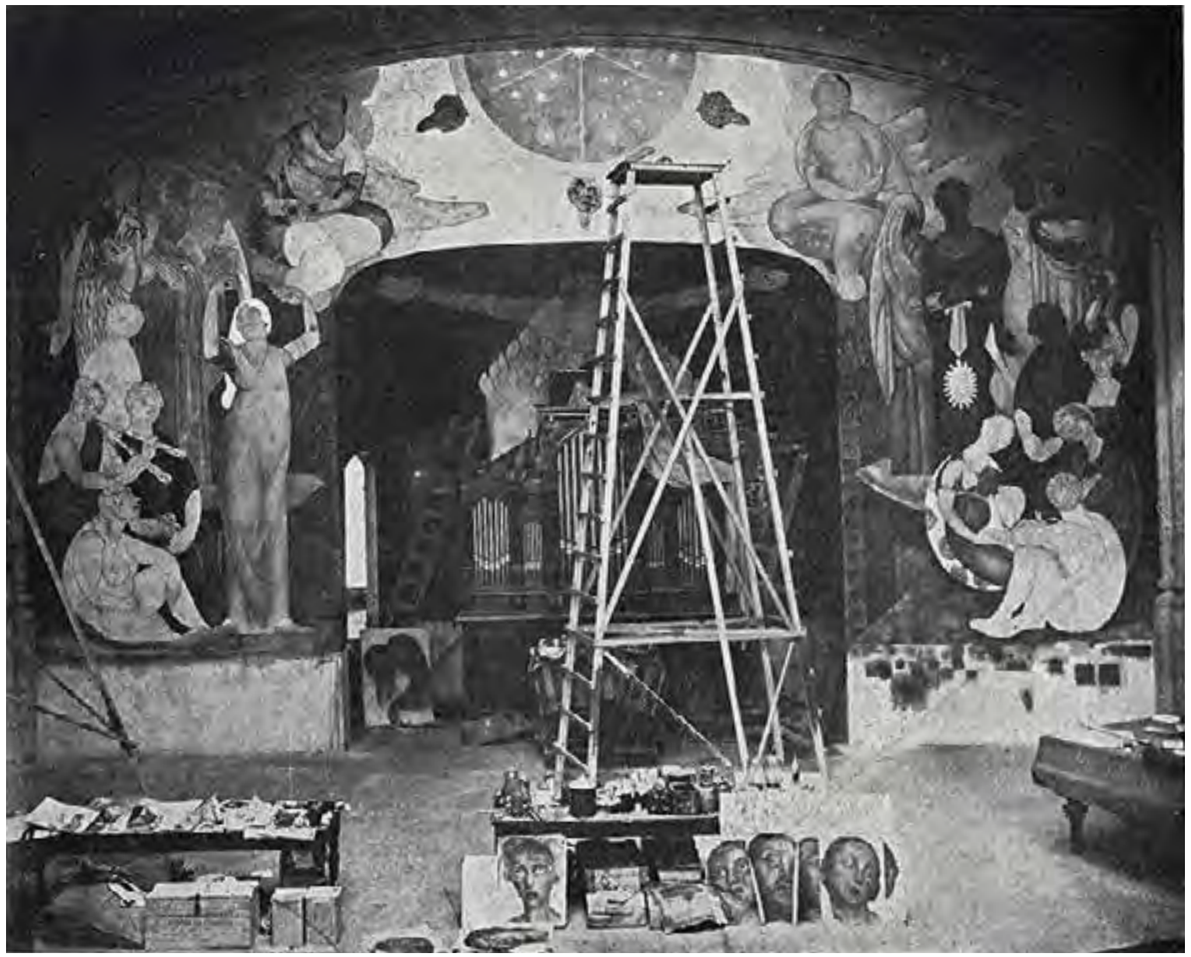

Fig. 7 Diego Rivera's *Creation* in progress, 1922. Photographer unknown. From *The Arts* 4, no. 4 (October 1923): 227

Fig. 8 Diego Rivera on a scaffold in the Escuela Nacional Preparatoria, 1922. Photographer unknown. From *El Universal Ilustrado* (Mexico City) 5, no. 257 (April 1922): 26

were meant to be transferred to the wall. Rivera used both a French laid linen- and cotton-fiber paper with an indigo-gray tone and a rougher light tan butcher paper.[31] The differing papers allowed him to experiment with tonal gradations and volume, using pastels or Conté crayons in three colors: blood red, black, and white.[32]

Photographs taken in March 1922 while the project was underway show that after a rough outline was sketched onto the wall, the working drawings were used by Rivera or his assistants to transfer the hands and faces—the most complex details of the composition—directly to the wall, using tracing paper or paper rubbed with vine charcoal (this material appears in the margins of some drawings). Recent tracings of the mural, when superimposed over the sketches, reveal a perfect 1:1 correspondence.[33] One photograph (fig. 8) shows the drawings tacked to the wall with resin (perhaps copal), and some of the cartoons (pls. 6 and 9) bear the resulting stains in the corners. A few drawings show drips of the same paint used for the mural (pl. 10), providing evidence that they remained on the wall while the work was being completed. The thick paper allowed the drawings to be reused in different positions, but Rivera did this in only one case, for the heads of Wisdom and Tradition, although he altered the hairstyles slightly while painting them. Though carefully worked by Rivera, these drawings and the resulting painting make clear that this was a collective pictorial process, even in the painting of faces, which in the hierarchical ancient guild system was often reserved for the master. Rivera was clearly proud of the drawings: a staged photograph shows that he lined up sketches of faces in front of the unfinished mural (fig. 7), and he dedicated others to models or friends. He included ten of the studies—many now in the SFMOMA collection—in his first two retrospective exhibitions, held at the California Palace of the Legion of Honor in 1930 and at the Museum of Modern Art in 1931–32.

Seen together, these sketches and cartoons provide evidence of Rivera's creative process, of the importance he placed on the role of gesture in conveying iconographic meaning, and of his desire to inscribe himself within the tradition of mural painting while at the same time acting as an innovator. *Creation* was not an end but a beginning: Rivera's formal experimentation, his repertoire of themes, and his technical, visual, and narrative strategies laid the groundwork for modern Mexican muralism. Although the mural reveals unresolved tensions in its attempt to integrate formal avant-garde strategies with references to past art and folk traditions—which may have led to Vasconcelos's dissatisfaction with the results—it was a crucial first step toward Rivera's construction of a national and universal aesthetic language.

31. The watermark "Ingres, Canson & Montgolfier" is visible on the cartoon for the hand of Science (pl. 15).
32. I am grateful to Michelle Barger and Amanda Hunter Johnson for allowing me to study these drawings up close at SFMOMA. As noted by Hunter Johnson, Rivera used the entire surface of the paper for the tracing, especially the faces. The Ingres, Canson & Montgolfier blue paper continues to be produced and is commonly used for pastel drawing.
33. Darío Meléndez Manzano completed the outlines in collaboration with Lili Sun and Mariana Ciprés, students in the graduate visual arts program of the Faculty of Arts and Design, Universidad Nacional Autónoma de México.