Fabiola López-Durán and Nikki Moore
"From France to Brazil and Back:
Le Corbusier, Nature and the Ideal Human Type, 1925-1946."

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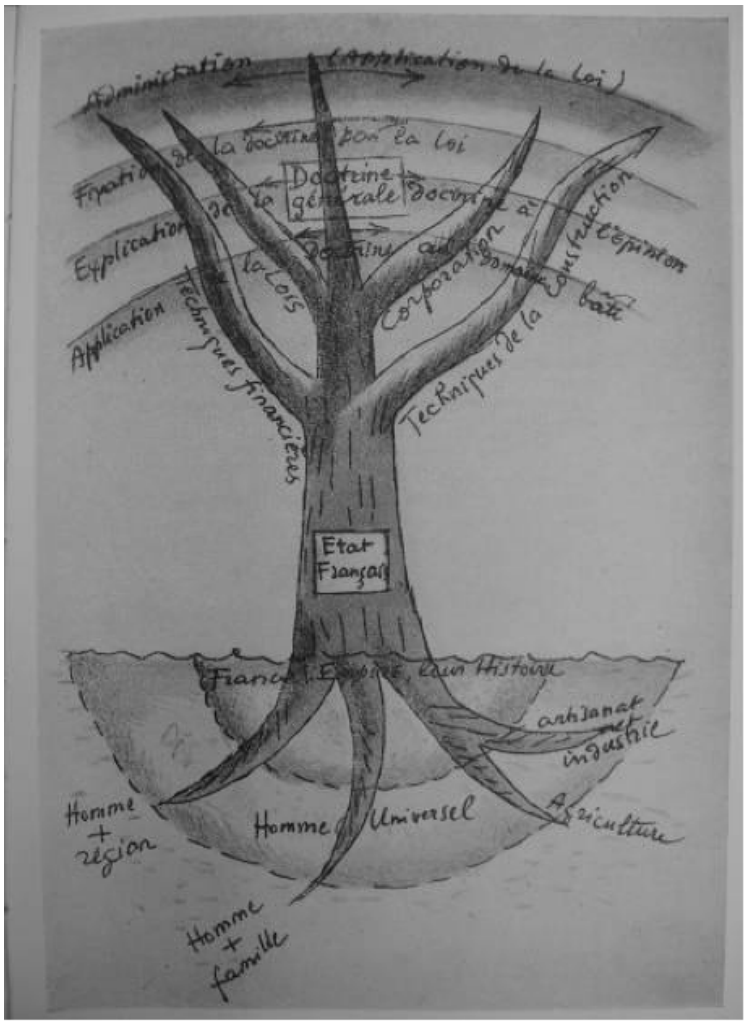


Le Corbusier, *Arbre domaine bâti,* published in Le Corbusier and Francois De Pierrefeu, *La Maison des Hommens*, 1942.

**Abstract**

This paper investigates a global moment between 1925 and 1948 in which Le Corbusier's work aligns with eugenics. From his formulation of universal type-needs, to his *Modulor* and its normative human body—architecture was made complicit in a genetically inspired program that mirrored eugenics attempts on the human race.

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In a 1942 article slated to present his book, *La Maison des hommes* (The Home of Man) in Comodeia—a French popular journal co-opted by the Vichy regime into a vehicle of Nazi propaganda—Le Corbusier presented a drawing of a tree, the first glimpse of his own state doctrine.[1] Three roots come from the drawn trunk of the French state: the left root represents the man and his immediate environment, the region. The middle root represents the man and his social structure, the family. And finally the right root represents the cultivation of land beside trade and craft. This triad links milieu, reproduction and production at the base of the built domain.[2] **[Image 1]**

This same tree, directly recalling Darwin's evolutionary Tree of Life—the *Arbor vitae* by which, in 1837, Darwin graphically illustrated "the interconnectedness of organisms in his theory of evolution—that Le Corbusier used to illustrate the interconnectedness of man, nature, and family, all held together by the State and its executive tool—the built environment.[3] Le Corbusier was, with this tree, placing himself within the company of evolutionists, inserting a powerful orthopaedic function whereby the stability of the family, the French nation, and its empire depend on the stability of the physical environment.[4] At the epicenter of this doctrine was Lamarckian eugenics--the social and biological movement that strove for nothing less than the improvement of the human race, using heredity and the environment as its primary tools. This

form of science, or pseudo-science, was based on Lamarck's theory of the "inheritance of acquired characteristics," wherein evolution is driven by adaptation to environmental changes—in contrast to mainstream eugenics which viewed evolution as impervious to the environment and driven solely by genetics.[5] Le Corbusier's diagram, used to present his own book, *La Maison des hommes,* clearly positioned architecture as the main technology of eugenics. Moving from Paris to Brazil and back, our story begins in 1925, in France, on the heels of late nineteenth and early twentieth century concerns about human degeneration.[6] It is the trans-national story of a "second enlightenment" which attempted to thwart nature's control over man and his progress, wherein pseudo-scientific discourses, articulated in France, crossed the ocean and then became intertwined with the discourses of architecture, aesthetics, landscape and urban planning in early twentieth century Brazil.[7]

## I .
## 1925 Paris : ORTHOPAEDICS

With their eyes trained on the perception of order, aimed to bring the rigor of the hard sciences to art, in 1920 Le Corbusier, Amédée Ozenfant and the poet Paul Dermée founded a magazine titled *L'Esprit Nouveau*.[8] Defining art as if it were science, these editors found in both fields a dependence on number, constants and invariants, and a shared aim to bring order to the world. It was precisely with the inception of this publication that Charles-Edouard Jeanneret, now known as Le Corbusier, underwent the transformation of his own name in a process of objectifying himself, as if this new name would provide order, which he called "the most elevated of human needs."[9] As the result of a scientific process, he aligned himself with his own definition of art and invented a persona with it's own protective shell.[10]

Years later, in 1925, for the *International Exhibition of Modern Industrial and Decorative Arts* in Paris, Le Corbusier presented a pavillion also called *L'Esprit Nouveau.* It was both Le Corbusier's paradoxical architectural contribution to the exhibition and the embodiment of a total work of art and science, penned in four volumes that compiled the articles published since the 1920's in *L'Esprit Nouveau* magazine. These four volumes covered the decorative arts in *The Decorative Art of Today*, architecture in *Towards a New Architecture*, urbanism in *The City of Tomorrow* and painting in *Modern Painting*.[11] Throughout the pavillion and in *The Decorative Art of Today*, Le Corbusier arrived at a theory he called type-needs, which served an early normative program through which furniture and the decorative arts most intimately universalize new bodies, measured against a single human type.[12] Fostered by Hermann Muthesius' interest in evolutionary object types, and more than tinged by Adolf Loos' application of Lamarckian theories and the consequent bare aesthetic of modernism, as expressed in *Crime and Ornament*, this discourse sprung from a blind and problematic melding of architecture with the social and biological sciences informing criminology and ethnography.[13] Inaugurating this path in *The Decorative Art of Today*, Le Corbusier begins with a discourse on scale. To search for human scale, for human function, he writes, is to define human needs. Furthermore, he states: "These needs are type, that is to say they are the same for all of us; we all need means of supplementing our natural capabilities, since nature is indifferent, inhuman (extra-human), and inclement; we are born naked and with insufficient armour."[14]

Creating a single human typology of a particular scale, Le Corbusier draws everyday objects into the service of man. In *The Decorative Art of Today,* Le Corbusier introduces something new in what he calls an 'orthopaedic' relationship between objects, furnishings and the human.[15] As the term 'orthopaedics' is traditionally defined as the branch of medicine attending to the correction

of injuries or disorders of the skeletal system, Le Corbusier's terminology clearly signals a clinical, medical shift in man's relation to the decorative arts. In his book, Le Corbusier elaborates on the twin concepts of type-needs and type-objects through furniture—the chairs, file cabinets, desks and utilitarian accessories which have been accelerated, through history—from mere objects of wealth and accumulation to objects in the service of a medical correction of the human being.[16]

Of course, Le Corbusier is not alone in the history of theorizing a relationship directed toward man's improvement through contact with his environment. Through this discussion of type-objects, Le Corbusier's writing leans close to a much older theory of influence, formulated by the eighteenth-century French physician and anatomist Xavier Bichat. In a time before microscopes, Bichat discovered the tissue structure of organs and in 1799 submitted his now famous definition of life as the "...ensemble of functions by which death is resisted."[17] This ensemble, made up of layer upon layer of varying permeabilities, gave new shape to theories of the body. According to Bichat, "...life is a war, a state of resistance against the physical forces of nature," and thereby the body is variably shielded and made vulnerable to the workings of the outside world through its layered yet permeable membranes.[18] Made up of "vegetable functions"—digestion, circulation, respiration and secretion, and "animal functions"—the cerebral, nervous and musculo-skeletal systems, Bichat's body moved beyond the hollow vessel formulations that predated him to offer up a layered body under attack from without. The vegetable functions only provided a rough sketch for a body which remained to be clothed. Drawing on the double entendre built into the French word "habit," alternately implying a link to daily clothing (as opposed to seasonal fashion, or *la mode*) and to the repetition of customs (as we understand the word "habit" in English) Bichat proposed that it is daily "habit" which both

protects the body from its surroundings and refines the animal over and above the vegetable core of man.[19] Le Corbusier's desire to bring orthopaedic correction to mankind through the decorative arts resonates almost too well with Bichat's focus on everyday habit. As if following Bichat, Le Corbusier pursued a line of study that at once praised and sought to master the influence of the environment on the constitution of the human being, aligning with French historian of science George Canguilhem's claim that "the body is only quasi-natural" due to its profound responsiveness and vulnerability to life conditions.[20]

The seductive nature of environmental adaptation theories for architects, medical practitioners and reformers of the 20th century comes to light in this history of Le Corbusier's normative projects, and should not be underestimated. Jean Baptiste Lamarck's work on the effects of the milieu on a given organism, coupled with Charles Darwin's theory of natural selection, and Herbert Spencer's work on the survival of the fittest became the trendy and timely intersection of research and social theory, trickling into work in medicine, politics and the plastic arts.[21] It has been postulated that Loos' *Ornament and Crime* offered the contemporary layman the clearest understanding of Lamarckian theory at the time.[22] Therein, Loos was clear in his belief that "as culture progresses, [it] frees one object after another from ornamentation...[And furthermore]...just as conquered primitive races were dying out through a biological process of selection, ornament is facing extinction."[23] **[Image 2]** He shared this evolutionary stance with Le Corbusier, who also stated in *The Decorative Art of Today*: "…we can see decorative art in its decline, and observe that the almost hysterical rush in recent years towards quasi-orgiastic decoration is no more than the final spasm of an already foreseeable death."[24]

Creating an uncanny tie between the decorative arts and evolution, the key to Le Corbusier's work at the time lies in a need to control nature. Perhaps *L'Esprit Nouveau* pavilion represents the earliest stage of Le Corbusier's participation in a kind of "second enlightenment." While the first Enlightenment can be identified by man's efforts to throw off the constraints of tradition and religion toward a new understanding of man's freedom and self control, this untitled "second enlightenment" is marked by the move, enabled by evolutionary theories, to attempt to throw off the constraints of nature, putting man in control of his environment and fate.[25] A monument to standardization, Le Corbusier's pavilion was made of industrial and replicable materials and designed in consideration of the immediate natural surroundings. These surroundings were both a fabrication of natural disorder and a scene to be viewed through the framework of the architecture. Encapsulated in the center of Le Corbusier's ideal cell for human living, a single tree is both protected and constrained by a simple, bare opening in the roof of the terrace. The windows and the opening of the terrace itself create screen-like viewing spaces that both frame and fix nature, creating the illusion of both performance and control.

Another contribution to the 1925 *International Exhibition of Modern Industrial and Decorative Arts,* a garden designed by Mallet Stevens and Jan & Joël Martel, may best exemplify this period's attempts to control nature and the threat of impending death: two trajectories at the center of modernity. As Jean-Nicolas Forestier, a member of the Parisian Museé Social and the Director of Parks and Gardens for the exhibition, recounts their project: "Four tall trees were required for this small garden, and we could not plant them in June, furthermore, their shapes and sizes needed to be strictly identical... With audacity, Mr. Mallet-Stevens resorted to reinforced cement.... The design frankly expressed the material's characteristics while its overall perception was that of a tree.…It is rather difficult to comprehend

the extent of ingeniousness and art that is required to complete such a work."[26] This "ingeniousness", this move to replace unpredictable, seasonally restricted, non-identical live trees, with concrete and thus formable, identical, white, implacable and undying replications foreshadows what architecture could and would do for eugenics movements in Latin America. Forestier, finding a now-familiar balance between the role of nature and the possibilities for change embedded in 'proper' nurture, further praised the project, saying "...gardens should not merely be constructed, just as they should not merely be planted."[27] **[Images 3-5]** Like Le Corbusier, and possibly far ahead of him, Forestier saw the orthopaedic and cultivating potential that the decorative arts and the built environment were already offering to the so-called improvement of man.

## II.
## 1936 Rio de Janeiro: BIOLOGY

Between Le Corbusier's first trip to Latin America in 1929 and his first trip to the US in 1935, his discourses were centered on the racial and sexual other, the primitive, nature and death.[28] The fear of degeneration had haunted French society for decades and a sense of impending death inhabited modernity. Le Corbusier envisioned an antidote to this irrevocable decay in Latin America, and no other place represented it better than Rio de Janeiro, with its black population and tropical landscape.

In 1936, while preparing his series of talks in Rio de Janeiro, Le Corbusier, in a cardboard sketch, brought together the image of a man and a series of words connecting three apparently unrelated topics: nature, architecture and eugenics.[29] At the top of his notes: the word 'Castello,' followed by the name 'Lucio Costa,' the phrases 'pedro aller police' and 'Castello coûts clichés,' the name

'Carlos Porto,' and a reminder to himself, "Acheter livre Carrel," to buy the book by Alexis Carrel, the French Nobel prize-winning physician who had just published his 1935 bestseller *Man The Unknown*, a book later considered a manifesto for white superiority--a loud call for the implementation of eugenics.[30] The sketch places together the name of a demolished mountain at the center of Rio de Janeiro (the so-called Morro do Castelo) with the names of Brazilian modern architects, the most important French eugenicist, and the representation of the simple man who became the object of transformation for Carrel, Le Corbusier, and for Brazil's government.[31]

**[Image 6]**

What made Le Corbusier think of Carrel while thinking of Rio de Janeiro? Was Carrel's theory of "the salvation of the white race" at the core of Le Corbusier's ideas on landscape, urban planning, and architecture? It is not a mere coincidence that Castelo, the greatest eugenic laboratory in Latin America, is the first word that appears on the cardboard. It was the pulverized mountain from which thousands of "undesirable" inhabitants, mostly blacks and poor, were displaced in the early 1920s. It was the esplanade that remained after this devastation and became the stage for the 1922 international exhibition with its neocolonial pavilions and its image of white Brazil. It was also the name of the epicenter of Musée Social member Alfred-Donat Agache's master urban plan for Rio. This plan was a medical treatment for Rio, which he called "Mademoiselle Carioca," intended to exercise discipline and control over a modern tropical city cleansed from diseases and "undesirables," to be suitable for European life.[32] And finally, it was also the name of the new building for the Ministry of Health and Education, the institution that would be in charge of developing and enforcing Brazil's eugenic policies for Getulio Vargas' new authoritarian regime.[33] The building—for which Lucio Costa was chosen as the leader of the design team and for which Le Corbusier was invited as a design consultant—

would be located on this very site where the Castelo mountain once stood. Lucio Costa, the architect best known for designing Brasilia, was a main advocate for selective immigration seeing it as the only vehicle to achieve good government and good architecture.[34] Linking the dramatic transformation of the urban territory of Rio de Janeiro with Lucio Costa and then to Carrel's vision for the remaking of society, Le Corbusier, on one piece of cardboard, distilled and concretized one of the most basic and accepted rationales of modernity: change the environment, change the man. For Le Corbusier, Costa's eugenic syllogism of breed begetting good government begetting good architecture works also in reverse.

This association between Carrel and the built environment would become the trigger point for much of Le Corbusier's thinking over the next several years. But it was in Rio during that summer of 1936 that Le Corbusier clearly aligned himself with Carrel's ideas. Evoking Carrel's eugenics book, Le Corbusier commented to his audience: "Plon, the editor who published my book on North America, celebrates the success of his latest book: *Man, The Unknown* by Dr. Carrel. Write, he told me, a book that will be an echo of that one; I will do it with pleasure: the man and his shell..."[35] This appears to be the very first time Le Corbusier made public reference to Carrel and his work. This cardboard note, where he linked Carrel and Rio de Janeiro with the sketch of a man, was the spark for new theories, which would become a viable doctrine on the remaking of man, via nature, through which the built environment would be put to work. It is clear that Le Corbusier was beginning to work out what would later become his new Plon book, *The Home of Man*, published during the Vichy regime, echoing Carrel's project for the remaking of society. It is in this book that Le Corbusier provides a clear explanation for how this process of remaking life is completely altered by how humans are housed, whether in the single domestic house, the city at large, the countryside, or the wider metropole.

**III.**
**1940 The Free Zone, France: COLLABORATION**

The Forties began, for Le Corbusier, with a 'feverish drive' for collaboration. On July 3rd, 1940, just three days after Maréchal Phillippe Pétain moved to and set up the Vichy Regime within various hotel rooms in the spa town of Vichy, in the so-called Free Zone, Le Corbusier established himself in one of those very same hotels.[36] Driven by his persistent efforts to work with Petain's government, Vichy became Le Corbusier's base of operations. During the following two years, Le Corbusier's faith in both the goals of the Vichy Regime and his potential to contribute to them were curbed only by frustrations with the Regime's lack of interest in urban progress, undaunted by the atrocities perpetuated by the regime with which he was eager to collaborate.[37]

Le Corbusier was happy to find a government that was embracing ideas that he had been developing on his own since the 1930's. He had, himself, identified these ideas as the base of his core doctrine, first articulated in *Précisions* (1930), the book he wrote about his first travel to South America in 1929, and rearticulated in *Maison des Hommes* (1942), the book written to emulate Carrel's book, and in five other books written during the 1940s. This doctrine aimed not only at a new form of living but at a new form of man.[38] To this end, Le Corbusier's doctrine depended upon firm control over nature through the standardization of living and the creation of a universalized and normative human being, in order to deploy a system of secularized salvation--the quasi religion of urbanism. It is important to note that Le Corbusier began to articulate the elements of this doctrine in 1930, immediately after his first trip to Brazil, but it was not until 1936 after he came back from this second trip to Brazil and established a relationship with Alexis

Carrel that he was able to solidify his doctrine. For many years nobody was more influential to Le Corbusier than Carrel. At some point in 1937 Le Corbusier sent his books to the celebrated eugenicist, not as an act of cordiality or as publicity for his work, but rather as a way to initiate an intellectual exchange.[39] Le Corbusier wanted the opinion of Carrel, the man who had written the most popularly influential theory of eugenics, imbedded in radical racism, sexism and euthanasia policies for criminals, the mentally ill, and the so called "degenerated."

As soon as Le Corbusier left Paris and established himself in the Free Zone, now in conversation with Carrel, he began to work on the construction of his doctrine. Eager to connect with those in power who would support his architectural and urban plans for France and the Metropole, Le Corbusier committed himself to the communication of his ideas. In a radio broadcast in 1941, Le Corbusier clearly identifies the built environment as both the cause and the cure for degeneration, announcing: "The house problem…is the key to both the family's regeneration and the spirit's regeneration, the key to the nation's regeneration (...) the degeneration of the house, the degeneration of the family, are one."[40] As a result of his exposure, in 1942, Pétain himself announced that Le Corbusier, along with Alexis Carrel, would be a member of the Committee for the Study of Habitation and the Urbanism of Paris.[41] Shortly thereafter, in 1943, Le Corbusier accepted Carrel's invitation to become technical advisor to his French Foundation for Human Research, whose main goal was to cleanse French society of criminals and the insane, as well as Carrel's invitation to be a "technician of value" for his French Foundation for the Study of Human Problems, known as the Carrel Foundation.[42] After all of his efforts, when the Allies arrived at Normandy and it became clear that Vichy would be on the losing side, Le Corbusier resigned from Carrell's projects—but his enthusiasm for Carrel's ideas never waned.

**IV.**
**1948 Global: THE MODULOR - THE ANTIDOTE**

For the remainder of the 1940s, Le Corbusier worked on the universalization of the last and blatant vestige of his doctrine and associations.The Modulor, the scale to bridge both the metric and Anglo-Saxon systems, was designed to center all aspects of architecture around a particular human model. Based on a man of six feet, with a raised arm, Le Corbusier's Modulor was an antidote to disorder, an organizational scheme that imbued regularity and ultimately, normativity, into each of his buildings.[43] The overly large hands and feet of the Modulor, so emblematic of primitivism in modern art, point to Le Corbusier's work in Latin America. The Modulor, imprinted in concrete worldwide, at Le Corbusier's bidding, is the map to his own history and involvement with evolutionary theories, the pursuit of order, normativity and purity, and an enduring global symbol of architecture's past complicities with Lamarckian eugenics. **[Image 7]**

**Endnotes:**

[1] Le Corbusier, "Architecture et urbanisme: La Maison des hommes" (text manuscript and dactilograph written for *Comoedia* in August 1942), FLC B3-3/ 615 g 630, Paris. This article was unpublished until 1985, when the text was included by Giuliano Gresleri in his introduction to the first Italian edition of Le Corbusier's book *La Maison des hommens*. See Giuliano Gresleri, introduction to *La Casa Degli Uomini,* by Le Corbusier and François de Pierrefeu (Milano: Jaca Book, 1985), 22-24.
[2] Le Corbusier selected the image of this tree as the quintessential image of *La Maison des Hommes* and the social doctrine it articulates. See Fabiola López-Durán, "Eugenics in The Garden: Architecture, Medicine and Landscape from France to Latin America in the Early Twentieth Century," (PhD diss., MIT, 2009).
[3] Ibid., 113. See also Charles Darwin, "Natural Selection; or The Survival of the Fittest," in *On the Origin of the Species.* 1859. (Cambridge MA: Harvard University Press, 2003), 7-43.
[4] Le Corbusier and François de Pierrefeu, *The Home of Man,* trans. Eleanor Levieux (London: The Architectural Press, 1948), 17. First published in French as *La Maison des hommes* (Paris: Plon, 1942).
[5] López-Durán, *Eugenics in the Garden*, 12.
[6] Understood as a "self-reproducing force", transmitted from generation to generation and dragging the individual body and society down to decay and final extinction, degeneration became the largest fear haunting French society and Latin American nations at the turn of the twentieth century. Used to characterise other races as inferior to the white race or to identify the clinical pathologies of an individual, degeneration became a real force; "not the effect but the cause of crime, destitution and disease." Daniel Pick, *Faces of Degeneration: A European Disorder, C. 1848–1918* (Cambridge: Cambridge University Press, 1989), 21. See also Robert A. Nye, *Crime, Madness and Politics in Modern France: The Medical Concept of National Decline* (Princeton, NJ: Princeton University Press, 1984).
[7] This concept of a "second enlightenment" emerged for the first time in an electronic conversation about nature and urban planning in early twentieth-century Latin America. Nikki Moore elaborated her idea in the following terms: "Working to harness the effects of nature in pursuit of an elusive perfection and freedom, late nineteenth and early twentieth century man found himself rebelling against the natural world as the seventeenth and eighteenth century thinkers rebelled against church and state during the first Enlightenment." Nikki Moore, email message to Fabiola López-Durán, January 02, 2013.
[8] *L'Esprit Nouveau: revue internationale illustrée de l'activité contemporaine* published 28 issues between 1920 and 1925.
[9] Nicholas Fox Weber, *Le Corbusier: A Life* (New York: Knopf, 2008), 178.
[10] Ibid., 178.
[11] In 1927, Le Corbusier said that these four volumes "were the theory of which the Pavilion ought to be the materialization." Le Corbusier, "Du Pavillon de L'Esprit Nouveau" in *Almanach d'Architecture Moderne*, 150. See also Christine Boyer, *Le Corbusier: Homme de Lettres* (Princeton: Princeton Architectural Press, 2011), 360. For more information on the International Exhibition of Modern Industrial and Decorative Arts, see Anthony Sutcliffe, *Paris: An Architectural History* (New Haven: Yale University Press, 1993).

[12] Le Corbusier, *The Decorative Art of Today (*1925), trans. James I. Dunnett (London: Architectural Press, 1987), 72-79. First published in French as *L'Art deécoratif d'aujourd'hui* (Paris: Editions Crès, 1925).
[13] "Ornament und Verbrechen" (Ornament and Crime) was the title used by Adolf Loos to present his lectures, which he retrospectively dated to 1908. The first publication of "Ornament and Crime" is unknown but lectures with this title were mentioned for the first time in *Fremden Blatt,* in January 22, 1910. French translations were published in *Cahier d'Aujourd'hui,* in June 1913, and in Le Corbusier's own magazine *L'Esprit Nouveau,* in November 1920. For an english version see Adolf Loos, *Ornament and Crime: Selected Essays* (Riverside CA: Ariadne Press, 1997). See also Canales, Jimena and Andrew Herscher, "Criminal skins: Tattoos and modern architecture in the work of Adolf Loos," *Architectural History* 48: 235-256 and Christina Cogdell, *Eugenic Design: Streamlining American in the 1930s*. (Philadelphia: University of Pennsylvania Press, 2010), 13-14.
[14] Le Corbusier, *The Decorative Art of Today,* 72.
[15] Ibid.
[16] Ibid., 75.
[17] "La vie est l'ensemble des fonctions qui résistent à la mort." Xavier Bichat, *Recherches physiologiques sur la vie et la mort (Paris: Brosson, Gabon, year 8 [1799-1800]) 1,* quoted in Georges Canguilhem, *Knowledge of Life* (New York: Fordham University Press, 2008), 104.
[18] "La vie est un combat, un état d'effort contre les puissances physiques de la nature." Julien-Joseph Virey, "Vie ou force vitale," Dictionnaire des sciences médicales, 60 vols. (Paris: Panckoucke, 1812-22), 57, quoted in Paula Young Lee, "Modern Architecture and the Ideology of Influence," *Assemblage* 34 (1998): 13.
[19] Lee, "Modern Architecture," *13-14.* See also Fabiola López-Durán and Nikki Moore, "Ut-opiates: Rethinking Nature," *Architectural Design* 80 (2010): 44-49.
[20] Stefanos Geroulanos and Todd Meyers, introduction to *Writings on Medicine,* by Georges Canguilhem (New York: Fordham University Press, 2012), 10.
[21] Jean Baptiste Lamarck, "The Influences of Circumstances" in *Lamarck to Darwin: Contributions to Evolutionary Biology,* ed. Henry Lewis McKinney (Kansas: Coronado Press, 1971). First published in *Philosophie Zoologique* (Paris: Dentu, 1809); Charles Darwin, *On the Origin of the Species.* 1859. (Cambridge MA: Harvard University Press, 2003); Herbert Spencer, *Principles of Biology.* 1864. (Ithaca: Cornell University Library, 2009).
[22] Cogdell, *Eugenic Design*, 15-16.
[23] Ibid., 13-14. Moreover, in 1924 when Loos was asked if ornamentation should be eliminated from the art school curriculum, he replied: "Ornament will disappear of its own accord, and school should not interfere in this natural process, which humanity has been going through ever since it came into existence." Tying ornamentation to the primitive and also the feminine, Loos further states: "in the final analysis, women's ornament goes back to the savage" that "the lower the cultural level, the greater the degree of ornamentation." See Loos' articles "Ladies Fashion (1898-1902)" and "Ornament and Education (1924)" in *Ornament and Crime.*
[24] Le Corbusier, *The Decorative Art of Today*, 96. Both Loos and Le Corbusier assigned ornamentation a low rung on the evolutionary ladder.
[25] For Nikki Moore's first definition of the term "second enlightenment" see endnote 7 in this text.

[26] Dorothee Imbert, *The Modernist Garden in France* (New Haven: Yale University Press, 1993), 40.
[27] Ibid,.
[28] Boyer, *Homme de Lettres*, 457. See also Wendy Martin, "Remembering the Jungle: Josephine Baker and Modernist Parody," in *Prehistories of the Future: The Primitivist Project and the Culture of Modernism*, ed. Elazar Barkan and Roland Bush (Stanford, CA: Stanford University Press, 1995), 310-325.
[29] Le Corbusier's document FLC F2-17 No. 275, Fondation Le Corbusier. Paris, France.
[30] Alexis Carrel, *L'Homme, cet inconnu*, (Paris: Plon, 1935). Le Corbusier owned Carrel's bestseller and read it during the summer of 1936. The following note appears, in Le Corbusier's handwriting, on the first page of his own copy of Carrel's book, held at the Fondation Le Corbusier: "Eté 1936, Rio + Le Piquey" ("Summer 1936, Rio + Le Piquey"). Carrel's book was simultaneously published in French (with the title *L'Homme cet inconnu*) by Plon in Paris, and in English (with the title *Man, The Unknown*) by the American publisher Harper & Brothers, who also sold the rights to publish condensed chapters of the book in the popular American magazine *Reader's Digest,* contributing to the commercial success of the book. Before the end of the 1930s Carrel's book was translated into fourteen languages, and by 1940 Harper & Brothers had sold 50,000 copies and Plon 168,000. See Andres Horacio Reggiani, "Alexis Carrel, the Unknown: Eugenics and Population Research under Vichy," *French Historical Studies* 25 (2002): 331-56. For the collaboration and correspondence between Le Corbusier and Carrel see López-Durán, *Eugenics in the Garden, 185-246.*
[31] In 1568, after years of battles for the control of the city between Portugal and France, Rio de Janeiro was moved from the base of the Pão de Açucar mountain in Urca to a new site on the top of a hill on the coast of the Guanabara bay. This hill, called Morro do Castelo, was recognized from that moment on as Rio de Janeiro's original urban setting. However, in 1920, alleging hygenic and eugenic reasons, the mountain was demolished, its inhabitants expelled, and a 815,000 squares meters of flat land--the result of the demolition of the mountain and the new esplanade landfill reclaimed from the sea--was occupied first by neo-colonial pavilions (at the time emblems of the modern nation) and then by modern buildings including the Ministry of Health and Education, for which Le Corbusier was the principal consultant. For more on the Morro do Castelo demolition see López-Durán, "Paris goes West: From the Musee Social to Ailing Paradise" in *Eugenics in the Garden*, 2009.
[32] Alfred-Donat Agache, *A cidade do Rio de Janeiro, remodelação, extensão e embelezamento. 1927-1930* (Paris: Foyer Brésilien, 1930).
[33] Getulio Vargas first regime lasted from 1930, the year of the coup d'état that marked the end of the First Republic (1889-1930) to 1945, when a bloodless coup took Vargas out of power. Following the corporatist authoritarian regime installed in Portugal in 1933 called Estado Novo, on November 10, 1937, Vargas announced the Brazilian Estado Novo, the authoritarian-nationalist New State that abolished the 1938 forthcoming presidential elections, dissolved the congress, and built its power on the state's use of violence to suppress any supposed threat to the nation. In 1951, Vargas came back to power, as a democratic elected president, and governed his country until his suicide in 1954. For more on Getulio Vargas's first regime and its struggles over art, architecture and culture see Daryle Williams, *Culture Wars in Brazil* (Duke University Press, 2001).

[34] In a 1928 article, Lucio Costa publicly declared: "I am pessimistic about [architecture and urbanisms in general]. All architecture is a question of race. When our nation is that exotic thing that we see on the streets, our architecture will inevitably be an exotic thing. It is not those half dozen who travel and dress on Rue de la Paix, but that anonymous crowd that takes trains from Central [Station] and Leopoldina, people with sickly faces who shame us everywhere. What can we expect from people like this? Everything is a function of race. If the breed is good, and the government is good, the architecture will be good. Talk, discuss, gesticulate: our basic problem is selective immigration; the rest is secondary—it will change on its own." Lucio Costa, "O arranha-céu e o Rio de Janeiro," in *O País*, Rio de Janeiro, July 1, 1928. Translation ours.
[35] "Un éditeur qui publie mon livre sur l'Amerique du Nord: Plon, se félicité en ce moment du succès de son dernier livre: 'L'Homme cet inconnu' du Dr. Carrel. Faites, m'a t-il demande, un livre qui soit un écho a celui-la ; je le ferai volontiers: l'homme et sa coquille…" Le Corbusier, Manuscript Lecture I, Rio de Janeiro, Brazil (07/1936-08/1936), FLC F2-17, Paris. Translated quote in López-Durán, *Eugenics in the Garden*, 195.
[36] Nicholas Fox Weber, *Le Corbusier: A Life* (New York: Knopf, 2008), 413-414.
[37] For more on Le Corbusier's efforts to collaborate with Pétain's regime see Fox Weber, Le Corbusier: A Life, 413-465.
[38] In 1948, Le Corbusier stated that the elements of his doctrine were to be found in the books written during World War II. He did not mention *Destin de Paris* (1941) and *Sur les Quatres Routes* (1941), but, as Christine Boyer argues, "any attempt to abstract the elements of Le Corbusier's doctrine is incomplete without them." The list also includes: *L'Urbanisme des Trois Établissements Humains* (1945), *Propos d'urbanisme* (1946) and *Manière de penser l'urbanisme*. See Boyer, *Homme de Lettres*, 617-618.
[39] Over many years Le Corbusier and Carrel maintained an intellectual exchange. As early as August 1937, barely a year after Le Corbusier announced in Brazil that he would write a book equivalent to Carrel's bestseller, Carrel sent a four-page letter to Le Corbusier commenting on the importance of Le Corbusier's work to his own theories; and in December 1939, Le Corbusier sent a letter to his mother commenting on his intellectual relationship with Carrel, stating that they were "in perfect agreement." From 1937 to 1943, Le Corbusier sent his books to Carrel, listened to his opinions, attended his lectures, and celebrated each opportunity to collaborate with the infamous French eugenicist. See Carrel's letter to Le Corbusier (FLC E1-12) and Le Corbusier's letter to Carrel (FLC A2-17 No.17) in López-Durán, *Eugenics in the Garden*, 207-211.
[40] Le Corbusier, Radio Broadcast (1941), FLC B3-12. No.216, quoted in López-Durán, *Eugenics in the Garden,* 215. In this radio broadcast to present his book *Sur les quatres routes,* Le Corbusier restated an idea he had used at the end of *Destin de Paris,* a small book written during the fall of 1940. Le Corbusier said "The house problem…is the key to both the family's regeneration and the spirit's regeneration, the key to the nation's regeneration." Le Corbusier also states that *Sur les quatres routes* was also the result of preparatory work that he and De Pierrefeu had just assembled for their book *La Maison des Hommes.*
[41] Fox Weber, *Le Corbusier: A Life*, 447.
[42] Ibid., 462. The French Foundation for the Study of Human Problems, also known as The Carrel Foundation, a pluri-disciplinary center with 300 researchers, was created by decree of the Vichy regime in 1941 and lasted until 1944. The main goal of this organization was to "improve" the French Population. For more on The Carrel Foundation, see Alain Drouard, "About the

Relationship Between Medicine and Social Sciences: the French Foundation for the Study of Human Problems or Carrel Foundation (1941-1945)" in *Histoire des sciences médicales*, 28: 1994.

[43] Fox Weber, *Le Corbusier: A Life*, 462.