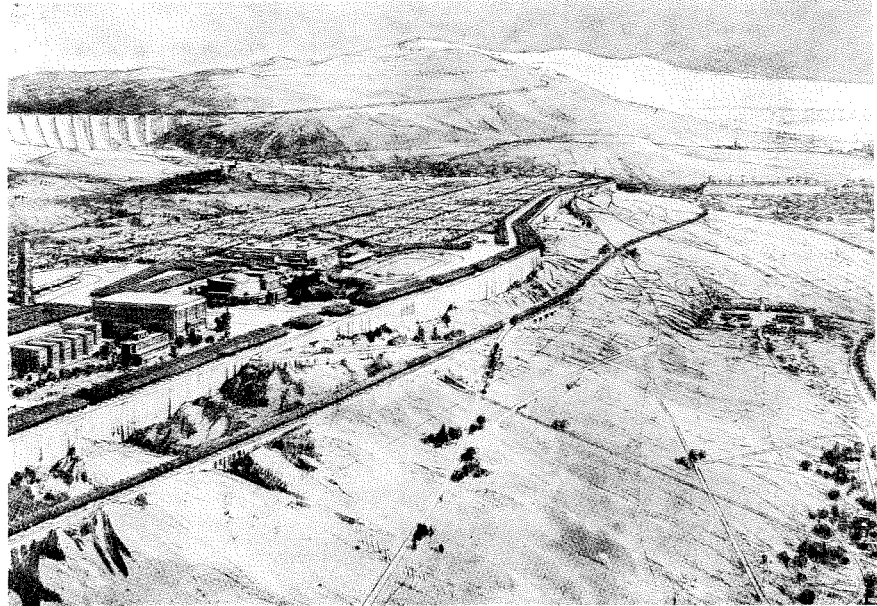


# Tony Garnier

## Lawrence B. Anderson

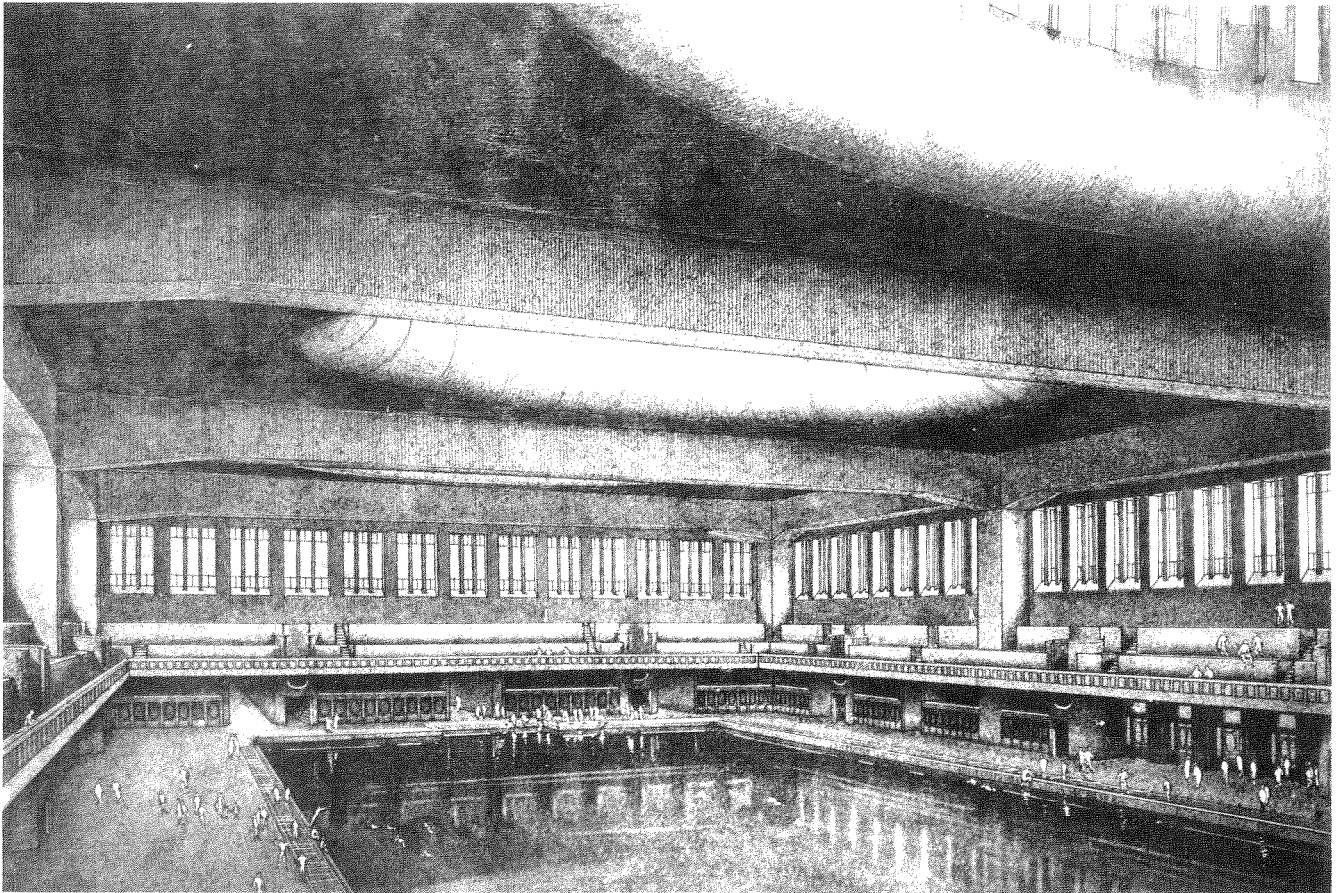
Tony Garnier was a man born too soon, obliged to adapt to an environment uncongenial to him. He was a product of the Ecole des Beaux-Arts against which he rebelled. That slowly stiffening institution was losing its ability to respond to new ways of thinking, yet it still retained the authority to suppress Garnier and his ideas. In shyness and hurt, he withdrew to his native province, where he pursued his independent career while, through his students and over a long period, he avenged that rebuff by his genius as a teacher. He did not have the possibility to operate in any other pedagogical setting or to invent his own, as did Gropius, who was only fourteen years younger. In a sense, Garnier's Lyon atelier was indeed his own creation, but in France all higher education was so highly centralized that the Paris Ecole with its prestigious history offered the only framework for even provincial teachers. There is also no evidence that Garnier tried to change the Ecole's mode of operation: its massive anonymous juries, its centralized programs, its system of prizes, and its unflagging reliance on the spirit of competition. It was only its cultural attitudes and its lack of social vision to which he objected.

Garnier and Gropius resembled each other in several ways: their rationalism, their visions of the oncoming industrialized society, and their conviction that architecture had to be purged and given a fresh start. Differences are also apparent. Gropius belonged to



Photographs 1, 2, 3, 4, 5 and 6 are from Tony Garnier, *Une Cité Industrielle, Etude pour la Construction des Villes*, 1st ed. Paris: A. Vincent, 1918.

**I View of Upper City.** At left rear, the hydroelectric dam; in valley at right, the industrial sector

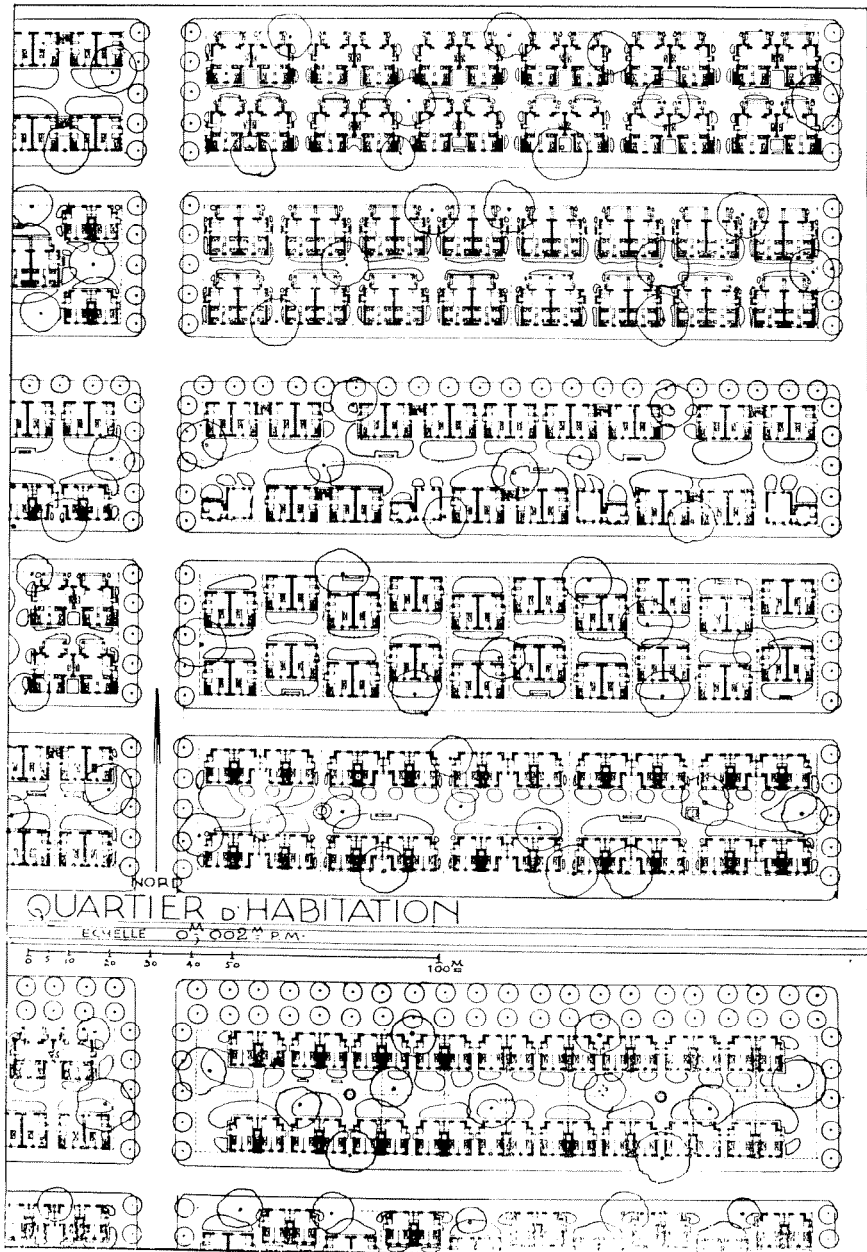


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4 2 Interior of municipal swimming pool

a body of like-thinking men who kept in touch with each other, and he believed that design should be a team activity. Having constructed a set of principles, he was eloquent and persuasive in explaining them to the world. Garnier was all alone; he did not trade ideas with others, and he was not eloquent in speech or writing. His message can be found only in drawings and executed work. He and his contemporary Auguste Perret knew and admired each other, but they did not interact, and there is nothing to show that Garnier kept in close touch with the brilliant and successful men who had been his colleagues at the Ecole and the Villa Medici. Le Corbusier visited Garnier and had respect for his contribution. Indeed it is very possible to think that the ways of conceptualizing the physical organization of cities shown by CIAM in its early meetings owes something to Garnier and the *Cité Industrielle*, despite the lack of any other connection than the publication of the *Cité* in 1917.

The biographer encounters great difficulty in dealing with Tony Garnier. It is very hard to be precise about the influences that shaped him and equally hard to assess his influence on the development of the phenomenon called modernism. One is obliged to characterize him as a quintessentially isolated figure who nevertheless brought into sharp focus the yearnings of a new industrial society for better ways to cope with new conditions of urban living and new technologies. He came from a blue-collar background



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3 Plan detail of residential district

and his early education was vocationally oriented. Lyon had already become the center of the French silk industry and was therefore subject to the growing pains of booming textile technology with accompanying social dislocations and crowding of poorly paid workers in urban slums of an unprecedented kind. These facts are of capital significance in the shaping of Garnier's social perspective.

Yet, the temptation to exaggerate these influences must be resisted. It is true that Lyon was also a major center for the development of socialism as a political movement and that one of socialism's most prominent leaders—Edouard Herriot—was for many years that city's mayor and in effect Garnier's principal client in the important commissions Garnier eventually executed on behalf of the city. Yet there is no record of any political activity or even adherence to a party by Garnier, no hint of any intellectual or ideological exchange with Herriot, and no evidence that their relationship had any dimension other than what was necessary for the projects.

Coming from this background of hard work and poverty, Garnier demonstrated technical skill and artistic gifts that won him scholarship support and at age twenty brought him to Paris and changed the course of his life as he completed his professional education in the environment of the Ecole. His upward mobility into the rather elitist profession of architecture was perhaps unusual

but certainly not impossible in late nineteenth-century French society. Garnier spent ten years—1889–1899—as a student in Paris. That is a long time for professional formation, and we must add the previous three years in the Lyon Ecole and the four subsequent ones at the Academy in Rome before he set up his own office in Lyon at age thirty-five.

It must not be thought that spending a decade in a Paris atelier was unheard of. Students progressed toward the diploma not by time spent but by values accumulated through getting passing grades or higher in project judgments. At a minimum (in 1930), one had also to make a satisfactory “construction project,” a kind of imitation working drawing. Finally, the student became *diplômable*, could submit an adequate independent thesis, and become a qualified professional. But the best designers often remained in the school beyond that point in order to participate sporadically in the various prize competitions. Of these, the most prestigious was, of course, the *Prix de Rome*.

Despite the existence of the regional schools, the real action was in Paris. Competition was intense, and the student who could win a number of top awards achieved national recognition because the winning designs were published. This recognition laid the groundwork for a successful career in practice. It was comparable to football in the United States, where the Heisman Trophy winner is sure

to have attractive offers from the professional teams. The Rome Prize winner could normally count on important commissions being directed his way. (This did not happen in Garnier's case, for reasons that are developed by Louis Piessat in his unpublished biography of Garnier.) Such a situation was not the case in American architectural education, despite the efforts of the Beaux-Arts Institute of Design (BAID) in New York to bring it about. As more and more schools were established in universities, our educational system became highly dispersed, and the practice of centralized judgments withered by 1940. No correlation could ever be observed between success in BAID juries and later prominence in practice. For very many years the Paris Ecole could count on a measure of consensus about what constitutes excellence in architectural design, and it was possible to measure projects for that quality. The success of Bauhaus ideas broke any American consensus, but the Ecole was chauvinistically unable to accept the Bauhaus, and it was not until the 1960s that their centralized jury system came apart under circumstances described in Piessat's memoir.

Tuition fees at the Ecole were very low, and under these conditions it was meaningless to distinguish between full-time and part-time students. Garnier was almost thirty, the age limit for eligibility, when, in his fourth experience of being a *logiste* (finalist), he won the coveted prize.

Unfortunately, there is absolutely no record of how Garnier spent those ten years in Paris other than a few watercolors and the design projects that were successful enough to be officially published. He had come to Paris on prize money, but he must have worked as a draftsman/designer in architecture offices, as did almost all the advanced students. It was surely through office work that he learned how to cope with the practical problems of the profession, so that when he returned to Lyon in 1904 he was ready to open an office in his own name.

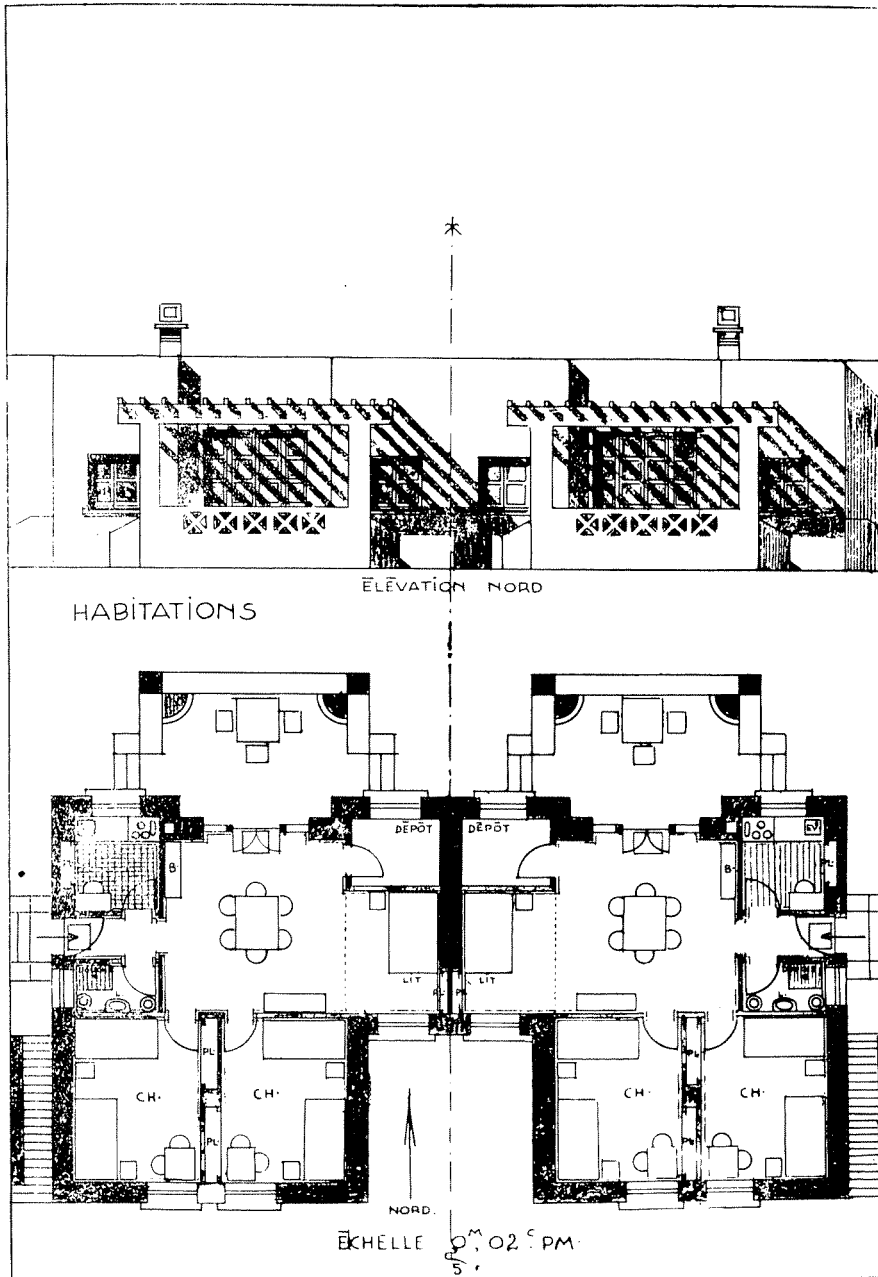
Most of his time during the four years of his residency at the French Academy in Rome (Villa Medici) had been devoted to the design of an imaginary city of 35,000 inhabitants instead of to the archaeological reconstitution of some ancient site as required by the authorities who administered the prizes. The exhibition of this design in Paris was received with coolness by official commentators and aroused no enthusiasm elsewhere.

Garnier stuck to his guns and in 1917, having established himself in practice and as a professor, he published the work entitled *Cité Industrielle*, loose-leaf, with very little text and many illustrations. Another edition was published in 1933. It is of course now out of print but may be discovered in the recesses of the older architectural school libraries.

Many other people had by 1900 been searching to create models for



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cities, which in the industrial age were growing into unheard-of and sometimes monstrous forms. Garnier, being a trained and gifted designer as well as utopian dreamer, was the first to depict an ideal modern city by working out all the details. He designed an ideal terrain as well, a hilly area on terraces overlooking an important river, with a convenient tributary to be dammed upstream for all needed power and with downstream and downwind flats near the confluence for a transportation nexus and industrial park. On a sunny plateau, serenely above these activities, was spread the low-density residential city and its governmental-cultural-recreational center. Elementary schools were distributed to facilitate pedestrian access, and the health facilities were on still higher terrain overlooking the city. Any activity that could be noisy or pollution-generating was placed in isolation on the riverbank.

Garnier has been praised by many observers for his extraordinary achievement in controlling the organization of this vast self-imposed program. The Cité projects a powerful image of hygienic, egalitarian, and yet sophisticated urban life. Many of its features remain worth striving for, but it is also interesting to note its shortcomings as a predictor of possibilities. Our century has diverged irreversibly from the ideals embodied in Garnier's plan. For example, he firmly downplayed any office facilities other than those accessory to government or industry, and one has to look hard

to find anything resembling a shopping center. Clearly, his citizens were not into service industries, and they were not addicted to consumerism.

In his radical separation of residential areas from places of employment, Garnier introduced the need for mass transportation; the distances were too great for daily walking. Since the city was to be abundantly supplied with hydroelectric power, Garnier chose to meet all transportation needs with electric trains and streetcars. At the turn of the century, the prevailing urban transport, both public and private, was surely horsedrawn vehicles. Garnier must have been totally confident of the obsolescence of that mode: no stable, public or private, can be found. Although Panhard's internal combustion-driven automobile had already made its appearance, Garnier gave no sign that automobiles would be anything but experimental. By 1917, Model T Fords were tumbling out of Detroit, and by 1933 the internal combustion engine had already revolutionized transportation, yet Garnier chose not to make any serious changes in the Cité as he prepared it for publication in those years.

By far the largest zone depicted in the Cité is that devoted to one- and two-family houses spread out in long narrow blocks running east-west. Some higher density housing is also included, mostly for unmarried persons, but it is clear that Garnier's preferred unit is the small, free-standing dwelling. There is no recognition that professional,

government, and management personnel, with above-average incomes, would be allowed any enclave of their own.

Garnier's residential district is therefore strongly homogeneous, articulated only by the carefully distributed local schools. The houses face sunshine and view and are assured of adequate ventilation. Curiously, however, they have no outdoor privacy. They stand in a parklike space crisscrossed by north-south and diagonal paths that enable pedestrians to move everywhere freely, in a system quite independent of vehicular streets. There are no boundaries to discourage voyeurs or that might suggest the right of a family to grow its own carrots. Trees, shrubs, and flowers, together with outdoor sculpture, are everywhere and are apparently to be serviced and maintained at public expense. The way of life implied by these arrangements would be hard for the French to accept; like most Europeans, they have always wanted their property to be fenced or even walled in.

Another urban design feature of the Cité is the avoidance of the *rue-corridor*, the time-honored practice of giving definition to streets by positioning buildings continuously along their flanks. Garnier's objection to this was probably based on hygienic principles that turned into aesthetic preferences. He was not the only person of his time to make a connection between narrow streets and bad public health. An accompanying phobia was that associated with enclosed

courts. Such courts in a city can provide protection from climate and can also become quiet communal spaces, buffers between the family and the city at-large. To Garnier they were simply insalubrious and to be eradicated. His avoidance flew in the face of Ecole tradition as well, since the Beaux-Arts predilection for strong circulation grids led inescapably to the formation of interior courts. See, for example, the 1917 plans for MIT by Welles Bosworth, an American architect who lived in Paris and designed in the best Beaux-Arts manner.

When Garnier worked at high-density solutions, as in the competition for downtown renewal in Marseille, he did resort to *rue-corridors* and interior courts. However, in his designs for the 1905 Rothschild Foundation competition, aimed at setting standards for rather high-density worker housing in Paris, he arranged the apartments for passive solar exposure, and the dwellings look out on sunny landscaped areas rather than on surrounding streets. Garnier's innovation, which was in sharp contrast to the other competition entries, was a first clear statement of parallel strip housing without resort to enclosed courtyards and avoiding direct street exposure. These principles for group housing were to reach full application in German *siedlungen* in the late 1920s and early 1930s.

Louis Piessat, who has been a student and employee of Garnier, and who, with Pierre Bourdeix, presided over Garnier's teaching

studio in Lyon during the years following Garnier's retirement, rightly calls attention to Garnier's remarkable range of scale, his ability to give clear organization to vast complexes while treating many intimate details with understanding and love. But he is obliged to quote Michel Roux-Spitz, himself a Garnier allumnus and prominent architect, who said among other things, "il n'aimait pas le métier," "he did not like the craft." Garnier was an exponent of the new material—reinforced concrete, in the use of which the Lyon building industry made great progress during his lifetime. When one looks today at the façade of the Ecole de Tissage (weaving), now almost sixty years old, with its faceted pseudopilasters, the quality of workmanship is astonishing; no marks of successive pourings can be seen, and every arris is pristine. Yet, when Garnier specifies that, for buildings in the Cité, all interior intersections of planes are to be rounded, it is the hygienist speaking, not the designer concerned with the technology of concrete placement. Garnier conceived of concrete as a universal material, to be seen inside and out. This led him to make all roofs flat. In the smaller buildings, no serious structural problems presented themselves, but Garnier did not think, as did Le Corbusier, in terms of separating supporting structure from enclosure, so as to gain more freedom in space-making. The fact that Garnier was not, in his heart of hearts, a "constructor", resulted in him being outdistanced by two of his contemporaries in the search

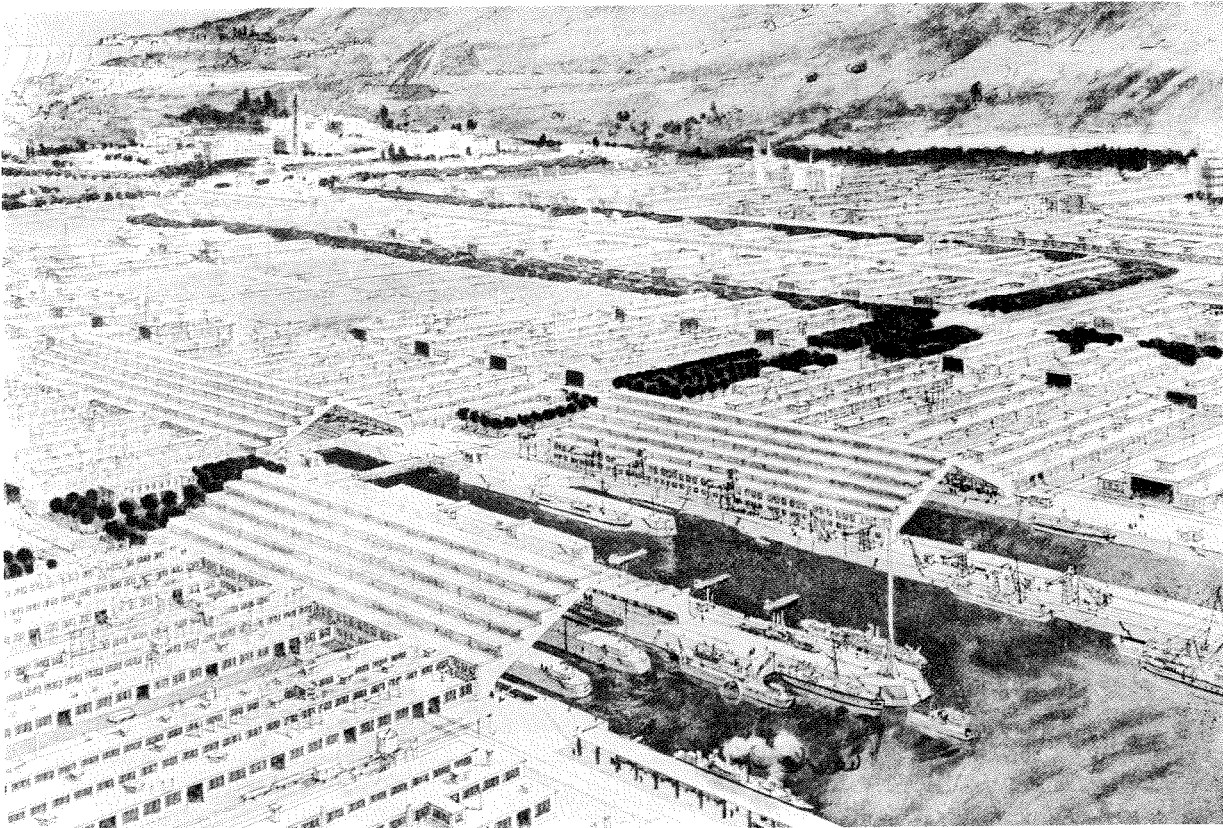
for real elegance in the use of reinforced concrete. Early in Garnier's career, Auguste Perret began his persistent search for a legitimate classic analogue in concrete, and in 1916 Eugène Freyssinet astonished the world with his hangar at Orly.

In the area of long-span structures, Garnier introduced two solutions that became part of his signature as architect. The great Cattle Market is his finest architectural achievement still surviving without change. Its prototype is to be seen in the boat-building shed in the industrial part of the Cité. The original intention was to realize this form in concrete; when this proved impractical, the frame was built in steel with concrete decks. These three-hinged arches are low in the haunch, the building seems to be all roof, the multiple flat planes articulate continuous clerestory windows that bathe the interior in diffused light. The latticed pattern of the arches has a gossamer quality that would not be attainable in concrete until the days of Nervi. Garnier's other characteristic spanning device, never built but drawn repeatedly on projects by him and his disciples, is an alternate to the dome. The high-rising renaissance dome had had enormous impact in France (Invalides, Val de Grâce, Panthéon) and it became the everpresent centerpiece in typical *grand plans* drawn at the Ecole. Programs invariably called for some big assembly hall or other feature occupying a hierarchical position in the plan and whose dome would rise to dominate the ensemble.

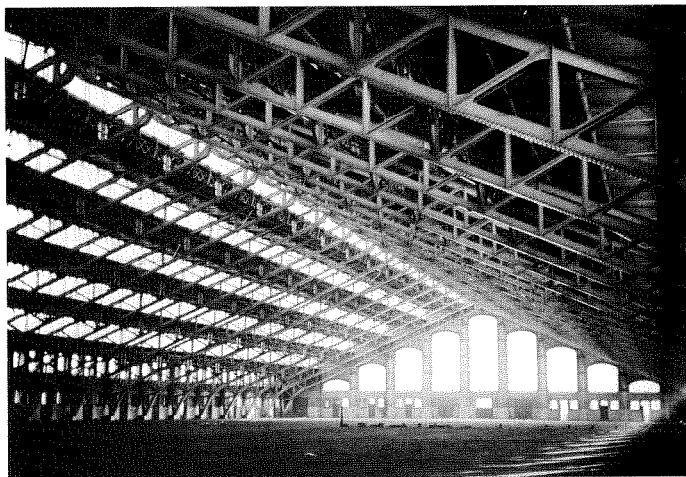
Such a *cliché* Garnier could not accept; his solution for covering such a space was to build pairs of parallel concrete girders, tiered on top of each other with diminishing magnitude, the upper tiers becoming octagonal with clerestory windows or a crowning lantern. In his formidable 1919 project for a Labor Exchange in Lyon, he proposed to span in this fashion the great congress hall seating 4,000 persons.

Both these solutions enabled the architect to obtain natural top lighting, while avoiding any sloping or curved surfaces. However, in his Cité project for an immense public bath, Garnier proposed great horizontal girders between which the roof slabs, horizontal atop the girders, warped upward to meet oval skylights, prefiguring an improbable membrane structure. This could have been the beginning of a structural breakthrough had means been available at that time to analyze such a form. Unfortunately, Garnier never had a brilliant engineering collaborator who could have done for him what Komendant did for Kahn and Arup for Utzon.

In the design of the medical center now known as the Hôpital Edouard Herriot, Garnier was able to bring to fruition a project that embodies a pervasive trait in his character: compassion toward helpless people. It consumed much of his time during the period 1909–1927 and resulted in an institution that continues in high gear today. Medical practice of that time was almost totally without the tools



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**6** View of industrial sector, with boat-building facilities in foreground  
**7** Interior of Cattle Market in Abattoir of Lyon. Photograph by Lawrence Anderson.



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and treatments now in common use, but it had become apparent that sunshine and pure air were helpful in overcoming many diseases. There was a great movement toward breaking down big hospitals into units called pavilions, thus giving patients close relationship to these amenities and making them feel more relaxed than if they were in a huge crowded environment. Garnier's hospital is the example *par excellence* of the psychological and therapeutic merits of the pavilion concept, later abandoned by health planners because of its inefficiency. I recently visited Grange-Blanche (its original name) and was impressed at the bustle of outdoor circulation between the many two- and three-story buildings and deeply moved to see that the windows of a sunroom had bracketed above them trellises on which wistaria bloomed. This Garnier touch not even a hospital administrator could suppress in six decades.

The closest Garnier came to using the architectural language of Perret was in the City Hall of Boulogne-Billancourt (a Parisian suburb); it is the only major work Garnier executed outside greater Lyon. The work exhibits superior probity and dignity without any immodest gesture. It was under construction in 1931–1934, overlapping my own study period in Paris, but I was unaware of it then and still have never seen it.

Although I never had the good fortune to meet Tony Garnier, I benefited indirectly from his

8 Pavilion in the Hôpital Edouard Herriot. Photograph by Lawrence Anderson.

professorship through close association with his students. Arriving in Paris in the autumn of 1930, I joined the Atelier Defrasse-Madeline-Aublet, a studio external to the Beaux-Arts, located in the rue Visconti. Also inducted there during that period were several students from the Garnier atelier who had come to Paris for their advanced studies. Among them were Pierre Bourdeix and Louis Piessat, author of Garnier's biography. Georges Dengler, also a Garnier *protégé*, had already spent a glorious year in Defrasse-Madeline-Aublet and was in the Rome competition. Although new to the atelier and thus lacking other friendships, these students and myself were doing work in *première classe*; we naturally socialized together in the café and restaurant life that gave relief not only from the atelier but from our sleazy hotels that were no more than rooming houses.

It came to pass that in the 1930 Rome competition Piessat had "negrified" for Bourdeix (still in Lyon) while I did the same for Dengler in Paris; that is to say we elaborated on parts of the designs by means of sketches, which, if approved, could be incorporated in the final drawings. Dengler also sought criticism from Garnier by sending studies by mail; one of these was returned with a marginal critique in the form of a sonnet. The general tenor of Garnier's advice to Dengler was to keep his design airy, light, and clean, avoiding all nonessential enrichment. The jury awarded the

first prize to Dengler, who, after a suitable period of celebration and commemoration by his supporters, was sent off to Rome by train from the Gare de Lyon.

Those were heady days, among the most joyously rewarding that the Ecole could still furnish to its adherents. They uplifted me; not only did I bask in the glow of victory as a close friend of the winner and the general exhilaration the event provided for atelier morale, I distinctly felt being rubbed off on me large segments of the attractive philosophy of the great man that Garnier was. I relished his teaching vicariously and came to admire him for the positions he took and the creative work he produced.

His eminence remains solitary; a heroism part of, but also very peripheral to, the Ecole, an achievement foreshadowing, but not exactly merging with, the idealistic first phases of modernism.