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URBAN ANTICIPATIONS: EUGENE HENARD
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Wall Labels

A new universal order was the promise that the late 19th century was to fulfill. Industrial Revolution was the Word; the perfectability of man its Faith; and the World Expositions its Temples.

The scenario of economic and social action hence shifts to the urban centers. The protagonists--Crowds, Commodities, and Machines--appear. And their spectator--the Mass-Citizen--arrives.

The familiar city turns into the new landscape when living-space is distinguished from working-space. Crowds move through crowds as the Mass-Citizen is mechanically accelerated along the same old street patterns to and from the centers where the Future is produced.

At work, he implements Progress by populating a new man-made milieu with objects and techniques which continue to split into more objects and techniques, without order or plan.

At home, in his drawing room, he enacts that which is to come by means of paradoxical rituals of remembrance and prophesy. Surrounded by industrial reproductions of originals, he fancies himself the graceful chatelain. Replacing wind by steam, emissaries by telephones, and carriages by subways, he invokes the new order in the image of Machines as city Totems.

The prophetic urbanists here presented were shareholders of their time's fund of optimism and its conviction that the city's status quo would attain the state of grace if Technology's requirements were granted the quality of value systems. They possessed, nevertheless, a humanistic grasp of the contradictions and tense ironies resulting from superimposing the invisible pattern of demands of a new society on the old city's structure. Lucidly, they surmised that one of the crucial problems of contemporary urban planning for large numbers concerns the smooth flow of energy and the pleasant movement of people between and within destinations.

The small selection of urban designs here introduced to provide a background to Henard's ideas did not propose the development of totally new urban systems, but, rather, the implementation of piece-meal solutions which preserved most aspects of the existing city structure. They deserve, therefore, the recognition of those who, today, despairing of the arrival of the city of the imagination, but reluctant to reconstruct the cities of the memory, hope for small scale urban improvements. Nevertheless, these proposals merit further credit because their attempts at evolving a mode for conceiving the city in terms of its dynamic processes rather than its fixed elements, provided the framework for gradually weaving the new city into the fabric of the old one with a minimum of disruption and, contrary to many utopian proposals, without demanding the unfair sacrifice of one generation for the next.

Street of the Future, 1910. (*left*) In order to improve existing city streets, Hénard proposed elevating the roadway high enough above ground level to allow for a service road below. This access-way, replete with accessible channels for utility systems, service, mass transit, cargo and merchandise transportation and even trash removal, would have direct access to basements of buildings bordering the streets.

Scheme for a Multi-level Street, 1910. (*right*) As demands on the street increased Hénard suggested it would be possible to construct additional subterranean levels without interfering with the traffic on the upper roadway. This multi-level street scheme, with the various levels linked to one another by escalator, has found wide application today as the principal means of integrating structure and movement in dense city areas.

Overpass Intersection, 1906. (*left*) Hénard identified the intersection as the crucial problem point in the surface web of city circulation. To eliminate the prevalent high rate of collision in the common four-way intersection, he proposed the first designed double-level overpass. This is not a simple overpass bridge. The lower road is dug out below grade resulting in gently ascending and descending ramps that more successfully continue the visual and physical pattern of the city. To further ensure continuous vehicular flow, and to give the individual a safe pathway through the city, pedestrian street crossings are accessible by stairs.

Rotary Intersection, 1906. (*center*) The multiple-branch *étoile* intersection, so prevalent in Paris, had become even more dangerous than the four-way one. Before Hénard's investigation of it, vehicles were allowed to traverse these *rond-points* in any desired direction, even diagonally. However, Hénard demonstrated that single direction circulation would greatly speed movement and reduce accidents, and traffic regulations were soon promulgated supporting these conclusions.

Moving Ramp for the Exposition Universelle of 1889, 1887. As early as 1887, Hénard proposed and designed for the Exposition Universelle of 1889 an electrically-powered moving pedestrian platform for traveling between and within buildings. The idea of pedestrian belts was finally realized in the moving conveyors at the 1893 Chicago World's Columbian Exposition, the 1900 Paris Exposition Universelle and in many subsequent expositions. Recently their usefulness at shopping centers, airports and subway stations has been affirmed. Moving pedestrian conveyors offer increasingly recognized advantages of speed, economy and efficiency where heavy loads must be carried, space is limited, and distances are short.

General Plan for Growth of Paris, 1904. Before government officials or many of his contemporaries, were concerned with the question of long term city and regional planning, Hénard evolved the first comprehensive long-term transportation and land use plan for Paris. Meant to serve as a general guide for 75 to 100 years, the master plan anticipated an integrated road network with sufficient linkage between Paris and its developing region. The location of nine new large parks along the periphery and a dozen smaller open spaces in the interior were projected for areas where little or no park space had previously existed.

Hénard also plotted three landing fields for light aircraft, including the Champ de Mars, in a large triangle across the city to prevent future air congestion.

Boulevard à redans, 1903 (left), and Boulevard à redans triangulaires, 1903 (right) Hénard recognized that buildings form the walls of urban spaces. As an alternative to the monotony of interminably linked building façades he designed two new street types, the *boulevard à redans* and the *boulevard à redans triangulaires*. In each, vest pocket spaces are provided along the pedestrian ways alternating with the protruding building mass. In these spaces, Hénard suggested small playgrounds, parks, cafes, and gardens be placed to bring new vitality to the city street. He also hoped they would encourage variety in urban architecture responsive to the new spaces, and that these open spaces, in turn, would provide a vantage point from which urban buildings could be more easily and more fully appreciated from the street.

Proposed Renovation of the Champ de Mars as Dirigible Port and Sports Park, 1903. After the Exposition Universelle of 1900 the French government was eager to sell the unkempt and unused Champ de Mars to land developers.

As a means of preserving most of the area intact, Hénard suggested in 1903 that part of the Champ de Mars be converted into the first in-city landing field for aircraft. Since the Wright Brothers' first bi-plane flight in 1903 was not immediately publicized in Europe, Hénard's vision was still guided by the only aircraft he could have known, the dirigible. Nevertheless, at the very beginning of air flight, when it was generally considered merely a fascinating dare-devil sport, Hénard recognized that it would become a revolutionary means of inter-urban transportation. He responded with the Champ de Mars proposal.

With Hénard's scheme for the Champ de Mars, Dutert and Contamin's architecturally outstanding Galerie des Machines would have been preserved as a storage and repair hanger, with the Eiffel Tower serving as a signal and communications station. Also much of the valuable Champ de Mars could have been saved for gardens, theatre and recreation. Instead, the suggestion was ignored, nearly half of the Champ de Mars sold and the Galerie des Machines destroyed.

Theodor Fritsch: Street of the Future, 1896. By the beginning of the Twentieth Century, isolated individuals were rethinking the traditional notion of "street" and its relationship to "city." Several of them, like Hénard, concluded that the central city street ought to be a multi-level affair, divided into horizontal decks according to purpose. Thus, for example, Theodor Fritsch in Germany and Sir John Wolfe Barry in England designed and published double-level streets on stilts. The upper level was for circulation of bicycles, pedestrians and people-carrying vehicles. On the surface below, accessible channels were left open for utility conduits, freight transport and merchandise conveyance. Fritsch, like Barry and Hénard, recognized that the roadway should be designed in conjunction with structure, and therefore provided direct access between the service level and bordering buildings.

Antonio Sant'Elia: Citta Nuova, 1914. Italian Futurist thinking was also involved in early twentieth century city planning. Sant'Elia's Citta Nuova, like Futurist theory, acknowledged and came to terms with the necessity of inserting movement that takes place in the city into urban design. In his scheme, types of circulation were sorted out and the separate elements—the road, the sidewalk, the rail line, the bridge—were fused with structure into a new unified city form. Although his visionary schemes were destined to remain on paper, this treatment of circulation in the Citta Nuova received wide application on a more fragmented scale.

Henri Jules Borie: High-rise Dwelling Units (Aérodômes), 1865. Low-cost housing was also a concern of these visionary thinkers, as illustrated by an inventive scheme devised by Henri Jules Borie, a Parisian civil engineer. He recommended placing dwelling units in ten-story high blocks, an unprecedented height for his era. Horizontal planes were carved out of the building's volume, creating an innovative set-back system that provided peripheral pedestrian streets in the air. These in turn gave access to elevated bridges crossing above existing grade level streets between building blocks. Borie also flattened roofs to accommodate such institutions as schools and churches which required space and would be widely used by the public (presaging some of Le Corbusier's later proposals). Direct access was provided by the elevator system that serviced apartments and elevated streets below.

The logic of such multi-purpose (mixed zone) combinations is being recognized today in isolated air-rights projects, where convenience for people, simplification of movement and its integration into structure have only been affected because of oppressive land costs.

William Moseley: The Crystal Way, 1862. As early as 1862 William Moseley, an English designer and developer, proposed a scheme that integrated all the luxury and pleasure of Milan's Galleria (or today's closed, roofed, climate-controlled pedestrian malls) with a system of public rapid transit. Meant to extend from Regent's Circus to St. Paul's in London, circulation channels for trains and pedestrians were separated by levels, with the transit line cutting below existing streets and the pedestrian arcade bridging them. Shops, stores, hotels and houses border both, with access between buildings and the glass-covered mall provided all along the upper pedestrian level. Below, the building sub-basements open onto mass transit rail lines facilitating circulation, merchandise delivery, and removal of trash.

Randolph Speer: Elevated Pedestrian Belt Planned for Lower Broadway, New York, 1874. The concept of mechanized pedestrian transport within and between buildings gained serious consideration in the late Nineteenth Century. In 1874 an American engineer, Randolph Speer, designed an elevated, electrically-propelled moving platform for lower Broadway which featured such amenities as benches, enclosed pavilions and strolling space. Stops were at fixed stations. However, like the elevated railroad of some years later, the circulation system was not integrated with bordering structures. Instead of entering and exiting through elevated foyers and lobbies, the pedestrian would have had to depend on outside stairways which would have created long lines and bottlenecks.