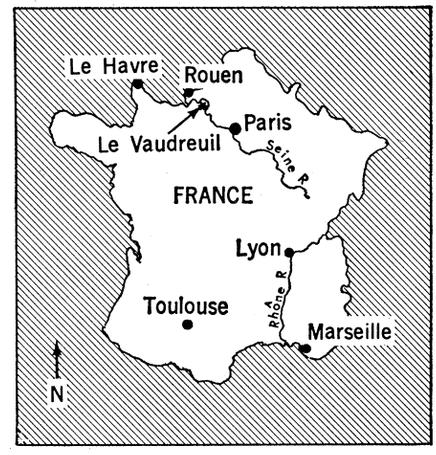
Le Vaudreuil: French Experiment in Urbanism without Tears



France is en route to capturing the distinction of building the world's first industrial city designed from the earliest stages to control air, water, noise, and esthetic pollution.

The first stages of construction are scheduled to begin next year on the new city of Le Vaudreuil, to be located on the Seine River 60 miles west of Paris. It is one of eight new towns currently being built in France under the country's sixth 5-year national development plan. It is one of the smallest—the population will stop at around 140,000 —and certainly the most expensive. The government has allotted over $120 million for planning, subsidized low-cost housing, and public works for Le Vaudreuil (which got its name from a village on the site), but this is a small fraction of the eventual outlay expected when private promoters and developers get into the act.

Le Vaudreuil is also setting a precedent as one of the most imaginative French-American cooperative ventures to have resulted from the stepped-up program of scientific exchange that President Nixon and French President De Gaulle agreed upon in 1968. For the Department of Housing and Urban Development (HUD) in particular, it is a landmark in international cooperation for housing and planning. The project interests the United States not only as a model for large-scale urban technological innovation, but as an experiment in the shaky new game of interdisciplinary research and planning—a pursuit whose complexities are only beginning to be realized as the concerns of scientists and social planners increasingly merge in efforts to ease the burdens of civilization.

The era of the new town really began at the end of World War II, when Europe started rebuilding her devastated cities. The proliferation of these settlements has been swift, as the pressures of population and industrialization have compelled planners to come up with alternatives to suburban sprawl and haphazard community growth.

France, like other European countries (particularly those in Scandinavia), has been trying valiantly to deflect commercial growth from the magnet of her capital, Paris. But the French problem is particularly severe—from the Parisian point of view, one lives either in Paris or in *province*, which means anywhere else.

Soon after the war, France inaugurated a policy of "decentralization," which involved designating eight cities around the country as alternate growth centers. This idea was only partially successful and was followed up with a plan to expand the Paris suburbs with the aid of fancy new highway networks. However, it was soon realized that this would spell the strangulation of the capital. The present approach involves the construction of five new, relatively autonomous cities in the environs of Paris, to be connected to Paris by high-speed public transit systems. Three other cities are being built, more or less from scratch, within commuting distance of three major industrial centers, Toulouse, Marseille, and Rouen.

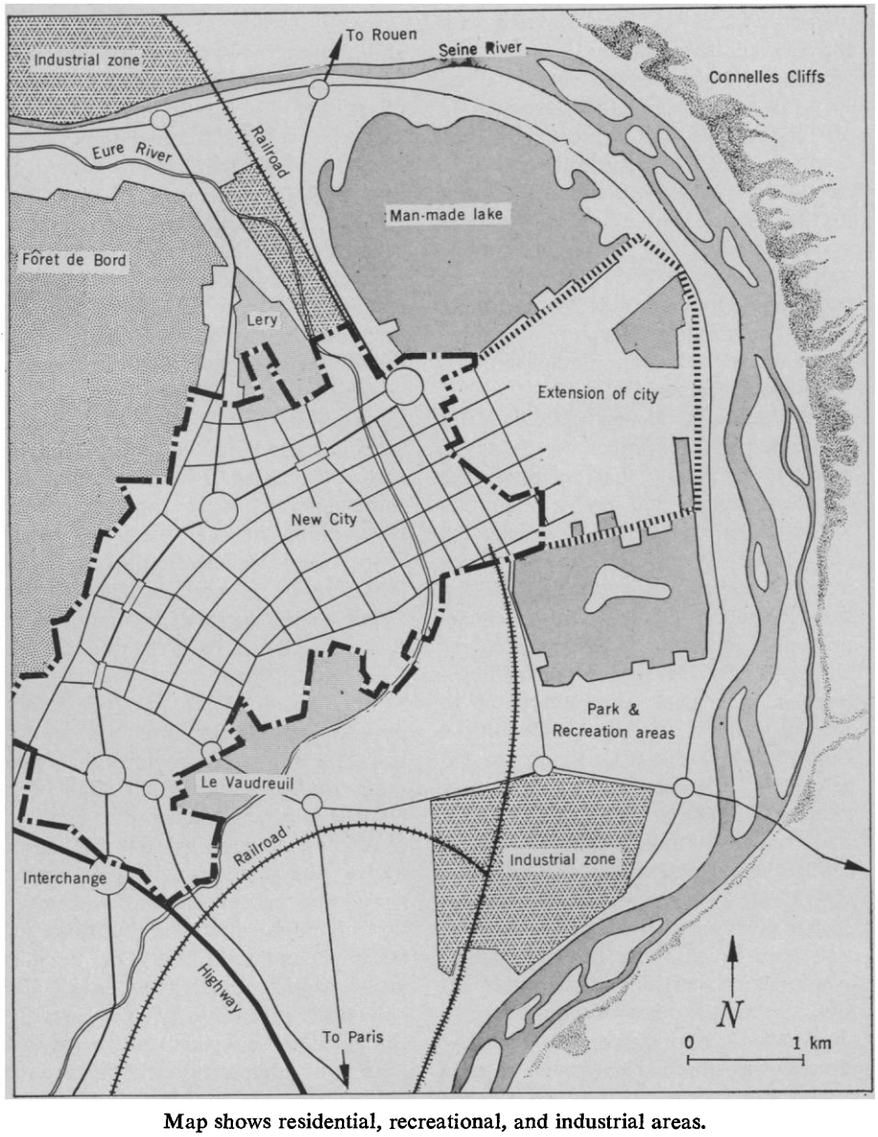
Le Vaudreuil, Rouen's satellite, will be nestled in a curve of the Seine 15 miles southeast of that teeming nest of oil refineries and textile manufacturers (called by one HUD official the "Pittsburgh" of France). It was designated an experimental city in 1967 by the Délégation Général à l'Amenagement du Territoire et à l'Action Régionale (DATAR), the agency that administers the 5-year plan. As an alternative to Rouen, which is already straining at the seams, it is hoped that Le Vaudreuil will help stabilize Rouen's population, now totaling 570,000, at 600,000. In 1969 it was decided by the Délégation Général à la Recherche Scientifique et Technique (DGRST), the agency that oversees all of the government's scientific research and development, that heavy pollution in the Seine corridor rendered it almost imperative that Vaudreuil be a showcase of pollution control. The new city was also thought to provide a good opportunity for applying on a large scale the extensive studies of *les nuisances* (French for pollution) that were conducted under the fifth 5-year plan, in order to see what could be extrapolated for nationwide application.

Some critics have objected to the designation of the 10,000-acre site for this experiment on the grounds that the Seine is already heavily contaminated and the air suffers from its proximity to Rouen. But many natural advantages offset this. Le Vaudreuil will rise on the Seine valley's flat and thinly populated farmlands, which are carved out of the chalky plateaus of Upper Normandy. The landscape is unmarred, save for a cellulose factory and numerous gravel pits whose contents are loaded on barges and pushed up the river to supply building material for Paris. Recreational facilities already abound—including a golf course, riding stables, and a mountain-climbing school located on the sharp cliffs just across the Seine. Islands in mid-Seine form potential natural parks; the site is bounded on the west by a state forest. Basic transportation is handy, including a railroad, an airport, and a soon-to-be-completed superhighway stretching from Paris to the port of Le Havre.

Since Vaudreuil became the potential proving ground for urbanism without tears, the site has become probably the most studied area in all Gaul. The DGRST has contracted out hundreds of studies, directed by four task forces whose energies are divided as follows: site, resources, and administration; communication and transportation; housing; and industry. The resulting investigations range from a detailed biological inventory of the area, to complicated acoustical projections, to a study of adolescent social maturation.

Plans for making the city a reality are far from solidified, partly because

the French are bent on keeping open as many options as possible; however, certain fixed principles of growth and character have been established. In arriving at their concept, the French have drawn wisdom from the mistakes made by other countries, particularly England. The English rigidly planned their first "new towns" in their entirety; the cities were designed to be static and self-contained, and the results were sterile, characterless assemblages that were more like places of exile than living cities. The designers of Vaudreuil, instead, are following a difficult and seemingly paradoxical course of planned natural growth. The city is supposed to evolve organically, like the unplanned cities of old, from a central, 500-acre core. The French are fond of comparing this core, which they call *le germe de ville*, to the embryo of a baby, complete in all its tiny parts, which will begin existence as a person rather than as an arm or leg of a future metropolis. But instead of having centuries to ripen, it will have to come of age in a matter of decades—from a population of 15,000 by the late 1970's, to 140,000 by the year 2000. Vaudreuil's industry will be closely connected with the economic life of Rouen —with emphasis on the manufacture of plastic products and pharmaceuticals —but it will not be a company town. Nor will it be a suburbanite dormitory. In addition to offering employment to an indigenous population, the city will be a place for cross-commuting with both Paris and Rouen. Thus, planners have in mind a sophisticated population, one that is accustomed to urban living and expects a variety of cultural amenities, the lack of which has often been a serious cause of dissatisfaction among the wives of businessmen who have relocated outside of Paris. As one French magazine says, Vaudreuil cannot be "just any old new urbanization—it must possess all the characteristics of a true city [*une véritable ville*]."



Map shows residential, recreational, and industrial areas.

Zoning will be minimal, with land use subject to three basic designations: industrial, residential, and recreational. Shops, businesses, and light manufacturing endeavors will be interspersed among housing units. Strict codes, such as exact chimney height for optimum dispersion of fumes, will apply to industrial structures, and building materials for housing will be of sound-absorbent substances such as porous brick. Buildings will be contiguous and of varying heights, up to six or seven stories.

The whole city will be built over a simple grid of main roads built 400 to 600 meters apart. Many of these will be sunken, all will be one-way, and traffic lights will be timed to facilitate nonstop traffic flow. Secondary roads will be two-way.

Engineer Jean-Paul Lacaze, chief of the interdisciplinary Vaudreuil study team, has explained that the "neuter" character of the grid pattern (as opposed, for instance, to a radial road plan) does not predetermine the city's main centers; it can be easily extended as the town grows, and it is adaptable to various kinds of land use.

Spatial, esthetic, and pollution considerations have compelled designers to heavily exploit the possibilities of vertical construction. Garbage and solid waste, some of which, it is hoped, will supply energy for the city's heat supply (as is now the case in parts of Paris), will travel underground to subterranean treatment plants and incinerators. Utilities and other unsightly installations, such as parking lots, storage vaults, and sports arenas, will be buried. Above ground, networks of elevated walkways will crisscross roads and neighborhoods, encouraging people to use their feet for short hauls and providing easy access to public facilities and shops, while separating walkers from noise, fumes, and entanglements with traffic. A multitude of small *microsites*—multilevel concentrations of shops, schools, parks, and so forth, will further reduce the need for wheels. A varied family of special vehicles, such as small electric vans and buses and air-cushioned, linear induction–motored trains, will decrease reliance on gasoline-fueled trans-

port. The effect of the plan will be to demote vehicular thoroughfares to a functional role, rather than to allow them to dominate the urban environment.

A centerpiece of the city, and the thing that may end up putting Vaudreuil on the map, is a planned international conference center, the first of its kind, to be devoted exclusively to environmental studies. The government has allotted $5.5 million for initial work on the center, which will be equipped with its own laboratory. The center is expected, through continuous on-site monitoring, to provide crucial guidance for the city; it will also be a mecca for students of the environment and a clearinghouse for studies conducted at other new cities.

The French government plans to start work on the *germe de ville* next year with the construction of 4000 subsidized housing units; these will take the form of suburban extensions of two villages, Léry and Le Vaudreuil, that flank the core. Work will also begin on the infrastructure of one of the industrial zones. Once the government has laid the framework, private money, initiative, and ingenuity are expected to shape the town, which will gradually extend toward the river between two man-made lakes to be modeled from worked-out gravel pits. The challenges will be many, including that of fashioning surroundings which will incorporate without destroying the character of the half-dozen old Norman villages that dot the site.

What are the United States and France getting out of this mutual undertaking? At this point it is hard to tell, since the machinery of the arrangement is just starting to roll. The American Vaudreuil team, made up of 14 representatives of various agencies, including five HUD men, recently returned from its second visit to France, and Paul V. Brace, HUD's man in Paris for the project, has been assigned to stay on a second year. Lacaze's team is coming to Washington this month to talk with building experts, ecologists, and community planning experts around the country.

The Americans are watching the venture with tactful excitement and regard it as a unique opportunity to witness from the inside the French decision-making process. Furthermore, says Dale Barnes of HUD, "The French are way out on the leading edge" in developing new towns. "We are getting the results of millions of dollars of planning and development," which should be of considerable value when the Americans start building pollution-controlled towns. (The only such experiment to date is the Minnesota Experimental City, a domed affair that exists only on the drawing boards.)

For the French, the Vaudreuil project is a test of the kind of bilateral arrangements it hopes to make extensive use of in other regional plans. Richard Langendorf of HUD points out that this type of arrangement not only gives the French free advice and moral support but assures them of keeping up with the latest relevant developments in another country so they don't have to "reinvent the wheel." An attaché with the French scientific mission in Washington says that in the Vaudreuil arrangement the French are not so much interested in American

Briefing

Moths 65 . . . USDA 0

Since 1906 the Department of Agriculture has fought a yearly battle with *Porthetria dispar*, the gypsy moth, and each year the silken canopies spun by the moth's caterpillars have reappeared in the woodlands of Pennsylvania and New England, generally in greater numbers than before, to emblazon the failure of yet another eradication campaign. The department has emptied a war chest of more than $100 million in showering the countryside first with DDT, until that became unfashionable, then with the nonpersistent insecticide carbaryl. Despite these tactics, or because of them, some say—blind spraying of insecticide also destroys the parasites that must help bring gypsy moth populations under control—the moth has steadily expanded its range and depradations. This year, according to preliminary reckonings, its caterpillars have wrought medium to heavy defoliation over 1½ million acres of woodland and light defoliation in another half million. Next year's visitation, to judge from the egg batches already deposited, promises to be at least as scourge-like. Could something be awry with the department's gameplan for combating the moth?

Under the requirements of the National Environmental Policy Act, the Department of Agriculture has had for the first time to disclose the strategy of its antimoth campaign. The disclosure, in the form of an environmental impact statement, has not won universal praise. The opinion of the Environmental Protection Agency, in comments made public last month, was that the impact statement failed to justify the spraying program on either economic or esthetic grounds and failed also to prove that the spraying would do no damage to the environment. This verdict—which did not prevent the program from going ahead—left something to be desired as an accolade for the Department of Agriculture's 65-year, $100-million struggle against its lepidopteran adversary.

The EPA's comments (which followed in outline a scholarly critique prepared by the Environmental Defense Fund) implied the existence of remarkable lacunae in basic scientific knowledge about the gypsy moth and its consequences. The EPA pointed out that the Department of Agriculture failed to supply in its impact statement such elementary information as the usual rate of tree mortality in the absence of the gypsy moth, the percentage of defoliated trees that actually die, the effect of natural controls upon the moth population, the basic data needed to assess the effect of carbaryl on fish, birds, and other insects, a fuller discussion of alternative methods of control, or even a map of the areas to be sprayed. The Department of Agriculture, the EPA comments imply, has not done its homework—which could have something to do with the success of its gypsy moth gameplan.

More intelligent methods of control are now under study by Department of Agriculture scientists, in particular the possibility of confusing the male moths with the chemical used by the female as a come-hither scent. The criticisms of the department's impact statement by the EPA and the Environmental Defense Fund may have some influence on the budget for next year's antimoth campaign and the share of it accorded science-based methods of control.—N.W.

urban design ideas as in American gains in industrialized housing and building technology.

The American Vaudreuil team, which is being careful not to force its opinions down French throats, has tentatively voiced some "concerns" about the way the operation is being conducted. Chief among these, according to Langendorf, has been the failure of scientists and planners to "talk productively to each other." Designers, for example, have been busily working out housing and transportation models without the benefit of either input by environmental specialists or cost studies by economists. Goodwill abounds among all concerned, says Langendorf, but, since so many studies have been conducted separately, there has been difficulty in translating scientific data into forms useful to planners. This situation has slowed things up—"up to now there has not been developed a plan for Vaudreuil which fully reflects environmental interests." To help mesh diverse efforts, the Americans have urged the French to add some environmental and economic expertise to their interdisciplinary planning team, but so far an economist is still lacking.

The Americans have also expressed concern that the French were being too optimistic about expected breakthroughs in electrically powered transport and that too much reliance was being placed on the automobile. Indeed, according to a Washington architect, if the French were serious about having a minimum-pollution town, they would ban the automobile entirely. The French, however, are not interested in the total extinction of *les nuisances*—the automobile has not yet become a symbol of evil to them, and their emphasis is on striking a balance between acceptable levels of filth and acceptable levels of spending.

For the most part, the Americans admire the French modus operandi. Efforts to involve the local citizenry in the planning process, for example, have apparently been successful. On site is a houseful of architects and planners, some of whom are living in the area, who are always available for neighborly communication. Planners have held frequent meetings with residents, and most citizens of the area—with the possible exception of some Rouen politicians who fear loss of business and tax base—are favorably disposed toward the project.

The pattern of community involvement is to be retained as the city grows. "Planning for Le Vaudreuil emphasizes flexibility, so that changing technology and living patterns can form the basis of the plan itself and evolve with the growth of the city," says a HUD publication. The conference center will also furnish a permanent sounding board for local feelings.

The French, because of their strong centralized government, have long been among the world's leaders in regional planning (it may be remembered that it was a Frenchman, Pierre L'Enfant, who laid out Washington, D.C.); still, they have set themselves a considerable challenge by actually deciding to build a city that appears to skip a generation, both in concept and in technology. Their desire to incorporate flexibility and foreclose as few options as possible forces them to work with a welter of plans. These, in turn, must filter through the French bureaucracy, which has as many layers as a Napoleon pastry. In addition to DATAR and DGRST, the Ministry of Construction and the newly created Ministry of the Environment must have their say. There are also two new interministerial committees to be reckoned with, one for new towns, the other for Vaudreuil.

The attraction of the town for developers and industry is vital. One HUD official says that some businesses may be reluctant to step in because of the high costs of pollution reduction and the risks involved in the fact that most construction will not be done under government contracts; however, the amenities of the new town are expected to more than offset these factors. Langendorf says a number of industries have already expressed interest in locating in Vaudreuil, and the French parliament recently decided to build new production laboratories for the Pasteur Institute there—a decision bound to inspire confidence.

Vaudreuil will be a low-key, low-rise town, but as things stand now, it would be impossible to predict its future character. It could be a cleaner-than-average factory town or a scholarly resort for environmentalists. For all its muted decibels, pure air (when the exudations of Rouen are blowing out to sea), and frequent intervals of green, it will hardly be a countermagnet to Gay Paree. In its early years, at any rate, the population will be rather homogenous—science attaché Louis Pons says he expects it will be peopled largely by young couples, since the French are notoriously reluctant to move once they have settled somewhere. Vaudreuil, however, is an important experiment. Eighty percent of the population in the industrialized world is expected to be urbanized by the year 2000, and its planners want Vaudreuil to be the kind of place that will give cities back their good name.—CONSTANCE HOLDEN

Manpower: Federal Register of Scientists "Discontinued"

Under orders from the White House Office of Management and Budget, the National Science Foundation is mothballing the national register of scientific and technical personnel that it has maintained for nearly 20 years. As a direct result, the NSF will not conduct its biennial survey of scientific manpower this year as it had planned, even though this survey, which is based on the national register, is a principal source of information on salaries and employment of scientists and engineers.

The register consists of computer tapes bearing the names, addresses, employment, and educational background of some 592,000 individuals, drawn mainly from the mailing lists of 13 professional societies. Every 2 years the societies, under contract to the NSF, mail out updating questionnaires. Data collected on each scientist are preserved on microfilm, punch cards, and tapes at the National Register Record Center, operated for the NSF by North Carolina State College in Raleigh.

NSF officials insist the register has not been "killed" but has merely been "discontinued in its present form" while its staff seeks a cheaper means of gathering essentially the same statistical information. (The register cost $900,000 to maintain in fiscal 1971.