
The study of urban form in France

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Abstract. *This paper reviews urban morphological research in France, mainly since the early 1970s within schools of architecture. Changes in the nature of the studies undertaken are discussed in relation to a number of contextual developments and earlier types of study: first, two historiographical traditions, namely the history of town planning and the topographical histories of individual cities; secondly, studies carried out in the first half of the century; and thirdly, research since the 1960s in disciplines other than architecture.*

Key Words: urban morphology, architecture, town planning, France

The morphological history of cities, as it has been developed in the last 30 years, is nourished by two historiographical traditions: the history of urbanism and topographical history. In France, these two traditions gave rise in the first half of this century to two masterpieces: *L'histoire de l'urbanisme* by Pierre Lavedan and *Une vie de cité; Paris de sa naissance à nos jours* by Marcel Poëte. A major difference between these two works is their positions within the traditions to which they belong: the first laid the foundation of a new tradition, while the second was the apogee of a two-century old tradition.

History of town planning

L'histoire de l'urbanisme was published in three volumes between 1926 and 1982.¹ It is based on a distinction, essential for the author, between developed towns and created towns,² a distinction between spontaneous

urban evolution and town planning. According to Lavedan, only the latter type of town is of any interest to the history of urbanism,³ which is thus concerned with the creation of new towns, the planned extension of existing ones, and the planned transformation of old urban fabrics. Lavedan's work is based on considerable scholarship. His three volumes identify hundreds of different urban designs, for which he provides basic information. It is obvious why so many of the authors interested in the general history of town planning mention Lavedan: his work is a mine of information.

The aim of the general history of urbanism, like that of the general history of art, is to create a kind of genealogy of ideas, in this case of planning ideas. In order to do so, facts considered as relevant, gathered in a number of countries, mainly in the western hemisphere, are linked in a way that gives practically no attention to the evolution of

each particular town. In this kind of history, Paris, for instance, is mentioned in the chapters dealing with seventeenth- and eighteenth-century squares (on account of its five *places royales*) and with urban transformations of the second half of the nineteenth century (the famous *Hausmannization*). All the rest is forgotten.

Topographical history

In contrast, topographical or morphological history focuses traditionally on the physical aspects of particular cities. It has, for the most part, been the field of local historians, each studying his own town or city with no reference to other cities. Many cities have been studied in this manner. In Paris, this tradition goes back at least to 1550, with the publication of a book by Gilles Corrozet.⁴ This summarizes the legends of the foundation of Paris, explains the creation of many public buildings, and gives the etymology of street names. This approach was pursued during the following two centuries by several authors,⁵ and culminated in the work of Jaillot.⁶

Towards the middle of the nineteenth century, the topographical history of Paris was enriched by the new field of archaeology, interest in which was stimulated in Paris by the large public works carried out under Haussmann in the 1850s and 1860s. At the same time, the maps and plans of Paris were recognized as a valuable source for the history of the city and studied as such.⁷ It was also at that time that Adolphe Berté searched in the archives and measured existing buildings in order to draw an exact map of medieval Paris.⁸

Usually, the general works of topographical history were spatially organized, according to either an imaginary visit to Paris,⁹ or the numerical order of administrative quarters or the alphabetical order of the names of streets. At the beginning of the nineteenth century, however, a new approach appeared: two books followed a chronological order.¹⁰ Marcel Poëte gave a particular twist to this way of

telling the history of Paris because, for him, the Paris of the past and of his day were not successive beings: 'they were one and the same being under constant evolution'. Poëte wanted to understand and describe the soul of the city and see how it related to the physiognomy of the city. His monumental work was published between 1924 and 1931.¹¹ It consists of three volumes of text and one *album*. The first volume stretches from the birth of Paris to the middle of the fifteenth century;¹² the second from the middle of the fifteenth century to the end of the sixteenth century. The third volume deals more specifically with the religious aspects of the city during the sixteenth and seventeenth centuries. Anyone deterred by the 1500 pages of these three thick volumes could turn directly to the magnificent *Album* (published in 1925) in which Poëte tells, in his brilliant presentation of 600 illustrations, the evolution of Paris from its birth to the 1920s.

Early developments

The paths of Lavedan and Poëte crossed in two different ways. First, the two men worked together in what would become the Institut de l'Urbanisme de Paris. Poëte contributed to the shaping of an entire generation of students who wrote urban case studies under his supervision as part of their curriculum,¹³ while Lavedan became the director of this institute in 1942. Secondly, Poëte published the course that he gave at the Institute on 'Evolution of cities' under the title *Introduction à l'urbanisme* (the first part is an excellent introduction to urban analysis),¹⁴ and in 1975 Lavedan published *L'histoire de l'urbanisme de Paris*,¹⁵ which is still the best introduction to the morphological history of Paris.

Despite the quality of their work, neither Poëte nor Lavedan created a school of thought. Their ideas found an audience: individuals were certainly influenced by their books and teaching,¹⁶ but no group of disciples ever came into existence. Apart from personal factors, it is probably in the main the ambiguous status of the Institut

d'Urbanisme, and of urbanism as a subject, that accounts for this shortcoming.

It was not just a matter of chance that the only 'school' created in this field evolved around Raoul Blanchard, who published in 1911 his *Grenoble, étude de géographie urbaine*. Later, his work on other cities (for example, Annecy, Lille and Nancy) and the work of his students (for example, on Vizille, Valence, Albertville and Clermont-Ferrand) amounted to what Gilles Montigny considers to be a homogeneous body of scholarship based on the same approach.¹⁷ For example, all of the case studies are divided into three parts: first, the site and its influence on the city; secondly, the development of the city; and thirdly, the main functions of the city. The influence of Blanchard crossed the border, to Spain for instance.¹⁸

In the architectural realm, the interest in urban form was expressed in different ways at the beginning of the century. In the Ecole des Beaux Arts, the subjects studied by the winners of the *Prix de Rome* gradually evolved from isolated monuments to groupings of several monuments, and then to entire towns. This shift of emphasis also took place in the legislation and practice of preservation, which spread from the monument itself to its surroundings and later to entire areas.¹⁹ At the same time another development occurred: architects began to be interested in ordinary buildings in rural areas. An important outcome of this new interest was the publication in 1941 of a book by Georges Doyon, the third edition of which, nearly 40 years later, would be highly successful.²⁰ Work on rural dwellings led to one venture in particular: during the Second World War, about 50 architects took part in a typological survey covering the whole of France. They produced 1759 case studies of rural dwellings, which were assembled in 1969, augmented, and published in some 20 volumes.²¹

The beginning of a new era

After the Second World War, morphological studies were related to the effort of

reconstruction and regional planning. Geographers and sociologists did groundwork for governmental policy making, but their exact role has not yet been fully described.²² In the architectural world, a new awareness was emerging during the 1960s. The modernists were confronted with their own ideas: for example, the city was seen as the ultimate object of architecture, and the importance of housing was stressed. At the same time, the conception of architecture as propagated at the Ecole des Beaux-Arts, a very conservative establishment, was ferociously criticized. After the closure of this institution in 1968, many young teachers thought that the universities would be the best place for architectural studies. They wanted to leave the world of art and join the world of scholarship. To their dismay, the government decided that architecture should leave the Ecole des Beaux-Arts but should not be part of the universities. At this time, 23 independent schools of architecture were created, nine of them in Paris. The young teachers succeeded, however, in introducing research into the new schools. In the ministry in charge of architecture (its name has changed several times in the last 30 years, being first the Ministry of Culture, then the Ministry of Public Works, later the Ministry of Housing, and most recently again the Ministry of Culture) a small division was created, currently called the Bureau de la Recherche Architecturale, whose task it is to encourage research in the schools of architecture.

In terms of urban research, two groups were quickly ahead of the field: one in what is called today the Ecole d'Architecture de Paris-Belleville, and the other in what is currently known as the Ecole d'Architecture de Versailles.

Parisian schools of architecture

In the Ecole d'Architecture de Paris-Belleville, Bernard Huet initiated studies on Le Creusot, Nancy, Paris, Saint-Denis, Toulouse, Orleans and a few cities in Sicily.²³ Among these, the study of Le Creusot is the

best known, and it was the only one to be properly published.²⁴ It considers the development of an industrial town in order to understand the particular way of producing a city in the nineteenth century. In general, Huet was interested in the emergence of the modern city. In Toulouse, his team studied the 'retooling' of the town by the introduction of new building types during the nineteenth century; in Orleans they focused their study on three generations of *percées* (break-through streets), and in Paris it was the HBM (public housing) belt of the 1920s and 1930s that was the subject of the research. All of these studies followed what, in France, is called the *typo-morphological* approach. This has major Italian antecedents, namely in the Aymonino-Rossi branch of Muratorian scholarship with its focus on the dialectical relationship between the physical evolution of a town and its building types, mainly housing.²⁵ There was, however, a major contrast to Italian studies: through contact with thinkers such as Henri Lefebvre and, in particular, Henri Raymond, much importance was attached to various sociological aspects of urban and architectural forms.²⁶

In the Ecole d'Architecture de Versailles, research was organized around Jean Castex and Philippe Panerai, who were joined by the anthropologist Jean-Charles Depaule. Their first study focused on five large urban extensions or transformations: the Haussmannization of Paris, the designs of Unwin for Letchworth and Hampstead, Berlage's plan for Amsterdam, May's *siedlungen* in Frankfurt, and Le Corbusier's *unités d'habitation*.²⁷ This study ranges from individual buildings to the entire city, and shows how the urban block progressively opens up until it disappears altogether. It is a very strong anti-modernist manifesto which parallels what Colin Rowe was doing at the same time: criticizing what he called the dialectical jump from background to figure.²⁸ The plea of Castex and Panerai in favour of the closed block was later taken up in their study of Versailles, which is probably one of the best typo-morphological studies in

France. This work divides the history of Versailles into several periods, each of which is examined through the development of urban form and housing types. The specific design of Versailles is underlined, namely that it is a town developed not as a whole but rather as a collection of urban fragments. The study shows also how during its evolution this 'garden city of Enlightenment' became progressively a 'normal city': the large plots occupied initially by detached aristocratic mansions were filled in by apartment blocks.

At the end of the 1970s and the beginning of the 1980s, another team appeared at what is now called the Ecole d'Architecture Paris-la-Défense. It was composed of three architects: Alain Borie, Pierre Micheloni and Pierre Pinon. At the beginning, these three were interested in problems of architectural composition, mainly in the distortion of perfect geometrical figures. But their examples included urban forms.²⁹ They then proceeded to a much more urban approach, focusing on the development of towns on meanders.³⁰ It is impressive both in the number of towns studied and in the systematic way that the work is carried out. This team was influenced not so much by Italian research as by methods developed by Gerard Hanning in the Institut d'Aménagement et d'Urbanisme de la Région Ile de France. They disaggregated the urban fabric into different components - topography, road system, lots and built form - and studied the topological, geometrical and dimensional relationships between these levels. Unlike the studies mentioned previously, this is a 'pure' morphological study.

In 1981, all these Parisian researchers decided to work together and joined Antoine Grumbach (from the Ecole d'Architecture Paris-la-Villette), who developed in his projects and teaching the notion of the city as a sedimentary phenomenon,³¹ and Bruno Fortier (from the Institut Français d'Architecture),³² who had already written two books on eighteenth-century town planning.³³ Their common project was to

create an atlas of the urban forms of Paris. This meant reconstituting the plan of Vasserot, who had prepared measured drawings of Paris during the years 1810-30 but had never assembled his different plans at the same scale. The idea was to show this depiction of 'Paris before Haussmann' at the universal exhibition which was intended to be held in Paris in 1989. However, like the exhibition, it failed to materialize.

Bruno Fortier continued the project by himself while changing its scope. He studied thoroughly some twenty small fragments of Paris (including a *passage*, a *percée*, an aristocratic *hôtel* and a bridge), starting with the urban evolution of the site before considering the major architectural features. His draughtsmen drew in minute detail the ground plan of each area to the scale of 1:500, the scale that the Italians usually use in their urban research. But Fortier, who was never fond of the typo-morphological approach, was not interested in the relationship between 'morphology' and 'typology'. Rather, he wanted to understand how a town constitutes a formal substratum - seemingly a kind of *epistémé à la Foucault* - for architectural projects. The work seemed, therefore, to start from a very strong position: the town as a metalanguage of architecture. Unfortunately, Fortier is a very laconic writer, and never really developed this idea. This is why, at first glance, one can think that his book is merely concerned with the geometrical beauties of a plan or architectural detail. When this work was shown in 1989 at the Institut Français d'Architecture, it was an important moment in urban research by architects. Unfortunately the exhibition - by its form and content - gave the impression that Fortier shifted slowly from urban texture towards architectural objects. His book, which was published in conjunction with the exhibition, remains one of the most challenging pieces of thought on the relationship between urban form and architecture.³⁴

Provincial schools of architecture

During the 1980s, groups of urban researchers emerged in several architectural schools. Some of them were involved in establishing atlases of urban forms of their cities. This is mainly the case with I.N.A.M.A. (*Investigation sur l'histoire et l'actualité des mutations architecturales*) at the Ecole d'Architecture de Marseille, headed by Jean-Lucien Bonillo who studied several dwelling types (including the three-windowed Marseille house and the Haussmannien apartment building) before turning to the port and its relationship to the town as a whole.³⁵ In the Ecole d'Architecture de Grenoble, the team around Bernard Bonhomme and Xavier Malverti first gathered together a collection of plans of Genoble, and then proceeded to study different urban fragments of the town.³⁶ At the Ecole d'Architecture de Lille, Alain Demangeon studied in a very thorough way the grand boulevard Lille-Roubaix-Tourcoing, which is a wide avenue resembling in some ways the Soria's linear city in Madrid. In the Ecole d'Architecture de Saint-Etienne, a systematic study was made of the morphological evolution of the city from the nineteenth century to the present day.³⁷ At the Ecole d'Architecture de Nancy, the 'atlas' served as a teaching tool for André Vaxelaire and Vincent Bradel who, with their students, studied different neighbourhoods of the historical city. In the Ecole d'Architecture de Nantes, the students of Michaël Darin, Michel Denès, Thierry Roze, Jacques Scavennec and Jean-Jacques Treuttel measured buildings and drew a ground plan (at the scale of 1:500) of a strip of land, 200m wide, crossing the town from east to west. The idea was to create an urban 'section', 10km long, showing the relationship between the city centre, the old *faubourgs*, the new suburbs and the countryside. The teams met regularly over 5 or 6 years, forming a research network supported by a grant from the Bureau de la Recherche Architecturale.

At the same time, in the Ecole d'Architecture de Nantes, Michaël Darin studied a number of different urban forms in several cities: *places*, *percées*, *boulevards* and ordinary streets in Montpellier, Nantes, Paris, Rouen and Toulouse. Through the different case studies the idea was to examine how the city is produced by a combination of conflicting actions by those up the social ladder (such as prefects, mayors, architects and engineers) and those on its lower rungs (modest house owners, for instance).³⁸

Publication ventures

Outside the schools of architecture, Maurice Culot, who was very active in Brussels before moving to Paris, created a publishing venture in the Institut Français d'Architecture which produced a series of urban case studies, including those of Arcachon, Vittel, Toulouse and Marseille.³⁹ In the same institution, Lise Grenier edited a book on spas,⁴⁰ a subject not far from the resort towns studied by Dominique Rouillard, who teaches the history of architecture at the Ecole d'Architecture Paris -Tolbiac.⁴¹

Another institution that publishes work on urban form, principally architecture and town planning, is the Pavillon de l'Arsenal, an exhibition centre in the municipality of Paris. Some of its exhibitions result from research work. They are accompanied by remarkable catalogues, such as those of *Paris - Haussmann* and *Faubourgs de Paris*.⁴²

Suburban studies

The ideological context of architectural research on urban form in France was predisposed towards an emphasis on the historical parts of towns. However, researchers were also mindful of the need to study other kinds of urban fabric. Already, suburbs had appeared here and there in the different atlases that have been mentioned. But there are few researchers who have devoted their work specifically to this kind of phenomenon. One of them is Marcelle

Demorgon, a geographer in the Ecole d'Architecture de Versailles, who studied a number of highways in the Parisian region.⁴³ For her, these massive roads are the structural elements of peripheral areas. Now retired, her work is continued in the same school by Richard Sabatier.⁴⁴ In the Ecole d'Architecture Paris-Belleville, Nicole Eleb-Harlé, instead of focusing on one urban element, studied the general morphological evolution of several boroughs in the Paris region, including Pantin and Bondy.⁴⁵ Another study of a suburb is the book by Pierre Henon and Alain Thiébault on the history of Levallois-Perret, a borough just outside Paris, on its western side.⁴⁶ Working at a more detailed level, Benoît Carrié, Michaël Darin, Michel Denès and Thierry Roze tried, through a study of a very ordinary and heterogeneous part of Issy-les-Moulineaux (a borough adjacent to the south western part of Paris), to understand how this ancient village on the outskirts of Paris took its present-day shape. They analysed in a very precise way the evolution of streets, lots and buildings.⁴⁷

Studies abroad

French urban research is not limited to France alone. Some researchers preferred, and still prefer, working on other urban cultures. Philippe Gresset, for instance, studies Great Britain, mainly its Picturesque tradition.⁴⁸ Many others, however, are attracted by countries outside Europe, particularly in the Middle East (where Cairo, Damascus and Istanbul are among the cities that have been studied)⁴⁹ and North Africa (where cities in Algeria and Tunisia, for example, have been studied).⁵⁰ The doctoral thesis of Jacques Gaucher (a lecturer in the Ecole d'Architecture de Nantes) on three Tamil towns in southern India is particularly impressive, being based on many measured drawings ranging from those of individual houses (and their interiors) to the town as whole.⁵¹ Many of those attracted to such urban cultures have been looking for other ways to make cities: ways in which the

informal processes outweigh the formal ones. It was, for most of them, a way to criticize the evolution of French cities and modern urbanism.

Modern urban fabric

Most recently, a change has affected the *milieu* in which research is being undertaken. With the passing of time, modern urbanism has itself become part of history. Two pioneering works marking this change followed different approaches. Anatole Kopp saw, in the reconstruction that took place in the decades following the Second World War, a missed opportunity for the modern movement;⁵² while Bruno Vayssière suggested, in a provocative way, that the urban fabric produced at that time is often of very good quality, even if he did not approve of those who produced it.⁵³

However, a new attitude is now emerging: much less polemical studies have started to be published. The thesis of Daniel Voldman (a non-architectural historian, but whose work deals with some morphological aspects) was published last year. It explains the mechanisms of urban production during the period of reconstruction after the Second World War.⁵⁴ Rémi Baudouin (now head of the Bureau de la Recherche Architecturale) studied the life of Raoul Dautry, the Minister of Reconstruction, who was a very influential person on urban matters.⁵⁵ A symposium on the Reconstruction was held in the city of Lorient in 1994, and from it came two volumes containing many interesting local case studies.⁵⁶

As far as the 1960s and 1970s are concerned, in the Ecole d'Architecture de Saint-Etienne, J.N. Blanc, M. Bonilla and F. Tomas have recently studied the ideological context of the architecture and urbanism in the period, surveyed the main projects, and examined a few large housing projects in Saint-Etienne.⁵⁷ J.H. Fabre, B. Fayolle-Lussac, P. Girard and P. Weidknet, in the Ecole d'Architecture de Toulouse and Ecole d'Architecture de Bordeaux, also studied different housing estates of the same period.⁵⁸

Their work, as well as that done in Saint-Etienne, shifts emphasis from central government policy to the local context.

The quality of the urban fabrics under review is of the utmost importance. First, preservation is an issue in some of these housing estates, where architectural quality is more or less recognized. Secondly, the quality of more modest projects is also an issue. This is why Darin studied many pieces of modern green urban fabrics in an attempt to define what makes up their supposed quality.⁵⁹ This research was done with a grant from Plan Construction et Architecture, a governmental research agency that initiated a programme on the architecture of modern public space that led to a dozen studies of different aspects.⁶⁰

Changing patterns

In the 1970s, architectural research on urban form in France had a very strong ideological message. It was very much anti-modernist and it was used to define, or at least justify, new approaches to urban design. For some of the architects involved, research was only a short period in their professional life. Panerai and Huet, for instance, stopped doing research in order to concentrate on practice. Others, however, opted for an academic life and became 'pure' researchers (as pure as their teaching commitments would allow). Gradually, their work became less ideological, although this kind of research always tends to be a commentary on practice.

This development is a part of a general trend in the architectural schools: they are becoming more academic. Doctoral programmes are now being undertaken jointly with universities. More and more students are taking up these studies and producing impressive numbers of D.E.A. theses (documents of some 80 pages describing, after one year of studies, projects for doctoral theses).⁶¹ Some doctoral theses have already been submitted, be it by teachers, or by students hoping that this will open the way to academic careers.⁶²

Morphological research elsewhere

Studies of urban form are, of course, being pursued outside the architectural world. In geography, and in all other disciplines dealing with urban development, Marcel Roncayolo influenced a whole generation through his oral contributions to many meetings, his institutional position, and mainly his teaching. His work on Marseille, contained in three different books, was only recently published.⁶³ It is a masterpiece on the complicated relationship between material forms and social forces.

More or less in the same field, in the 1960s Bernard Rouleau began pioneering work on the history of the streets in Paris, studying their appearance during the course of the history of the city and showing their initial function.⁶⁴ Later, in the 1980s, he studied the morphological evolution of the villages and *faubourgs* of the outer *arrondissements* from their annexation to Paris in 1859 until the present.⁶⁵ It is a detailed study of the development of streets and lots based on very precise drawings.

In urban history, Jean-Claude Perrot's *Genèse d'une ville moderne: Caen au XVIIIe siècle* is a landmark.⁶⁶ It has excellent chapters on urbanism and the morphology of the city but, curiously, it appears not to have influenced architectural studies.

Art historians influenced this *milieu* mainly through two major works. The first, on the area of Les Halles in Paris, was initiated at the end of the 1960s by André Chastel.⁶⁷ He assembled a team with the object of studying ordinary architecture. The influence of earlier Italian studies of the 1960s is evident and acknowledged. However, the team, headed by Françoise Boudon, innovated by carrying out extremely thorough studies of the evolution of lots, necessitating very detailed work in different archives. This is summarized in 14 plans showing the evolution of the area's lots from the fourteenth century until the middle of the twentieth century. The second major work is by François Loyer, a specialist in the nineteenth century. It is a study of Paris,

which began in the 1970s as research for the Atelier Parisien d'Urbanisme, the capital's planning authority. It reconsiders, mainly based on visual observation, the quality of buildings and public spaces produced during the nineteenth century. This research influenced Parisian urban policy, which adopted so-called *Neo-Haussmannisme*, and the subsequent book was a great success.⁶⁸

The involvement of art historians in urban form was pursued through the work of the *Inventaire Général*, a large agency created within the Ministry of Culture by André Chastel in the 1960s. The task of the *Inventaire Général* is to carry out an exhaustive survey of all art production in France. This obviously impossible task led to the creation of a very precise descriptive method allowing systematic studies of a wide range of objects. This work is organized on a regional level by the branches of the Ministry of Culture. The subjects studied vary from one region to another, according to the endowment of particular areas and the interests of those involved in this enterprise. Here and there, architecture and urban form are being studied, leading to the publication of several very good studies of building types or whole cities.⁶⁹

Operational studies related to different planning policies are another type of study. They are carried out, for instance, before adopting preservation measures concerning whole areas of a city. The studies supporting these policies are usually done by architects or art historians and entail examination and evaluation of the urban fabric. Sometimes case studies are produced. Probably dozens, if not more, of such studies have been carried out, but little is known about them. It is thus difficult to understand how these studies are linked together, what are the 'model' studies (those to which reference is made before starting a new study), what are the methods used, and whether they form a 'tradition' or 'school'.

A radically different approach is adopted by Albert Levy at the Institut Français d'Urbanisme, who studies the epistemological basis of urban policy,⁷⁰ and by Pier Giorgio

Gerosa at the Ecole d'Architecture de Strasbourg, who does the same when he focuses on theoretical writings.⁷¹

A 'school' of urban morphology?

Whether or not one counts operational studies alongside the academic ones, one thing is clear: in France, since the 1970s, the study of urban form has emerged as a field of knowledge. Admittedly it is very fragmented, with work carried out here and there, in different towns and institutions. Most of the time, those involved are not aware of each other's work. It is a non-hierarchical field, dominated by nobody. Therefore, one cannot speak of a French 'school' of urban morphology. The lack of uniformity is its weakness and its strength. Many had to improvise objectives and methods. In so doing they enlarged the field. But, actually, no one is aware of the richness of the field, and few are conscious that it exists. Even publishing is done in a very fragmented way. There is no major collection or publishing house specializing in that sort of literature. Often research is published locally and cannot be found in bookshops in other cities. Moreover, one particular feature of the French research system is that the final product requested by funding bodies (notably governmental agencies) is 30 or so copies of the final *rapport de recherche*. These are sent to a handful of public or university libraries, and they become increasingly difficult to trace as time passes. In order to keep this production alive and to distribute it to a wider public, *Ville Recherche Diffusion*⁷² was created in the Ecole d'Architecture de Nantes. With more effort in this direction, it is to be hoped that French studies of urban form will get the kind of attention they deserve.

Notes

1. Lavedan, P. (1926) *Histoire de l'urbanisme. Antiquité, Moyen-Age* (Henri Laurens, Paris); Lavedan, P. (1941) *Histoire de l'urbanisme. La Renaissance et les Temps modernes* (Henri Laurens, Paris); Lavedan, P. (1952) *Histoire de l'urbanisme. L'Epoque moderne* (Henri Laurens, Paris). In the 1970s part of the first volume and the whole of the second were revised and republished: Lavedan, P. and Huguenev, J. (1974) *L'Urbanisme au Moyen-Age* (Arts et Métiers graphiques, Paris); Lavedan, P., Huguenev, J. and Henrat, Ph. (1982) *Urbanisme à l'Epoque moderne: XVIe-XVIIIe siècles* (Arts et Métiers graphiques, Paris). When he died at the age of 97 Lavedan was updating the third volume.
2. This distinction was first formulated in Lavedan, P. (1926) *Qu'est ce que l'urbanisme* (Henri Laurens, Paris); it was then pursued in Lavedan, P. (1936) *Géographie des villes* (Gallimard, Paris) in 1941, in the second volume of *Histoire de l'urbanisme*, and again in the second edition of *Géographie des villes*, which appeared in 1959. Each time, the distinction changed slightly but was never entirely satisfactory. Was this grand *opus* based on an unworkable definition?
3. Medieval towns were regarded as an exception.
4. Corrozet, G. (1550) *Les antiquitez, histoires et singularitez de Paris* (Paris).
5. Sauval, H. (1654) *Paris ancien et moderne contenant une description exacte et particulière de Paris* (Paris); Sauvel, H. (1724) *Histoire et recherches des antiquités de la ville de Paris* (Paris); Brice, G. (1684-1725) *Description de la ville de Paris et de tout ce qu'elle contient de plus remarquable* (Paris); Piganiol de la Force (1742) *Description historique de la ville de Paris et de ses environs* (Paris).
6. Jaillot, J.-B. R de C. (1772-1775) *Recherches critiques, historiques et topographiques sur la ville de Paris* (Paris).
7. Bonnardot, A. (1851) *Etudes archéologiques sur les anciens plans de Paris des XVIe, XVIIe, et XVIIIe siècles* (Paris).
8. Berty, A. and Legrand, H. (1885-1897) *Topographie historique du vieux Paris* (Paris). Berty's work is particularly interesting: realizing that the work of his predecessors contained many inaccuracies, he decided to consult many archives as well as make measured drawings of Paris, paying particular attention to party walls, a persisting topographical element according to

- him!
9. Sauval, for instance, organized his book as a kind of tourist guide.
 10. Cf. Dulaure, J.-A. (1825) *Histoire physique, civile et morale de Paris* (Paris) and Marlès, J. de (1839) *Paris ancien et moderne, histoire de France divisée en douze périodes appliquées au douze arrondissements de Paris et justifiées par les monuments de cette ville* (Bruxelles).
 11. Poëte, M. (1924-1931) *Une vie de cité. Paris de sa naissance à nos jours* (Picard, Paris).
 12. Corrozet cites legends that explain the birth of Paris as an action of a mythical hero. Subsequently authors only mention the first written source: the account by Julius Caesar of a battle fought by his forces on this site in 52 B.C. Poëte gives a geographical explanation based on the characteristics of the site.
 13. Cf. Bouduoï, R. (1988) *La naissance de l'Ecole des Hautes Etudes Urbaines et le premier enseignement de l'urbanisme en France, des années 1910 aux années 1920* (Ecole d'Architecture Paris-Villemin / Ville Recherche Diffusion, Paris); Calabi, D (1997) *Marcel Poëte et le Paris des années vingt: aux origines de 'l'histoire des villes'* (L'Harmattan, Paris).
 14. Poëte, M. (1929) *Introduction à l'urbanisme* (Boivin, Paris).
 15. Lavedan, P. (1975) *Histoire de l'urbanisme à Paris* (Hachette, Paris).
 16. Rovert Auzelle, a well known architect and town planner, is often given as an example of the influence Poëte had on his students. Pierre Lelièvre, whose book on Nantes (*Nantes au XVIIIe siècle; urbanisme et architecture*, 1942) is an excellent case study, was clearly influenced by Lavedan.
 17. Cf. Montigny, G. (1992) *De la ville à l'urbanisme: essai sur la genèse des études urbaines françaises en géographie, sociologie et statistique sociale* (L'Harmattan, Paris).
 18. Cf. Vilagrasa Ibarz, J. (1998) 'The study of urban form in Spain', *Urban Morphology* 2, 35-44.
 19. Leon, P. (1951) *La vie des monuments français; destruction restauration* (Picard, Paris).
 20. Doyon, G. and Hubrecht, R. (1979) *L'architecture rurale et bourgeoise en France* (Vincent et Cie, Paris).
 21. By the publishing house Berger-Levrault.
 22. A recent example is Markou, E. (1994) *Aux origines de la fonction 'études': la Direction Generale a l'Equipment National (1941-1944), la Direction Generale de l'Urbanisme et de l'Habitation (1947-1949) et les experts extérieurs* (Centre de Sociologie Urbaine / Plan Construction et Architecture / Ville Recherche Diffusion, Paris).
 23. Devillers, Ch. and Huet, B. (1981) *Le Creusot: naissance et développement d'une ville industrielle 1782-1914* (Champ Vallon, Seyssel); Gülgönen, A., Laisney, F., Chiffard, J.-F., Delorme, J.-C., Pietu, M., Roujon, Y. and Scalabre, J.-P. (1977) *Morphologie urbaine et typologie architecturale* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Comité pour la Recherche et le Développement en Architecture / Ville Recherche Diffusion, Paris); Huet, B., Lambert, M. and Martin, M.-F. (1986) *Les faubourgs de Toulouse au XIXe siècle* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Bureau de la Recherche Architecturale, Paris); Huet, B., Lambert M., Perche, M. and Peysson, J.-M. (1988) *Mécanique de la percée urbaine de 1750-1900: les trois percées d'Orléans* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Paris); Dufour, L., Huet, B. and Raymond, H. (1977) *Urbanistique et société baroque* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Comité pour la Recherche et le Développement en Architecture, Paris); Huet, B., Berard, D., Braun, J.-P., Le Roy, B. and Prin, J.-P. (1975) *Bourges: politique municipale, morphologie urbaine et typologie architecturale au XIXe siècle* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Délégation Générale de la Recherche Scientifique et Technique / Ville Recherche Diffusion, Paris).
 24. For architectural scholars this book was really published too late. The ideas related to this research had already been spread through an article by Devillers which appeared in 1974: 'Typologie de l'habitat et morphologie urbaine' in *Architecture d'Aujourd'hui* no. 174.

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25. The emphasis on housing is surely a legacy of the Modern Movement.
26. Raymond's study of suburban dwellers is a landmark in French urban sociology: see Raymond, H., Haumont, N., Raymond, M.-G. and Haumont, A. (1966) *L'Habitat pavillonnaire* (Centre de la Recherche Urbaine, Paris).
27. Castex, J., Depaule, J.-Ch. and Panerai, Ph. (1977) *Formes urbaines: de l'îlot à la barre* (Dunod, Paris); three years later, this slightly modified group published their study of Versailles: Castex, J., Celeste, P. and Panerai Ph. (1980) *Lecture d'une ville: Versailles* (Moniteur, Paris).
28. Rowe uses these *Gestalt* terms in order to contrast traditional and modern urban fabric: in the first case, according to him, buildings form a kind of background to voids (squares and courts) and in the second they float amidst unlimited space.
29. Borie, A., Micheloni, P. and Pinon, P. (n.d.) *Forme et déformation des objets architecturaux et urbains* (Centre d'Etudes et de Recherches Architecturales / Ecole Nationale Supérieure des Beaux Arts, Paris).
30. Borie, A., Micheloni, P. and Pinon, P. (n.d.) *Formes urbaines et sites de méandres* (Comité pour la Recherche et le Développement en Architecture / Ville Recherche Diffusion, Paris).
31. Grumbach influenced many people but his theoretical work, which consists of articles, was never collected together.
32. A centre which promotes architecture by means of exhibitions and a bulletin of information, but which also includes the vestiges of an architectural research centre dissolved in the early 1970s.
33. Fortier, B. (1975) *La politique de l'espace parisien à la fin de l'ancien régime* (Comité pour la Recherche et le Développement en Architecture, Paris); Demangeon, A. and Fortier, B. (1978) *Les vaisseaux et les villes: l'arsenal de Cherbourg* (Mardaga, Bruxelles).
34. Fortier, B. (1989) *La métropole imaginaire; un atlas de Paris* (Mardaga, Bruxelles).
35. Bonillo, J.-L., Borruy, R., Chancel, J.-M., Hayot, A., Graff, Ph., Perloff, M. and Peyre, C. (1989) *Atlas de Marseille: formes urbaine, vol. I: les types* (Ecole d'Architecture de Marseille / Bureau de la Recherche Architecturale, Marseille); Bonillo, J.-L., Borruy, R., Espinas, J.-D and Picon, M. (1991) *Marseille, ville et port* (Paranthèses, Marseille); Borruy, R. (1994) *Le port moderne de Marseille* (Chambre de Commerce et d'Industrie de Marseille, Marseille).
36. Bonhomme, B., Bajard, M., Lypsky, F., Malverti, X. and Queysanne, B., *L'atlas urbain de Grenoble* (Ecole d'Architecture de Grenoble/Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Grenoble).
37. Bonilla, M., Tomas, F. and Vallat, D. (1989) *Cartes et plans: Saint-Etienne du XVIIIe siècle à nos jours; de la représentation d'une ville industrielle* (Ecole d'Architecture de Saint-Etienne et Centre d'Etudes Foreziennes, Saint-Etienne); Bonilla, M., Tomas, F. and Vallat, D. (1994) *Saint-Etienne au XIXe siècle de P.-A. Dalgobio à P.-L. Lamizière* (Ecole d'Architecture de Saint-Etienne et Centre d'Etudes Foreziennes / Ville Recherche Diffusion, Saint-Etienne); Bonilla, M., Tomas, F. and Vallat, D. (1993) *L'immeuble collectif des années 50 à Saint-Etienne: de la place Foch à Beaulieu* (Ecole d'Architecture de Saint-Etienne et Centre d'Etudes Foreziennes / Ville Recherche Diffusion, Saint-Etienne).
38. Darin, M. (1986) *Alignement des rues* (Ecole d'Architecture de Nantes / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Nantes); Darin, M. (1987) *La grande percée* (Ecole d'Architecture de Nantes / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Nantes); Darin, M. (1989) *Les immeubles haussmanniens: le boulevard Saint-Germain à Paris* (Ecole d'Architecture de Nantes / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Nantes); Darin, M., Meillerais, O. and Saudrais, Ph. (1991) *Transformations de places à Nantes depuis deux siècles* (Ecole d'Architecture de Nantes / Plan Urbain / Commissariat General du Plan / Ville Recherche Diffusion, Nantes).
39. Institut Français d'Architecture (1982) *Vittel 1854-1936: création d'une ville thermale*, (Moniteur, Paris); Institut Français d'Architecture (1983) *La ville d'hiver d'Arcachon* (Institut Français d'Architecture, Paris); Institut Français
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- d'Architecture (1985) *Toulouse 1810-1860* (Mardaga, Bruxelles); Culot, M. and Jakovljevic, N. (ed.) (1989) *Trouville* (Mardaga, Bruxelles); Institut Français d'Architecture (1991) *Marseille: la passion des contrastes* (Mardaga, Bruxelles).
40. Grenier, L. (ed.) (1984) *Villes d'eau en France* (Hazan, Paris).
41. Rouillard, D. (1984) *Le site balnéaire* (Mardaga, Bruxelles).
42. Cf. des Cars, J. and Pinon, P. (eds.) (1991) *Paris-Haussmann* (Picard, Paris); Cohen, J.-L. and Lortie, A. (1992) *Des fortifs au perif; Paris, les seuils de la ville* (Picard, Paris); Lucan, J. (ed.) (1996) *Paris des faubourgs* (Picard, Paris).
43. Demorgon, M., Panerai, Ph. (n.d.) *La banlieue comme territoire structuré; étude d'une route: la N192 et la N308 de la Défense au pont Maisons-Lafitte* (Association de Recherche de l'Unité Pédagogique d'Architecture de Versailles / Service de la Recherche Architecturale, Versailles).
44. Sabatier, R. and Demorgon, M. (1989) *Parcours en banlieue* (Laboratoire de Recherche 'Histoire architecturale et urbaine - société' / Plan urbain / Ville Recherche Diffusion, Versailles).
45. Eleb-Harlé, N and Biau, V. (1985) *Pantin; mise en perspective historique des projets de ville* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Bureau de la Recherche Architecturale, Paris); Eleb-Harlé, N. and Biau, V. (n.d.) *Pantin; peripherie et projet urbain* (Institut d'Etudes et de Recherches Architecturales et Urbaines / Bureau de la Recherche Architecturale, Paris); Eleb-Harlé, N. (n.d.) *Portes et limites des plans d'aménagement, d'extension et d'embellissement; une génération de plans d'aménagement communaux: Bondy 1928-1960* (Ecole d'Architecture de Paris-Belleville / Bureau de la Recherche Architecturale), Paris).
46. Henon, P. and Thiebaut, A (1981) *Levallois: histoire d'une banlieue* (Mardaga, Bruxelles).
47. Carrié, B., Darin, M., Denès, M. and Roze, Th. (1998) *Etude architecturale et urbaine d'un quartier d'Issy-les-Moulineaux* (Agence Nationale pour l'Amélioration de l'Habitat / Ville Recherche Diffusion, Paris).
48. Gresset, Ph. (1982) *Le fragment de ville: une unité d'architecture urbaine de l'époque géorgienne (1715-1815)* (Comité pour la Recherche et le Développement en Architecture / Ville Recherche Diffusion, Paris); Gresset, Ph. (1990) *La ville au risque du pittoresque* (Ecole d'Architecture Paris-Villemin / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Paris).
49. Panerai, Ph. and Noweir, S. (1989) *L'herbe verte d'Embaba* (Laboratoire de Recherche 'Histoire architecturale et urbaines - société' / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Versailles); Borie, A., Pinon, P., Yerasimos, S. (1989) *L'occidentalisation d'Istanbul au XIXe siècle* (Ecole d'Architecture Paris-la-Défense / Bureau de la Recherche Architecturale, Paris); Réseau Architecture de la Ville orientale (1990) *Mesures de l'espace* (Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Paris); Arnault, J.-L. (1993) *Le Caire: Mise en place d'une ville moderne 1867-1907* (Université de Provence / Ville Recherche Diffusion, Aix-en-Provence); Noweir, S. and Gaillard, M.-N. (1994) *Le Caire, trace et empreinte* (Laboratoire de Recherche 'Histoire architecturale et urbaines - société' / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Versailles).
50. Malverti, X. and Picard, A. (1987) *Les traces de ville et le savoir des ingénieurs du génie* (Ecole d'Architecture de Grenoble / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Grenoble); Vilan, L. (1988) *Alger ou le lit de Procuste, la naissance de la ville coloniale en Algerie* (Laboratoire de Recherche 'Histoire architecturale et urbaines - société' / Bureau de la Recherche Architecturale, Versailles); Santelli, S. (1992) *Atlas des médinas tunisiennes* (Institut Parisien de Recherche Architecture Urbanistique Société / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Paris).
51. Gaucher's work (*De la maison à la ville en pays Tamoul*) was presented as a doctoral thesis at the Ecole des Hautes Etudes en Sciences Sociales and will be shortly published as a book by the Ecole Française d'Extrême Orient.

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52. Kopp, A., Boucher, F. and Pauly, D. (1982) *L'architecture de la Reconstruction en France 1945-1953* (Moniteur, Paris).
53. Vayssière, B. (1988) *Reconstruction, Deconstruction* (Picard, Paris).
54. Voldman, D. (1997) *La reconstruction des villes françaises de 1940 à 1954* (L'Harmattan, Paris).
55. Baudouï, R. (1992) *Raoul Dautry 1880-1951* (Balland, Paris).
56. Dieudonné, P. (ed.) (1994) *Villes reconstructives, du dessin au destin* (L'Harmattan, Paris).
57. Blanc, J.-N., Bonilla, M., Tomas, F. and Vallat, D. (1995) *Les grands ensembles d'habitation, l'ère partie: A l'origine (1952-1958)* (Ecole d'Architecture de Saint-Etienne / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Saint-Etienne); Blanc, J.-N., Bonilla, M., Tomas, F. and Vallat, D. (1997) *Les grands ensembles d'habitation, 2ème partie: L'apogée (1958-1967)* (Ecole d'Architecture de Saint-Etienne / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Saint-Etienne).
58. Fabre, J.-H., Fayolle-Lussac, B., Girard, P. and Weidknet, P. (1996) *Les grands ensembles: études croisées, Empalot et la Bénauge* (Production de la Ville et Patrimoine / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Bordeaux et Toulouse); Berland-Berthon, B., Fayolle-Lussac, B. and Girard, P. (1998) *Z.U.P. et quartiers neufs années soixante: Bordeaux-Nord et Bayonne* (Production de la Ville et Patrimoine / Bureau de la Recherche Architecturale / Ville Recherche Diffusion, Bordeaux et Toulouse).
59. Darin, M. (1997) *Les 'bons' espaces publics modernes* (Ecole d'Architecture de Nantes / Plan Construction et Architecture / Ville Recherche Diffusion, Nantes).
60. Articles summarizing these studies were published under the title: Picon-Lefebvre, V. (ed.) (1997) *Architecture des espaces publics modernes* (Moniteur, Paris); the individual papers are available through Ville Recherche Diffusion: for example Treuttel, J.-J., Garcia, J.-C. and Treuttel, J. (1996) *De l'espace libre à l'espace public* (Plan Construction et Architecture / Ville Recherche Diffusion, Paris); Devillard, V. and Jannièrre, H. (1997) *Espaces publics, communauté, voisinages dans la reconstruction allemande, 1945-1955* (Plan Construction et Architecture / Ville Recherche Diffusion, Paris).
61. Sometimes these documents are independent case studies and the students like to publish them as such: cf. Lypski, F. (1992) *Les campus américains* (Ecole d'Architecture Paris-Belleville / Ville Recherche Diffusion, Paris); Astrie, V. (1993) *Mécanique de la percée haussmannienne* (Ecole d'Architecture Paris-Belleville / Ville Recherche Diffusion, Paris); Rebaque, J.-C. (1994) *Réhabilitation et réappropriation de la mémoire d'habiter: le quartier de Charonne dans le XXe arrondissement de Paris* (Institut Français d'Urbanisme / Ville Recherche Diffusion, Paris).
62. This trend is likely to continue in the near future when teachers recruited in the 1970s start to retire.
63. Roncayolo, M. (1990) *L'imaginaire de Marseille* (Chambre de Commerce et d'Industrie de Marseille, Marseille); Roncayolo, M. (1996) *Les grammaires d'une ville, essai sur le genèse des structures urbaines à Marseille* (Editions de 'Ecole des Hautes Etudes en Sciences Sociales', Paris); Roncayolo, M. (1996) *Marseille, les territoires du temps* (Editions locales de France, Paris).
64. Rouleau, B. (1967) *Le tracé des rues de Paris* (Centre National de Recherche Scientifique, Paris).
65. Rouleau, B. (1985) *Villages et faubourgs de l'ancien Paris; histoire d'un espace urbain* (Seuil, Paris).
66. Perrot, J.-C. (1975) *Genèse d'une ville moderne: Caen au XVIIIe siècle* (Mouton, Paris-La Haye).
67. Boudon, F., Chastel, A., Couzy, H. and Hamon, F. (1977) *Système de l'architecture urbaine: le quartier des Halles à Paris* (Centre National de Recherche Scientifique, Paris).
68. Loyer, F. (1987) *Paris XIXe siècle; l'immeuble et la rue* (Hazan, Paris).
69. Cf. Plouvier, M., Oudart, P., Talon, M. and Pierson, G. (1987) *La ville de Noyon* (Cahiers du Patrimoine No. 10, Amiens); Cueille, S., Hervier, D. and Loyer, F. (1989) *Le Vésinet; modèle français d'urbanisme paysager 1858-1930* (Cahiers du Patrimoine No. 17, Paris); Favreau, R., Jouannet, G., Riou, J.-Y., Renaud-Romineux, G., Debelle,
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- J. and van Riesen, W. (1990) *Cognac, cité marchande, urbanisme et architecture* (Cahiers du Patrimoine No. 20, Poitiers); Cospérec, A. (1994) *Blois, la forme d'une ville* (Cahiers du Patrimoine No. 35, Paris); Sournia, B. and Vayssettes, J.-L. (1991) *Montpellier 1, la demeure médiévale* (Cahiers du Patrimoine No. 38, Paris); Sournia, B. and Vayssettes, J.-L. (1994) *Montpellier 2, la demeure classic* (Cahiers du Patrimoine No. 38, Paris); Fabre, G. and Lochard, Th. (1992) *Montpellier 3, la ville médiévale* (Cahiers du Patrimoine No. 38, Paris).
70. Levy, A. and Spigai, V. (1992) *La qualité de la forme urbaine* (Institut Français d'Urbanisme / Plan urbain / Ville Recherche Diffusion, Paris); Levy, A. (1995) *Contribution au projet urbain, composition urbaine et instruments d'urbanisme* (Institut Français d'Urbanisme / Centre National de la Recherche Scientifique / Ville Recherche Diffusion, Paris); Levy, A., (1997) *Explorer l'espace public* (Institut Français d'Urbanisme / Programme Interdisciplinaire de Recherche-Villes / Ville Recherche Diffusion, Paris).
71. Gerosa, P.G. (1986) *Sur quelques aspects novateurs dans la théorie urbaine de Saverio Muratori* (Université des Sciences Humaines de Strasbourg / Villes Recherche Diffusion, Strasbourg); Gerosa, P.G. (1993) *Histoire des théories sur la ville, XVIIIe-XXe siècles* (Université des Sciences Humaines de Strasbourg / Ville Recherche Diffusion, Strasbourg).
72. Newsletter, catalogue and photocopies of publications are available from Ville Recherche Diffusion, Ecole d'Architecture de Nantes, rue Massenet, 44300 Nantes, France. For another review of the evolution of morphological studies in France cf. Castex, J. 'Histoire de la forme urbaine' in Castex, J., Cohen, J.-L. and Depaule, J.-C. (1995) *Histoire urbaine, anthropologie de l'espace* (Centre National de la Recherche Scientifique, Paris).
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