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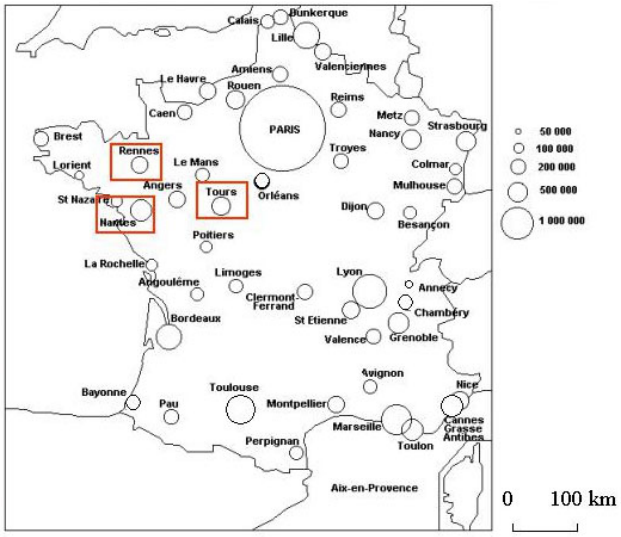
Fringe belts in French cities : Comparative study of Rennes, Nantes, Tours.

Urban morphology has been neglected by the French *nouvelle géographie*, having been adjudged too traditional and empirical. A notable instance of this is the fringe-belt concept, which has been almost unexplored in France. But this concept has theoretical – including deductive – dimensions that could help to revive urban morphology within francophone geography (Ducom, 2003, 2004).

Three aspects will be considered in this paper.

First, the pertinence of the fringe-belt model to French cities, which has become evident in my current comparative study of Rennes, Nantes and Tours, three medium size French cities not too damaged by the air raids of the Second World War.

Fig. 1: Three cities in West France.



A. HOUOT - Aix-Marseille Modif. Estelle Ducom

It underscores the importance of embedded fringe belts in the current cities' form, even if there are morphological differences du to each city's site, history, functions and size (Barke, 1990).

Second, the processes of fringe-belts formation will be analysed.

This will eventually bring to the fore the issue of the validity of the model in a current context of strong public planning, since the land occupation is now decided by the public authorities and not by spontaneous economic processes any more.

I- The memory of forms

M.R.G. Conzen (1960) defined the fringe belt as "a belt-like zone originating from the temporarily stationary or very slowly advancing of a town and composed

of a characteristic mixture of land-use units initially seeking a peripheral location". Institutions like hospitals, universities, parks, cemeteries, jails, military barracks or large houses isolated on large plots are typical of the type of land uses that would locate at the urban fringe during periods of slow urban growth. When the urban growth resumes, the hiatus leaves a permanent mark in that the fringe belt becomes embedded in the urban area.

Such marks have remained very obvious and can be observed in Rennes, Nantes and Tours.

Fig. 2 : Rennes (1- 1720, 2- 1879, 3- 2002, 4- 2003)

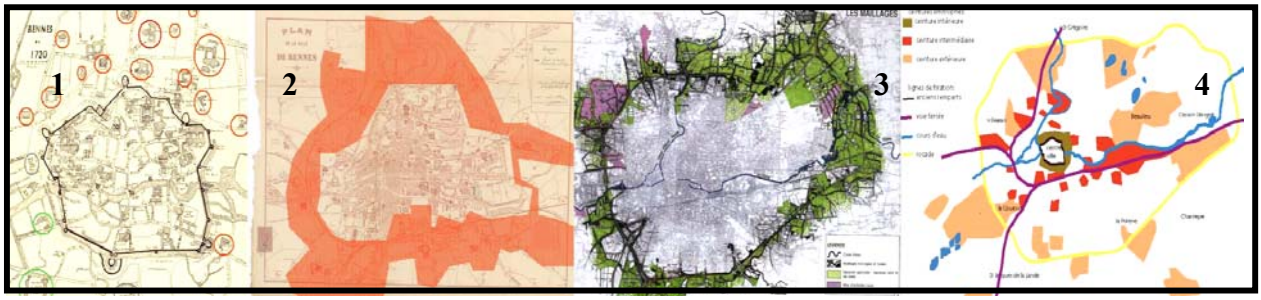


Fig. 3 : Nantes (1- 1766,2- 1836, 3- 1954, 4- 1998)

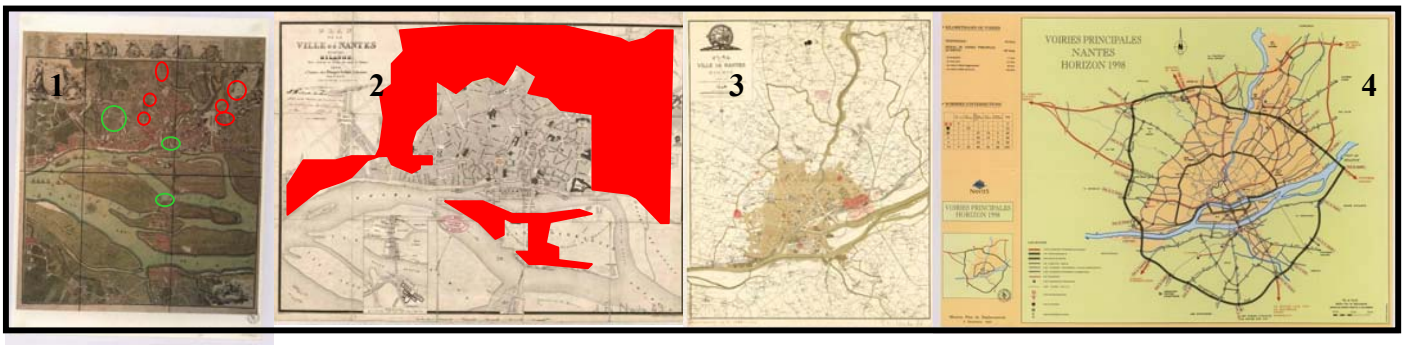


Fig. 4: Tours (17th century, 1839, 1959, 2002)

The observation of maps of the eighteenth century (fig. 2-3-4.1) shows the burgeoning of institutions outside the townwalls. Most of them are religious, but there are also a few health and military institutions outside the town walls, still in the country. These zones have remained after started urban growth beyond the walls and form the current inner fringe belt.

But the medium belt mostly developed at the beginning of the nineteenth century (fig. 2-3-4.2). Several types of fringe belts can be distinguished at this time, corresponding to the cities' functions. Thus, whereas Rennes's and Tours's nineteenth century fringe belts are mostly composed of schools (picture 1), military barracks (picture 2) and jails, large houses (picture 3), hospitals, sportyards, parcs (picture 4), railwaystations, Nantes's fringe belt is occupied by the same heterogeneous land use and also by many industrial buildings and plots (pictures 5 and 6).

Picture 1
Ecole d'agriculture des trois croix, Rennes.

picture 2
Military barracks, Tours.

Picture 3
Manoir de la Touche, Rennes.

picture 4
Jardin botanique, Tours.

Picture 5
Maison des syndicats, Nantes.

picture 6
Manufactures de tabac, Nantes.

Parts of these belts became embedded in the urban fabric (fig. 5), whereas others were alienated by the urban growth (fig. 6).

Fig. 5
Partly remaining fringe belt, West Rennes

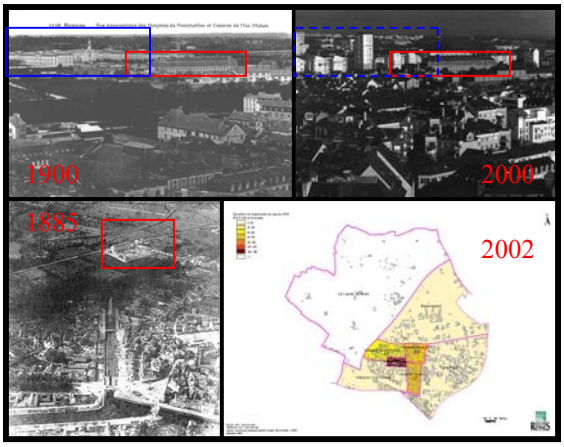
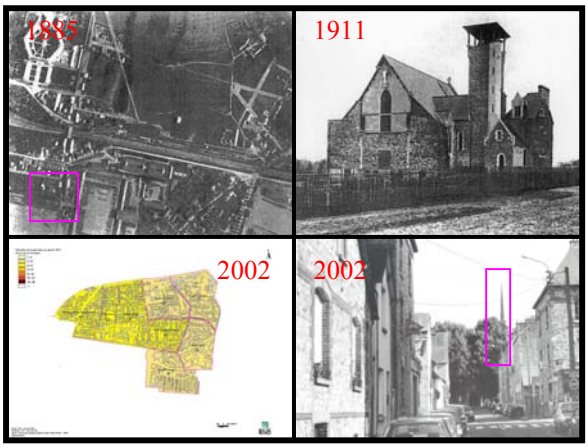


fig. 6
Alienated fringe belt, South Rennes



Sources: *Archives municipales*, DAFU Rennes, photos Estelle Ducom.

Fig. 5.1 was taken in 1885 from an airship at 800 meters high. The hospital Pontchaillou was just a farm, the "Boulevard de l'Ouest", now in the city and named Bd de Verdun, was in the country, like the railway. There was only a barrack (caserne Mac Mahon) which still exists and a manor. In 1900, the military barrack and the first construction of the hospital Pontchaillou are visible (5.2). Those huge plots have remained and are still visible in the area in 2000 (5.3). Thus, the fringe belt has partly remained and a density map illustrates that high density urban extension have develop beyond this area (5.4, 2002).

On the contrary, fig. 6 illustrates the case of an alienated part of the same nineteenth century fringe belt.

The aerial photo (6.1, 1885) shows Rennes's railway. The city has not yet grown beyond the railway to the South, and all we notice is the jail and a manor called Villeneuve. The Sacré Coeur church was built from 1908 to 1911 (6.2), in the country, preparing the development of the city to the south. Nowadays, it is embedded in a residential area (6.3, 2002). At the background, we can see the steeple of the church surrounded by houses from the 1930'. In this example, the fringe belt was alienated by the residential growth of the 1930', and the density map (6.4, 2002) shows the densification phenomena that happened in this area.

Nowadays, major differences distinguish those three cities' fringes. Rennes has a very obvious outer fringe belts corresponding to the green belt and the ring road. There is no similar fringe belt in Nantes and Tours, whose suburbs spread without any morphological rupture.

II- Processes of fringe belts formation

The fringe-belt concept was linked to land-rent theory by J.W.R. Whitehand (1972) who associated the creation of fringe belts with slumps in residential building and periods of low land values. It has been shown that these dynamics, combined with geographical obstacles, generate an urban area in which compact residential growth zones alternate with more loosely-structured fringe belts.

Concerning the building fluctuations, heterogeneous sources were available. First, statistics stemming from the different censuses (municipal censuses from 1822 to 1930 and INSEE censuses from 1946 to 1999), then the number of authorised and built houses and flats during the 25 last years obtained from the *Direction régionale de l'équipement*. Finally, statistics concerning the year of construction of houses and flats, which must be specified by the owners when paying the land tax.

Comparing the building cycles from 1800 to 2000 of our three cities (fig. 7) lays emphasis on important simultaneous hiatus in house and flat building, first in the first half of the nineteenth century, then at the very beginning of the twentieth century and of course during the Second World War, and finally between 1975 and 1990. At the same time, comparing ancient maps of the cities, those periods seem to be those of the creation of inner fringe belts, which had begun to form well before the nineteenth century, and medium fringe belts, which correspond to Edwardian fringe belts in the English speaking world, nevertheless with an important scale difference. Edwardian fringe belts are large and remain obviously in the townscape, whereas nineteenth century fringe belts in France contain very fewer openlands, which contributed to their alienation. They are also situated much nearer the city center than Edwardian fringe belts. These belts, formerly at the edge of the built up area and then embedded within it, survived long after renewed residential growth, despite the fact that parts of these fringe belts were alienated. Thus, they are nowadays discontinuous.

According to these observations, there seem to be an obvious link between the building cycles and the formation of fringe belts. But other factors than the housebuilding slumps have contributed to the development of fringe belts, especially the presence of fixation lines like townwalls, railways, rivers, presence of poorly drained zones to the south of Rennes and around the Loire in Nantes and Tours, where the river constituted an important obstacle to the urbanisation.

Moreover, the link between the fringe belt at the current edge of the agglomeration of Rennes and a recent house building slump is harder to prove. This slump did not lead to the creation of an outer fringe belt in Nantes or Tours…

Fig. 7: Building cycle in Rennes from 1800 to 2000

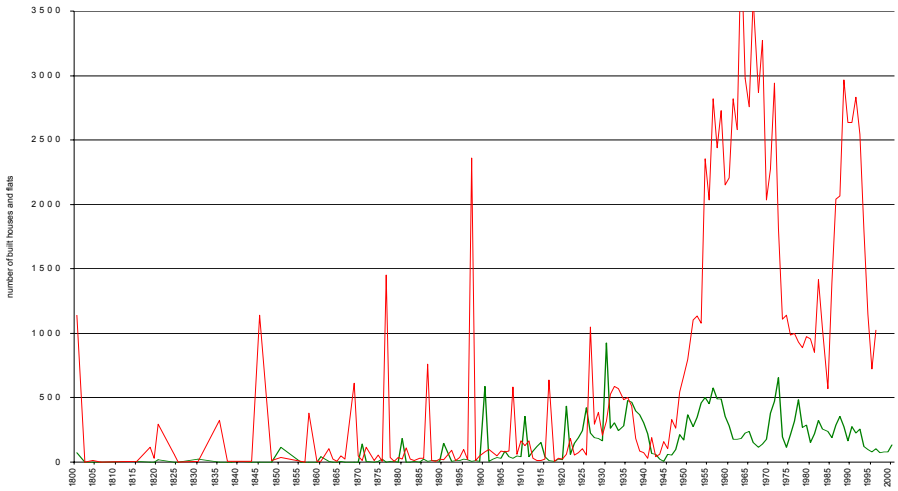


Fig. 8: Building cycle in Tours from 1800 to 2002

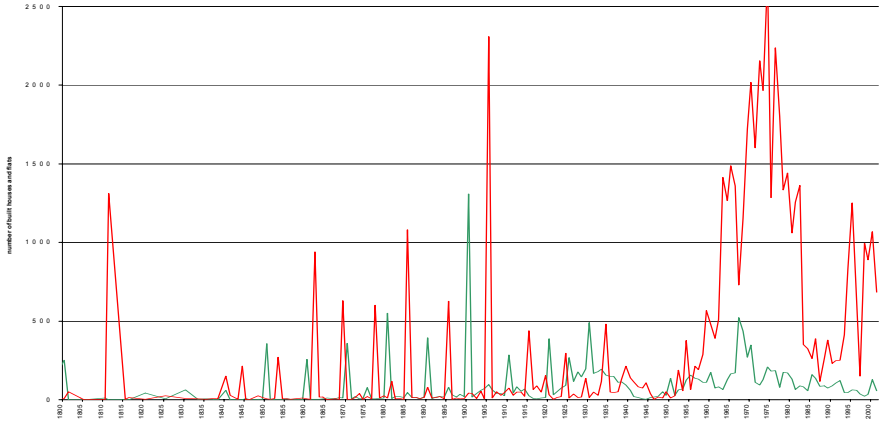
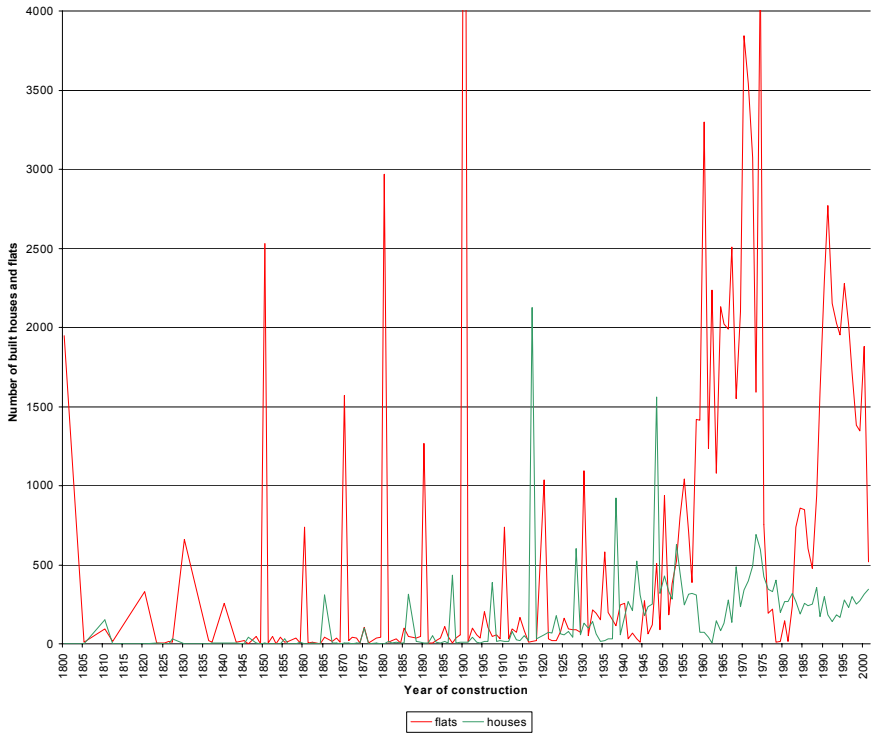


Fig. 9: Building cycle in Nantes from 1800 to 2002



Whereas the inner fringe belts were obviously to a considerable extent the product of economic factors, the fringe belt at Rennes' current urban fringe seems to have been strongly influenced by the city green belt policy from about 1960. This brings to the fore the question of the validity of the model in a current context of strong public planning, since the land occupation is now decided by the public authorities and not by spontaneous economic processes any more.

III- Is the fringe-belt model still valid?

Until the beginning of the twentieth century, urban areas were very limited in space. The progressive urban growth was mostly the result of individual initiatives.

Put simply, there was almost no urban planning policy until the Second World War. If the law "Le Cornudet" (March 1919) dealt with the "Plans d'aménagement, d'embellissement et d'extension", the first plans were vague and mostly limited to the city centre. There was no global extension project. The municipal authorities just accompanied the urban growth or even tried to further its spontaneous development, and never tried to control or limit it.

However, from the Second World War and the reconstruction onwards, the first planning policies were established very differently in Rennes, Nantes and Tours. The "plan Lefort" was Rennes's first global extension and town planning. The planners tried to densify the inner urban area to limit its outward extension on the one hand, and to favour the development of the surrounding towns on the other, with a view to making a polycentric city where mobility was strongly facilited. As a result, it is often said that until the 1960's, Rennes was a city without suburbs. It is significant to notice that the "Plan Lefort" already reserved large zones for public services, sports yards, cemeteries and a *non aedificandi* zone surrounding the built up area.

In the same way, a successful green belt policy associated with the presence of a ring road (progressive construction from 1968 to 1995) strongly influenced the formation of a fringe belt at the current edge of the urban area. The green belt and the ring road play the role of a fixation line, like the boulevards in the nineteenth century (Darin, 2000). This outer fringe belt is composed of large military zones, allotments, and green open spaces. This fringe belt acts like a barrier containing the urban sprawl.

On the contrary, Tours and Nantes spread considerably in the absence of an outer green belt. It is significant to notice that in the same building cycle conditions, Nantes and Tours don't have a proper outer fringe belt.

Nevertheless, Rennes's planned fringe belt has been contested for a few years, as it represents an important land stock. (Ducom, 2003). First alienations are planned, for instance on ancient military zones where residential extensions are in progress.

But the strongest pressure for change and intensification concerns the surviving inner and medium fringe belts (picture 7), which are parts of the historico-geographical development of cities but which are rarely taken in account as entities by planners (Whitehand, Morton, 2003). Thus, within the

framework of "*renouvellement urbain*", one of the burning issues of urban planning is the problem of densification of certain parts of the cities, precisely inner and medium fringe belts, which resist quiet well to intensification. Some sites of these remaining fringe belts have become deeply rooted in mental maps.

To that point of view, the fringe belt model could help the planners in their decision making.

Picture 7: Rennes: Construction of a shopping center in the inner fringe belt.

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