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Pascal Papillon et Rodolphe Dodier

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Periurban forests shifting from recreation to wellness

Pascal Papillon et Rodolphe Dodier

NOTE DE L'ÉDITEUR

Translation: C. Bartsch

- 1 In France and in Europe, numerous studies on recreational uses of and social demand for forests have been carried out, to the point that work has even been put into counting and analysing studies in terms of the social demands expressed (Schmithüsen *et al.*, 1997). This research should be pursued because forests and social demands are moving in the same direction, but on different time scales (Corvol *et al.*, 1997). Forests evolve slowly, in step with their growth, i.e. at a rate different than that of individuals and contemporary society, characterised by immediacy and rapidly changing social perceptions of forests. This is a decisive difference because most recreational uses must be quantitatively and qualitatively re-evaluated on a regular basis due to their impact on forest biotopes. The interactions between society and forest environments are changing due to the emergence of new ways in which forests are used (O'Brian, 2006).
- 2 In response to multiple demands for near-by natural areas, many towns are creating new forest environments just outside municipal limits, transforming them into "suburban parks" where recreation is more important than production (WIAT, 2008). However, forests located farther from cities, in more distant periurban areas, are also used for recreational purposes (Génot, 2003). Are the social uses of these new suburban parks comparable to those in more distant forests? Does the perception of uses influence the role and the values that society assigns to forests? The assumption here is that distances between forests and urban areas determine the main variations in public uses.
- 3 The second working assumption deals with the current emergence of a new use of forests, i.e. for wellness. The two features of wellness are a desire to achieve well-being

and beneficial effects for one's health, and they signal the arrival in France of a manner of perceiving forests much more common in other cultures (Nilson *et al.*, 2007). Is this wellness function taken in account by the health system? Are changes being made to strengthen its effectiveness?

Forests and periurban areas, a social interface

- 4 In the field of social geography, periurban forests are places where the activities of different social groups mix, hence the need to precisely define the notions and the areas studied before looking at the interactions and the study methods used.
- 5 Suburbs and periurban areas can be categorised in many ways. Cities grow and spread either along roads or by establishing their influence over outlying areas, thus eventually forming successive periurban rings. The first periurban ring (or rather the suburbs) is the densely but unequally build-up area in contact with the city. The second ring is characterised by the development of an archipelago of secondary towns. The third ring is composed of smaller, more distant villages with less population density, but still under the influence of the city (Dodier, 2007). These three periurban areas are also characterised socially. The inhabitants of poorer suburbs do not perceive and do not experience forests in the same way as the inhabitants of comfortable sections on the urban outskirts located next to suburban parks or even the inhabitants of more ordinary housing located in the second or third ring. This unequal access to periurban forests can even be a social marker of environmental inequalities, very similar to social inequalities (Emelianoff, 2006).
- 6 This study addresses the urban areas of three cities located to the west of the Paris region, namely Alençon, Blois and Le Mans, which in France are mid-sized cities. The number of inhabitants in the Alençon urban area is 52 955, in the Blois urban area, it is 88 270 and around Le Mans, the largest of the three urban areas, the number was 184 808 in 2007. The perceptions and recreational uses of forests could be compared between these three urban areas, but the assumption tested here is that practices differ primarily depending on the type of periurban area.
- 7 To define forests, we use the new definition of the National forest institute, namely “A forest is a territory with a surface area of at least 5 000 square metres and at least 20 metres wide, with trees capable of reaching an adult height of at least 5 metres *in situ*, covering over 10% of the surface”. However, we did not include in this study fully enclosed city parks that could be considered “ornamental forests”, e.g. private parks and public gardens inserted in the urban fabric, or forests located totally outside the influence of the city. The investigated areas begin with suburban parks located in the immediate vicinity of the city itself. These areas are distinguished from periurban forests, essentially national forests, located farther from but still under the influence of the city. It was thus possible to create a forest typology based on the concentric rings and on accessibility for the public.

Figure 1: The three periurban rings and their forests

- 8 In the first periurban ring, there are four kinds of forests.
- The three cities have created true suburban parks for the public. These areas are seen as near-by and very pleasant wooded parks, but are much larger than those that exist in the denser parts of the city.
 - There are private forests just at the edge of the urbanised areas, but they have met with very different fates. Some of them are well-maintained and farmed, while others are desolate areas of poverty, used by travelling gypsies, marginal elements of the population and by prostitutes. Under such conditions, recreational activities are uncommon.
 - Some forests belong to the State or local governments. These forests are used for military installations, medical-social activities or for agricultural secondary schools. These forests are well-maintained and are occasionally open to the public.
 - Finally, in the city of Blois, the Blois (2 753 hectares) and Russy (3 182 hectares) national forests are in direct contact with the city and certain installations (hospitals, planning zones, etc.). These forests stretch from the city to the outer edge of the second periurban ring.
- 9 In the second and the third periurban rings, two main types of forest can be distinguished.
- Private forests are generally not accessible, however some of them are crossed by public roads. Though not systematically closed to the public, signs often forbid access. In recreational terms, their only value lies in their participation in the landscape.
 - National forests exist in the three urban areas studied. They are vast, well-maintained and combine different types of forest landscape. These forests strongly influence the landscapes and territories. On the very edge of the Armorican massif, the Ecouves forest (8 173 hectares) and the Perseigne forest (5 100 hectares) are partially included in the Alençon urban area. To the east of Blois, the Boulogne forest (4 000 hectares) marks the limit of the urban area. To the south of Le Mans, the Bercé forest (5 379 hectares) stands as the

emblematic forest for the entire region. In all these forests, recreational activities are allowed or even more or less encouraged.

- 10 The same study method was used for all these forests, taking into account previous studies and results (Papillon, 2009). This research is based on an iterative process combining theoretical knowledge, direct observations, a sociological survey and discussions where the researcher looks for deeper meaning (Kaufmann, 2008). In the documentation on which our study is based, it is interesting to note that in France, most of the latest surveys are quantitative, even though the experts are aware of the major differences in results depending on the periods and areas studied (Boutefeu, 2005). That is why we pay particular attention to English-speaking countries and especially the United Kingdom where studies address more qualitative aspects (O'Brian, 2006; Marzano *et al.*, 2009).
- 11 People with particular experience were interviewed, notably those in local governments managing wooded areas, managers of fragile nature zones, heads of local environmental groups and the personnel of the National forestry agency (ONF).
- 12 The questionnaire-based surveys for forest visitors dealt with the frequency of visits, their recreational activities and their impressions of forests. To test the second assumption on the emergence of a wellness function, questions were asked about handicaps and health (De Singly, 2008). And at the end of the survey, the respondents were invited to answer a short quiz to determine their level of knowledge and information on nature. A total of 92 persons in suburban parks and 84 persons in national forests responded to the questionnaire, between May and July 2010. The answers to open questions were processed using a key-word system in order to avoid influencing the questioned persons.
- 13 Experience has shown that people do not provide the same answers on forests when at home or in a forest. They often speak assertively of their perceptions of and trips to forests even though they never go to forests. In a study on the Bercé forest, 16% of the interviewed persons living near the forest claimed to visit it fairly often when, in fact, they simply travelled through it by car (Pineau, 2010). That is why the surveys took place in the forests when people were free or accepted to interrupt their recreational activity to answer the questions. The single researcher adopted a very open attitude in order to understand the motivations and uses of the forest in each case.
- 14 The documentation acquired is therefore fairly dense and tends to be qualitative. It provides a few ideas for analysis of uses of periurban forests, the goal being to explain needs and new recreational uses.

Suburban parks for sports and national forests for nature

- 15 The surveys and interviews confirmed that walking is the main activity in forests, with over 50% of respondents mentioning it. However, observations reveal differences between affirmations and actual practices. Some visitors were questioned while they were playing or resting in clearings, often close to their car, yet most people said they used the hiking trails. In fact, there are not many people on the trails and actual use of the trails would appear to be less than people say. Some people put forward the

possibility of using the woods and the trails, even if they do not in fact use them, and/or consider such activities as more legitimate than their uses for relaxation.

- 16 Athletes also find ideal spots for many activities in forests, but they represent a population difficult to interview during their activity. They were therefore interviewed during a pause, before or after their exercise. Their main activities are jogging, mountain biking or Nordic walking. Archery and forest adventure courses illustrate the breadth of activities available to users in suburban parks. Horseback riding is also an activity, but draws fewer people. Forests are the sites of competitive events, some of which draw many people, e.g. the Ouest-France footrace near Le Mans with 15 000 participants in the *Arche de la Nature* forest. In the suburban parks located in the first ring around cities, there are even orienteering races, mixed sports events, bicycle races, equestrian events, dog sledding, etc. These events take place in a forest, seen as an accessible, open space, but the activities do not necessarily have any link with the forest itself.
- 17 Hunting takes place in all periurban forests. People opposed to hunting freely express their point of view. They mention the issues of safety and the difficulty of sharing forest land. The hunters are more hesitant to speak their mind, they would seem to be on the defensive and communicate less assertively. This is a latent and long-standing conflict, particularly in national forests where more hunting takes place and in more controversial forms (fox hunting).
- 18 In the studied forests, gathering of fruit and mushrooms is a traditional activity. One fifth of the surveyed persons take part occasionally, but half of the forest visitors have never done it and are not sure it is permitted. In the fall, people gathering chestnuts and mushrooms may be seen, but these activities would not seem to be as massively pursued as noted in some historical documents.
- 19 Naturalist activities are marginal and take place almost exclusively in national forests which are also the only ones to attract tourists. Conversely, 20% of visitors to suburban parks declare that they come above all to rest, compared to only 6% in national forests. On the whole, suburban parks are used more for rest and sports, whereas activities in national forests located in the second periurban ring or beyond have more to do with the forest itself.

Figure 2: What is your main activity here?

- 20 This differentiation in activities results in differences in perception and in knowledge of nature. In suburban parks, people are less aware of the size of the forest. Half have no idea, compared to only a quarter of the people in national forests. People in suburban parks are more often irritated by the cutting of trees and by any traces of forest management. That being said, the quantity and the quality of recreational activities in suburban parks are the sign of constant public demand that city planners have, on the whole, satisfied. The people surveyed in the suburban parks infrequently visit other forests and 80% of them are totally satisfied with the situation. The suburban parks offer recreational activities in natural and wooded areas that serve a useful purpose in that they avoid large numbers of people in forests that should be preserved. In comparison, the level of satisfaction in national forests is not as high and almost a quarter of the visitors are dissatisfied, but these people provide more precise answers and have better knowledge of the forest.
- 21 These differences in use and perception can be explained by the differences in demands and in familiarity with nature. The people in suburban parks need open space on a daily basis or at least many times a week to breathe fresh air, rest and do sports near their homes and their jobs. Near-by forests are well suited to these demands and the satisfaction levels are high. Observation of suburban parks shows that welcoming the public and ensuring its satisfaction are important issues for local politicians. Local governments create and manage these parks to attract, welcome and satisfy the public. Politicians and employees are happy to note the large numbers of people in the suburban parks. The *Parc des Mées* in Blois and the *Arche de la Nature* in Le Mans are a great success in terms of visitors. In Alençon, the *Fuie des vignes* has not yet been fully developed, but many people already use the park.
- 22 In the national forests farther from the city, visitors have more diversified needs and other expectations. They travel farther and are looking for something more gratifying than a simple, wooded park near a city. They take more interest in trees and in nature, they know more about forests and are looking for greater satisfaction. They are also more demanding, which explains both the well-being felt in these forests and the dissatisfaction and criticisms expressed.

Figure 3: Are you satisfied with this park / forest?

- 23 The distinction between suburban parks and periurban forests would thus appear to have strengthened over the past few years. The proximity to the city is a decisive criterion for the kinds of activity and the numbers of visitors. People find what they are looking for in the available areas as a function of the distance, which modifies the precise or specific expectations of each person.

Toward the notion of wellness

- 24 In spite of the multiple and occasionally contradictory uses, the notions of health and well-being clearly emerge in the justifications put forward by people. Above and beyond recreational aspects, the survey revealed that 10 to 15% of people are particularly concerned with their health, because they are ill, in remission, convalescent (primarily in the national forests) or handicapped (primarily in suburban parks). This proportion would appear high in comparison with national statistics provided by the Health ministry (Danet, 2010), particularly given that access to the forests requires a minimum of physical autonomy. Though caution is required, these results may be taken as a sign of the role of forests in human health (Nilson *et al.*, 2007).
- 25 The surveys indicate that for certain people, forests represent an essential factor in dealing with a difficult, personal situation. People confronted with illnesses expressed a need of fresh air and space to fight their illness and they find that those needs are met in forests.
- 26 Some encounters were poignant. In a stand of pine trees, along a track in the Ecouves forest, an old man was walking alone. He was a retired teacher and his daughter forced him to leave the house because he was depressive. His wife had died of a sudden cancer. Four months of sickness and his wife's death had profoundly affected the man who had lost the will to live. It was only the walks in the forest that were slowly changing his mindset.
- 27 On a sunny morning in the Boulogne forest, an elegantly dressed man was walking alone along a straight track. He was smiling, it was clear that he was feeling fine. He kindly answered the questions, spoke of personal fulfilment, of physical, psychological and spiritual well-being. The discussion revealed that the remission of his illness was

perhaps definitive, after years of treatment and chemotherapy. He hoped to see his children grow up. That morning, he was happy to be in the forest where he had come so often during his illness to find fresh air and peace of mind.

- 28 These answers to the survey evoke a possible wellness function of periurban forests. The benefit-to-risk ratio of a visit and reasonable physical exercise in a forest is perceived as positive for one's health. This intuition is in line with previous research, some of it done long ago, on the positive relationship between the environment and human health (Plaisance, 1985). In the western world, the natural environment is clearly a factor in the location of old-age homes, sanatoriums and hospitals (Jaffe, 2010), but this would appear to be more a question of habit that has never been formally tested and verified by contemporary medical science, even though it has been proven that after surgery, a view of natural areas helps patients to recover more quickly (Ulrich, 1984). This lack of recognition for the wellness function of forests is particularly clear in France because not a single French researcher took part in the European COST E39 research program, titled *Forests, Trees, Human Health and Well-being*, involving 23 countries and 160 researchers. The intent of the program was to formalise the relation between forests and health. One of the goals was to look at how people perceive the environment in a positive sense, rather than focusing on the common, negative effects of the environment on human health (Nilsson *et al.*, 2007).
- 29 In another cultural context, in south-east Asia, studies on forests and health are more systematic. In Japan, the relationship between forests and cancer natural killer cells has been proven (Qing Li, 2008). Other Japanese scientists have compared levels of a stress hormone in two test groups and shown that a walk in a forest more effectively reduces stress than a walk in a city (Japan Agrinfo Newsletter, 2004). In Japan, visits to a forest for health reasons are very popular and this fad is called *Shinrin Yoku* (Tsunetsugu, 2009). The English-speaking countries have translated the term as “forest bathing” and this activity is now spreading in North America (O'Connor, 2010).
- 30 The activities observed on the part of individuals are probably indicative of a wider trend in France, where pioneering work is now being rediscovered (Plaisance, 1985). Not only do people use forests for health purposes, but in the forests studied here, these individual activities are being amplified by novel institutional projects such as the two below.
- 31 The main psychiatric hospital (CHS) in the Sarthe department is located in the suburbs of Le Mans in a 30-hectare wooded park. Initially, hospitals were built in woods for essentially budgetary reasons and the personnel were not aware of the research on the relations between human health and the natural environment. Until 2011, neither the patients nor the medical staff had ever expressed a desire to use the park, large parts of which were impenetrable. But the new management of the hospital recently signed a contract with a landscape architect and the forest will be made accessible, with paths and facilities, in the hope of promoting health.
- 32 This change in the perception of forests by hospitals may also be observed at the Bataclasse cancer clinic in Caen. At the request of the patients, a project was launched to create natural areas in the clinic, one of which will be similar to a forest. The patients want a “breath of fresh air” and the natural areas are intended to help them precisely as a source of wellness.
- 33 These examples are probably just the tip of the iceberg in a new manner of perceiving periurban forests. In France, not a single periurban forest has publicised the potential

benefits to human health. The situation is very different in the English-speaking and Scandinavian countries where the benefits of physical activity and the environment for health are almost systematically mentioned. But it is clear that the perception of the links between health and forests is gaining ground in France and contributing to a profound change in how people use periurban forests.

Conclusion

- 34 Periurban areas are undergoing rapid change and now offer true environmental services just outside cities. These new areas relieve productive forests of excessive visitor streams. Differences in use and in the satisfaction obtained have appeared between the two types of forest. Suburban parks offer significant facilities to satisfy crowds and are greatly appreciated by visitors. They are used for sports and recreation. In periurban national forests, expectations are more demanding and complex. The multifunctional role of these forests is recognised, but will managers succeed in meeting contradictory demands for more public facilities and a more natural setting? The challenge is all the more difficult that many visitors to these forests are very familiar with forests and more demanding.
- 35 However, above and beyond these different approaches, new health demands are emerging. Forests are increasingly seen as contributing to health, by individuals but also by institutions whose perception of forests is changing. This exploratory study confirms the role of periurban forests as sources of wellness, a concept that should be studied further and applied to other environments such as mountains. The environmental and forestry sectors must manage these new social demands, notably by establishing contacts with the health sector. Though difficult, these demands constitute above all a flattering recognition of the value of periurban forests.

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RÉSUMÉS

In France and in Europe, periurban forests are subject to high social demands for recreational purposes. These demands take the form of frequent visits for sports or rest. Local governments have succeeded in creating new wooded parks close to cities that are highly appreciated by the population. A survey was run on visitors to forests around three mid-sized cities, addressing what they do in the forests and why. The answers revealed differences between suburban parks and larger national forests located farther from the cities. New approaches targeting health may also be observed on the part of both individuals and the health sector. These new approaches indicate the existence of a wellness function in periurban forests.

INDEX

Keywords : periurban forests, recreational activities, suburban parks, wellness

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