

# Planted towns and territorial organization: the morphology of a settlement process in Brazil

Renato Leão Rego and  
Karin Schwabe Meneguetti

Departamento de Arquitetura e Urbanismo, Universidade Estadual de Maringá,  
Avenida Colombo 5790, Bloco 32, Maringá - PR, 87020-900, Brazil.  
E-mail: rrego@uem.br

*Revised version received 18 February 2010*

---

**Abstract.** *The settlement forms that have developed in the northern region of Paraná State in Brazil reflect to a major degree the systematic colonization of that country. The British contribution to this process was responsible not only for the planning ideas employed, but also for a comprehensive layout of roads, a railway line, and small rural plots and planted towns. The uniformity of the organization of the territory, the unity of its formative process, the interaction between artefacts and nature, the ridge-settling system, and the regularities in the town pattern underlie the character of the landscape. Urban morphology provides a powerful means of interpreting this form of territorial occupation and the dynamics of its recent development.*

*Key Words:* new towns, settlement, colonization, urban morphology,  
cultural landscape

---

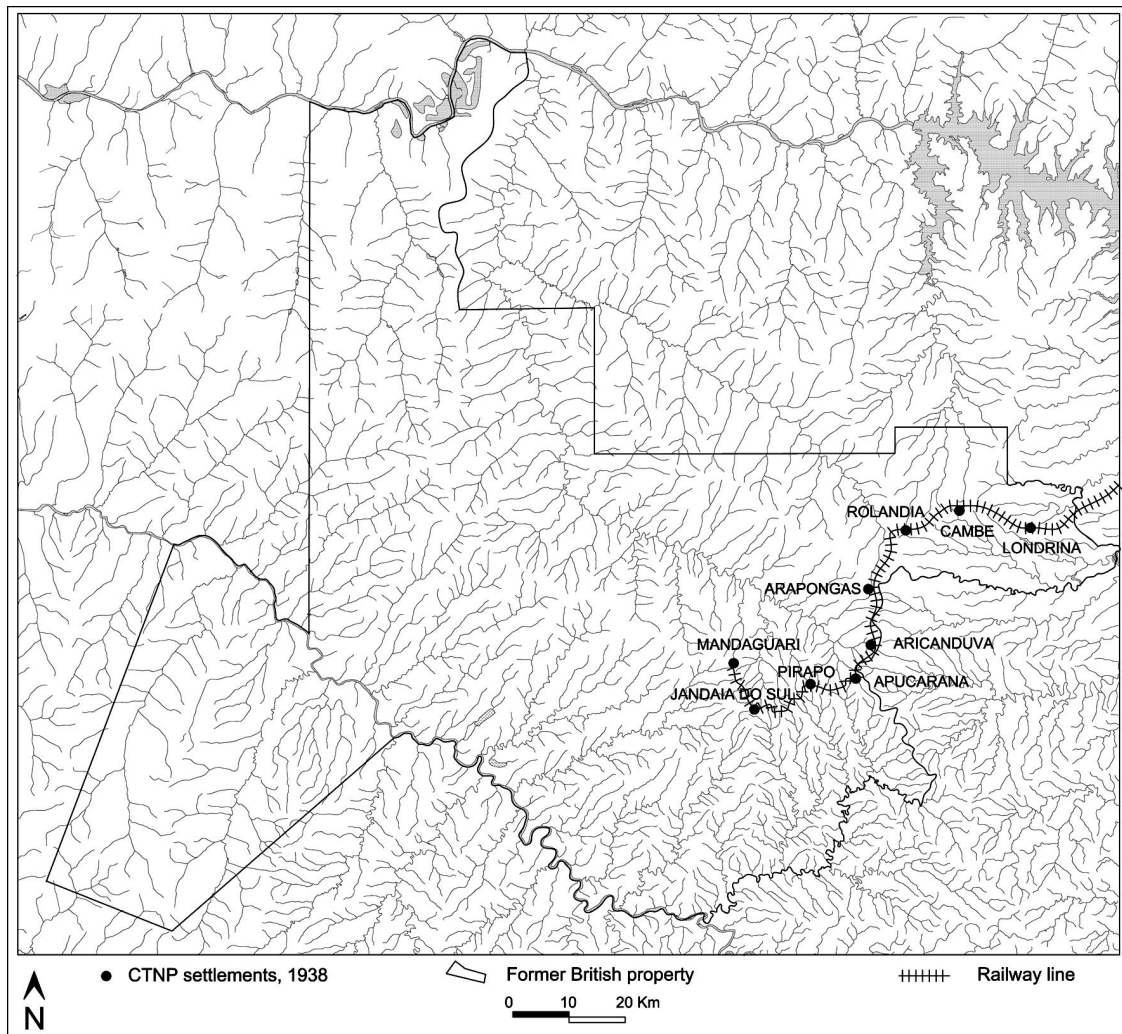
Regional characteristics, such as the forms and patterns of settlements, reflect the dynamic system of each part of the earth's surface, binding habitat and society together (Conzen, 2004a). As a result, distinctive urban and rural landscapes emerge as a specific combination of the attributes of the natural scene, the spatial system and historical development. Thus the cultural landscape is a continuously developing record of human activity which can be directly observed on the ground (Whitehand, 2009).

An example of this is the northern region of Paraná State, Brazil, and its newly planted towns. Owing to the unity of its formative process, especially regularities in the creation of the urban pattern, the landscape of Northern Paraná State has acquired a notable individuality (Monbeig, 1984). The locations and layouts of the urban settlements, along with rural land parcelling, are part of the

comprehensive organization of the territory. Most prominently, the colonization scheme has produced regularly-spaced towns along a railway built on the main ridges.

Over the years, however, a shift in the urbanization process can be recognized. Many villages started to be founded more randomly part of the way down to the valleys, independent of the railway but concentrating around more important towns. Changes occurred not only in the townscapes, but also in the associated regional landscape.

Studies of Northern Paraná State townscapes generally consider the systematic colonization process and the initial pattern of planned urbanization (Dozier, 1956; Monbeig, 1984; Rego, 2009; Rego and Meneguetti, 2008), but morphological investigations into the subsequent alterations of these planned landscapes have still to be fully developed. One such investigation is the subject of this



**Figure 1. Northern Paraná State in 1938, showing towns planted by the British colonization company along the railway line on the main ridges and the boundaries of the former Parana Plantations property.**

article. Using the cognitive approach to urban morphology (Gauthier and Gilliland, 2006) attention will be devoted here to the formative processes that underlie the cultural landscape.

### **The first planted towns and the construction of the landscape**

Initially, towns were planted in Northern Paraná State by British initiatives. After purchasing a very large amount of property in 1925, the British land-speculation company, Parana Plantations, launched a systematic colonization scheme. As part of this scheme,

a policy of deliberate urbanization was implemented (Rego, 2009; Rego and Meneguetti, 2008).

The British investors were not interested in selling the land immediately. Company records held in the National Archives, in Kew, the Rothschild Archives in London and *The Times* digital archives reveal that facilities were first installed in order to raise land prices. Towns, roads, a railway and various amenities were progressively built, whilst small rural plots were sold where the infrastructure had already been put in place. Thus, the foreign landowners played the role of the state, whose impoverished circumstances did not allow the

development of the region and the settling of people. So, in a very real sense, the promotion of public facilities came through the pursuit of private interests (Rego, 2008).

However, this overseas enterprise was not just a late manifestation of British imperialist initiatives, it has been observed that colonialism also worked as a vehicle for planning ideas. Planning notions and practices were transferred throughout the British Empire (Home, 1990, 1997; King, 1980) and, likewise, the British colonization of Northern Paraná State exhibited some of the ideas of the garden city movement, particularly Ebenezer Howard's social cities (Rego, 2009). This created a particular type of landscape that contrasted with that of other areas of Brazilian colonization.

Nine new towns were founded by Companhia de Terras Norte do Paraná (CTNP), a subsidiary of Parana Plantations in Brazil (Figure 1). Londrina, Cambé and Rolândia were founded in the early 1930s; Arapongas, Aricanduva, Apucarana, Jandaia, Pirapó and Mandaguari were founded between 1935 and 1938. Three more towns (Marialva, Sarandi and Maringá) were to be added a few years later. This initial town cluster was planted on the main ridges along the route of a prospective railway, which was to become the backbone of the settled landscape. These new towns were positioned at short regular intervals with a green belt between each. The close relationship between urban settlements and rural plots (Rego and Meneguetti, 2008) clearly shaped the concept of social cities (Howard, 1902), which was being extensively disseminated at that time and was known by the Board of Directors of Parana Plantations (Rego, 2009).

Ground plans are important documents for understanding the establishment of a town. One can read from them the original settlement nuclei (Conzen, 2004b), as well as the formal arrangement of the built-up elements. A study of the towns planted by Parana Plantations shows that town layouts were equivalent in area, as well as in facilities. There were also common principles of design: the definition of a central core as a public square, the placement

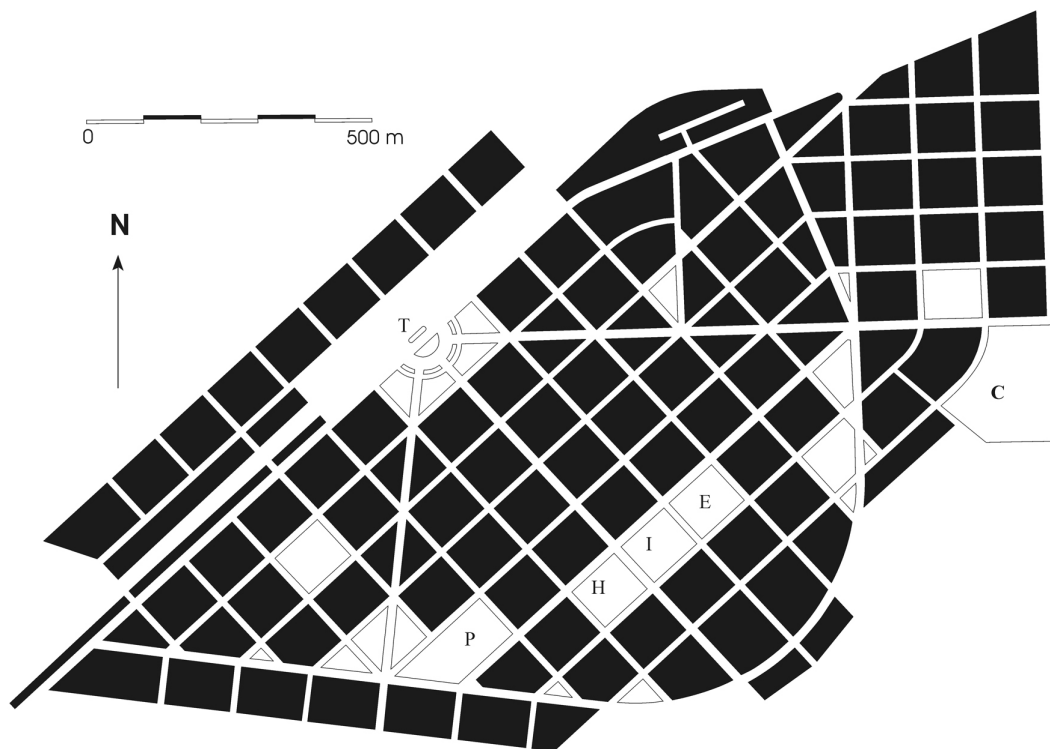
of the central square on a prominent level area, the strategic position of public buildings (such as the school and the town hall) around the central public square – or at the very boundary of the town in the case of sports facilities, the cemetery and the railway station – the principle of zoning, and the characterization of the railway station as the town entrance. It clearly resembles the pattern of British colonial towns (Home, 1997).

In general, geometrical regularity was prevalent, for these urban settlements were part of a private land speculation enterprise. However, each urban form differed, as the ideal, regular, grid-like pattern was adapted to suit site conditions: the colonial rectilinear plan was adjusted in each case, according to the original layouts held in the records of the former Brazilian subsidiary. In addition, aesthetic variation is evident, particularly in the arrangement of convergent streets in front of the railway station and the symmetrical layout of significant buildings or public squares (Figure 2). These characteristics created a distinct cluster of towns: not only the site, but also the transfer of certain planning ideas, created a distinctive landscape.

### **The transformation of the landscape**

Later on, the creation of urban settlements turned out to be not exclusively the task of the colonization company. Along with the landowners' efforts to found new towns and promote the occupation of the territory, less formal initiatives were also responsible for the flourishing of new villages within the boundaries of the property bought by the British company. Thus, numbers of towns were founded by 'third parties' – neither the State nor the foreign landowner.

After the liquidation of Parana Plantations in 1944, Brazilian entrepreneurs took over the colonization business and renamed the land company Companhia Melhoramentos Norte do Paraná (CMNP), which was responsible for the creation of 53 new towns and villages. At the same time, another 48 settlements were created within the former Parana Plantations domain



**Figure 2. Layout of Rolândia, an example of a town founded by a subsidiary of Parana Plantations, CTNP in 1934. T = railway station; P = sports court; I = church; C = cemetery; H = city hall; E = school.**

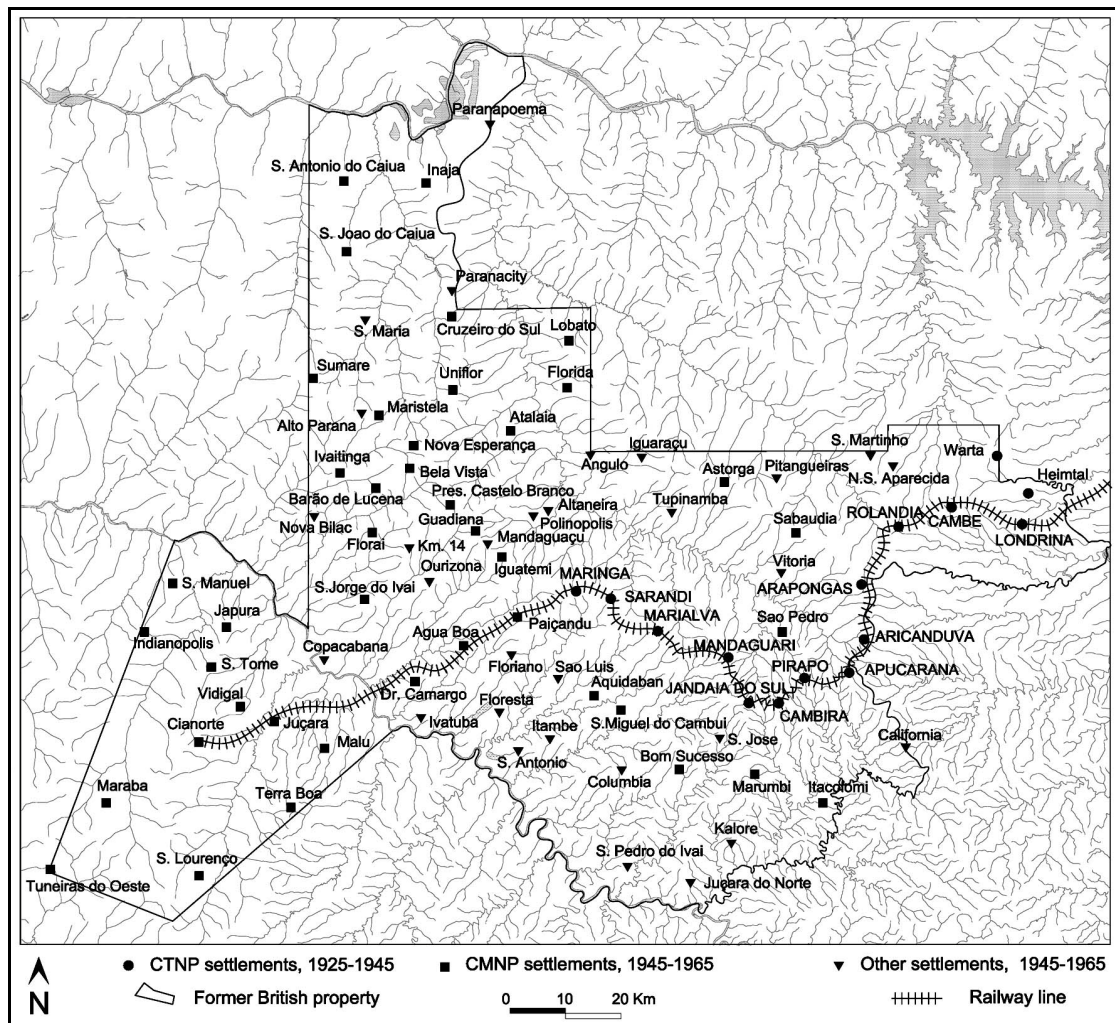
(Carvalho, 2000). It seems that these initiatives were actually encouraged, or, at the least, not opposed. All this resulted in huge changes in the colonization process, particularly with respect to town founding and urban forms.

One of the changes was a dramatic rise in the number of urban settlements over a short period of time (Figure 3). The marriage of town and country had proved to be one of the positive aspects of this successful colonization enterprise (Dozier, 1956; Katzman, 1977). Notably, it attracted people to, and kept them in, the countryside (Adams, 1905; Hall and Ward, 1998), when otherwise vacant countryside in a frontier zone would certainly have become a source of great concern. Thus, the increasing number of urban settlements was a highly desired goal, despite the responsibility and expense it brought. It demanded an ever-expanding transportation network and, most of all, an important increase in the infrastructure, if towns were to maintain

the urban standard previously practised. Besides, railway line expansion would be an issue, especially when governmental policies were favouring the car industry.

Possibly due to the rising number of urban settlements, the CMNP Technical Office was not responsible for all of the towns' layouts. The foundation of urban settlements by less formal initiatives led, unsurprisingly, to unbalanced layouts. Whilst some show a carefully laid-out town plan, others have less articulate and less elaborate forms. Moreover, while the British-founded towns were more or less adapted to the site, urban settlements created during the period of Brazilian administration were more grid-like. The sense of community in CTNP layouts was now lacking: buildings were no longer grouped to form a town centre in the core of the urban area, nor was a public square clearly defined. An example of this contrast is evident if Figures 2 and 6 are compared.

Another change was that the main ridges,



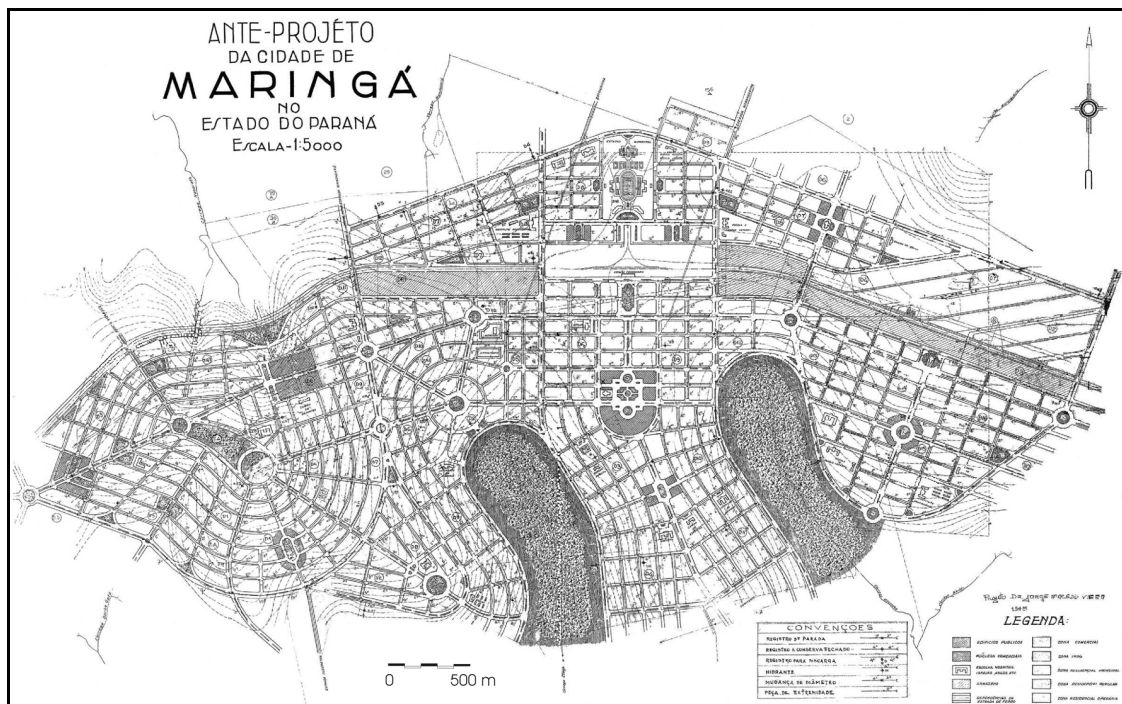
**Figure 3. The urban settlements of Northern Paraná State according to foundation date. The first period (1925-1945) comprises towns planted by the British Company, Parana Plantations, and the subsequent period (1945-1965) consists of towns and villages founded by CMNP and others. Two different types of landscape were created, reflecting different planning ideas.**

where the railway was being constructed, were abandoned as the backbone of the built-up landscape. Roads became the only link among most of the urban settlements, whilst towns already served by, or planned to be served by, the railway became the most important. Urban settlements started to be planted somewhat randomly (Figure 3). Some were positioned on secondary ridges, part of the way down to the valley. The scattering of towns was a turning point in the British urbanization scheme. Hills distinguished by the towns on top of them, as noted by a French geographer

who visited the region during the British colonization period (Monbeig, 1984), were no longer the most notable feature of the landscape.

Last but not least, hierarchically-structured town clusters were set up. Whereas urban settlements planned during the British administration period were equivalent in area and importance (Rego and Meneguetti, 2008), those laid out later were basically divided into three categories: major towns, towns and villages. According to a report on the Northern Paraná State colonization enterprise,





**Figure 4. Layout of Maringá, an example of a major town founded by CMNP in 1947. Reproduced with the permission of Museu da Bacia do Paraná.**

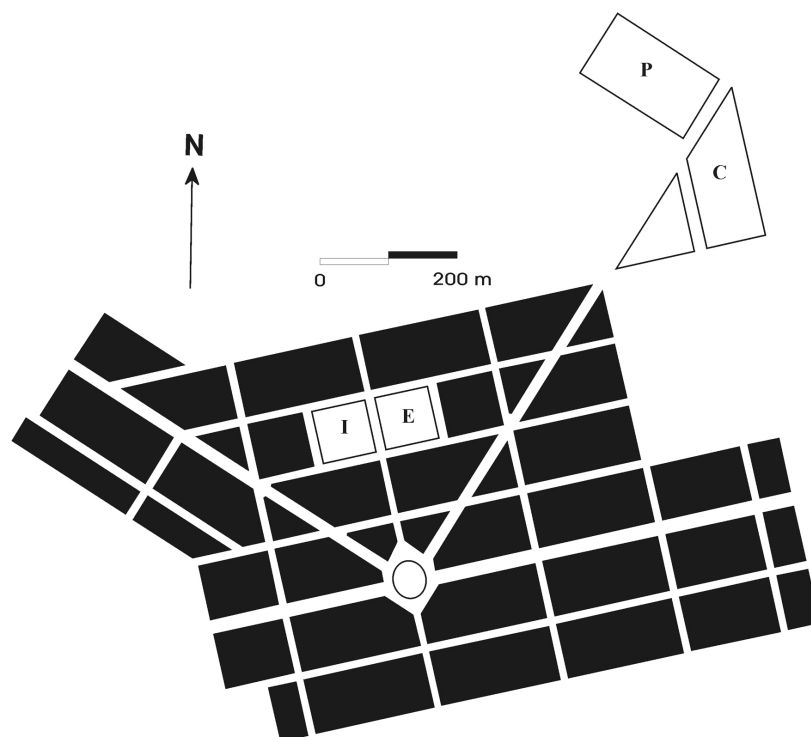
four major towns were planned and a number of small towns and villages were to be planted among them (CMNP, 1975; Dozier, 1956).

Not surprisingly, the major towns had been settled along the railway line. Londrina, the very first town founded by, and the home of, the British company's subsidiary had undergone major development, its urban area and importance being greater than initially foreseen. Thus, it gradually became a major town in the town cluster. Three other major towns were planted along the railway, 100 km apart; Maringá is one of them (Figure 4). Other towns were to be positioned among them, and these became the regularly-spaced urban settlements founded along the railway by the British company. Already settled, they offered a reasonable infrastructure and some important facilities that villages nearby could use and, thus, not need to provide themselves.

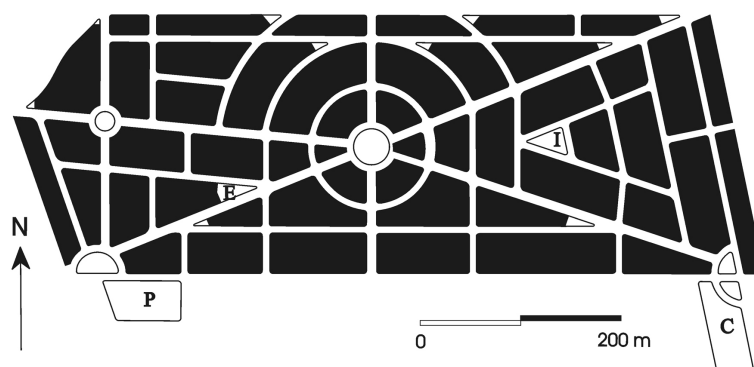
Examining original layouts and maps produced by the Brazilian Land Company after the British withdrawal (and held at the CMNP archives), it is noticeable that just one proper town was actually founded. Nova Esperança

was situated on the main ridge, close to the far western boundary of the domain of Parana Plantations, as a development of the original British urbanization scheme, though off the railway route. Thus, most villages (or *patrimônios* as they are named in Brazil) were founded after the British left the land speculation business (Figures 5 and 6). Smaller in area and offering little urban structure, they could easily multiply; and indeed they did (Figure 3).

These villages played an important role in the construction of the regional landscape. They not only turned out to be commercially convenient, but also suitable for new planning purposes. A shift in the regional planning scheme can be observed. The town clusters depicted in the regional maps of 1938 and 1965 illustrate this difference (Figures 1 and 3). The form, number of towns, and relationships between towns have changed. In the earlier map, equivalent, independent towns are present; their proximity resulting from town and country planning. In the later map, the towns are spread out over the whole territory.



**Figure 5.** Layout of Doutor Camargo, an example of a village founded by the Brazilian CMNP in the late 1940s. E = school; P = sports court; I = church; C = cemetery.



**Figure 6.** Layout of Ângulo, an example of a village founded by a 'third party' in the 1950s. P = sports court; I = church; C = cemetery; E = school.

They still maintained the close relationship with the countryside: rural plots still showed the same small parcelling scheme. However, they were no longer of equal status; full towns and dependent villages are differentiated. The latter tend to cluster around the more important

urban settlements.

The history of town planning ideas can help us to understand what was happening. At the time, the concept of satellite towns was being applied to the development of London. Generally speaking, this new regional

configuration was nothing but the garden city idea evolved and projected into a metropolitan context. Raymond Unwin had reformulated Howard's proposal into interdependent urban settlements. Although Howard and Unwin shared the thought of an 'urban region', they differed on the autonomy each town should have (Unwin, 1918; Ward, 1992). Howard's social city was transformed into a group of towns that were to a degree self-sufficient. In other words, the new towns around London would be subsidiary centres. Similarly, Purdom (1925) aimed to update and revalue the garden city idea through a diagram showing 'Satellite towns round London'. Formal evidence suggests this idea was also transferred to later developments in Northern Paraná State. Moreover, at that time, English examples of garden cities, zoning, town layout and regional planning were part of an obligatory course at the *Escola Politécnica de São Paulo* (Ficher, 2005), where members of the CMNP Board of Directors were originally trained as civil engineers.

The infrastructure of a conurbation with millions of inhabitants will probably be continually affected by an ever-growing urban aggregation. In contrast, a region in which the same population is distributed over a network of many towns may offer a more satisfactory scenario (Pesci, 2007; Purdom, 1925; Unwin 1918). The large quantity of services and facilities, which is one of the positive aspects of a great city, would then be decentralized in many sub-centres within a network, greatly improving the constellation of towns.

Unfortunately, in the later development of Northern Paraná State this has not occurred in the manner originally planned. Today, the region has nearly 2 million inhabitants and the population once settled in many villages and towns migrated to major towns due to an agricultural business crisis in the 1970s. The process of agricultural mechanization has also led to rural depopulation. Furthermore, amenities and services were continuously and selectively located in the towns, small and large, nearby. Thus, the town and country magnet designed by Howard was no longer working properly, and while some of the

villages evolved into towns, most of them remained in their initial condition.

## Conclusion

Analysis of the formation and historico-geographical character of the Northern Paraná State landscape has highlighted two 'morphological regions' overlapped in time (Whitehand, 2009). A town's relative position in the territory, the original physical form of the urban areas, the size and shape of the original urban areas, and the more or less elaborated town layouts have helped us to understand the dynamics of the regional landscape.

The initial cluster of equivalent towns planted according to the British colonization scheme gave rise to a hierarchical constellation of towns and dependent villages. Due to this change, urban settlements no longer occupied the main ridge; rather, they were more randomly founded on secondary ridges, part of the way down to the valleys. Thus, the whole region ended up being more widely dotted with towns. Along with the fertile soil and the facilities the foreign entrepreneurs provided, this was definitely a strong attraction to settlers. The new territorial organization was also a response to the restricted impact of the railway line over the whole territory, the continually developing network of roads and the rapid spread of automobiles.

However, the features of this new regional landscape still seem to have followed up-to-date planning notions. At first, the initial colonization scheme was based on British town and country planning ideas; in particular, those related to the garden-city movement – to be precise the social cities' idea, as Rego (2009) and Rego and Meneguetti (2008) have shown. Then, a later scheme of regional planning developed for metropolitan London, namely satellite towns, was transferred and adapted to the local conditions. In both cases, the built-up landscape was the unique result of a combination of the natural landscape and specific spatial systems.

This morphological study – a cognitive approach to the organization of territory – has



contributed to understanding the recent features of the landscape of northern Paraná through the analysis of the town-founding process and the comprehension of urban forms as a physical manifestation of specific cultural contexts. It has added to the growing literature on the urbanization process in general and that of the northern region of Paraná State in particular. It also has implications for future planning practice.

## References

- Adams, T. (1905) *Garden city and agriculture: how to solve the problem of rural depopulation* (Garden City Press, Hitchin).
- Carvalho, L. D. M. (2000) *O posicionamento e o desenho urbano de algumas cidades implantadas pela Companhia de Terras Norte do Paraná e sucessora, Companhia Melhoramentos Norte do Paraná* (Universidade Estadual de Maringá, Maringá).
- Companhia Melhoramentos Norte do Paraná (1975) *Colonização e desenvolvimento do norte do Paraná* (Companhia Melhoramentos Norte do Paraná, n. p.).
- Conzen, M. R. G. (2004a) 'A framework for the comparative study of townscapes, in relation to the concepts of region and environment complex', in Conzen, M. R. G. *Thinking about urban form. Papers on urban morphology, 1932-1998* (Lang, Oxford), 34-44.
- Conzen, M. R. G. (2004b) 'The Havel towns: townscapes of the Havel region, exemplified by Rathenow', in Conzen, M. R. G. *Thinking about urban form. Papers on urban morphology, 1932-1998* (Lang, Oxford), 83-100.
- Dozier, C. L. (1956) 'Northern Paraná, Brazil: an example of organized regional development', *Geographical Review* 46, 318-33.
- Ficher, S. (2005) *Os arquitetos da Poli: ensino a profissão em São Paulo* (Universidade de São Paulo, São Paulo).
- Gauthier, P. and Gilliland, J. (2006) 'Mapping urban morphology: a classification scheme for interpreting contributions to the study of urban form', *Urban Morphology* 10, 41-50.
- Hall, P. and Ward, C. (1998) *Sociable cities: the legacy of Ebenezer Howard* (Wiley, Chichester).
- Home, R. (1997) *Of planting and planning. The making of British colonial cities* (Spon, London).
- Home, R. K. (1990) 'Town planning and garden cities in the British colonial empire 1910-1940', *Planning Perspectives* 5, 17-33.
- Howard, E. (1902) *Garden cities of to-morrow* (Sonnenschein, London).
- Katzman, M. T. (1977) *Cities and frontiers in Brazil* (Harvard University Press, Cambridge, MA).
- King, A. D. (1980) 'Exporting planning: the colonial and neo-colonial experience', in Cherry, G. E. (ed.) *Shaping an urban world* (Mansell, London) 203-26.
- Monbeig, P. (1984) *Pioneiros e fazendeiros de São Paulo* (Hucitec, São Paulo).
- Pesci, R. (2007) *Ambiente e arquitetura. Hacia un tratado de arquitectura, ciudad y ambiente* (Al Margen, La Plata).
- Purdom, C. B. (1925) *The building of satellite towns: a contribution to the study of town development and regional planning* (Dent, London).
- Rego, R. L. (2008) 'Private interests, public virtues: Parana Plantations Ltd and the foundation of new towns in Brazil', unpublished paper presented to the Thirteenth International Planning History Society Conference, Chicago, July.
- Rego, R. L. (2009) *As cidades plantadas. Os britânicos e a construção da paisagem do norte do Paraná* (Humanidades, Maringá).
- Rego, R. L. and Meneguetti, K. S. (2008) 'British urban form in twentieth-century Brazil', *Urban Morphology* 12, 25-34.
- Unwin, R. (1918) *Nothing gained by overcrowding: how the garden city type of development may benefit both owner and occupier* (Garden Cities and Town Planning Association, London).
- Ward, S. V. (1992) *The garden city: past, present and future* (Spon, London).
- Whitehand, J. W. R. (2009) 'The structure of urban landscapes: strengthening research and practice', *Urban Morphology* 13, 5-27.