

THE USE OF DIFFERENTIATED HABITAT CONSTRUCTS AS AN ALTERNATIVE FOR THE ZONING PRINCIPLE: APPLIED TO AN ECONOMIC DEPRESSED REGION

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Summary

In this paper we will comment on the first results of a research program emphasizing the integration of qualitative-substantive aspects (significations, values and mental images) of the living environment into an action-oriented process of physical planning. Through the mixed-setting approach we strive for differentiated habitat constructs on different planning levels. This method reacts against zoning that has been developed into a rigid instrument of allocation on land uses. In order to make this method operational we are in a process of using it to draw up a structure plan for a very problematic region between Antwerp and Brussels : the Rupel region.

1. Introduction

Relating a planning approach to living is not at all a matter to be taken for granted. Indeed, planning theory has developed mainly from the economic and political sphere and usually does not have a tradition of caring about the actual living of people.

Combined with the technique of the mixed-setting, the method of the differentiated habitat constructs tries to create a new approach based on the integration of different scientific descriptions of living. This approach seems to offer at the same time a valid alternative for the shortcomings and limitations of the dominating zoning idea in physical planning.

2. Actors in the process

People live by integrating themselves in one way or another in a certain environment. Several actors can be distinguished as participants in this integration process.

The relationships and links between these actors are very important for the creation or the modification of a certain living process. Planning,

being a decision-making and action process, therefore involves the dialogue between mainly two groups of actors: society and government, with the expert or planning authority in the role of a mediator and initiator. The three types of actors constantly exchange information. However, if we were to limit the problem of the - time and context bound - interaction of these three systems only, we would simplify reality too much. Interaction also takes place within those systems. Government - with its many governmental departments, commissions, councils and organization levels; society - with a lot of individual interests and regulating units (e.g., big concerns, pressure groups, project development companies, institutional investors); and the planning institution (levels, relation to other units, departments) are internally very much differentiated with regard to their nature, their desires and their power.

Thus, an essential requirement of good physical planning is that these different systems have sufficient insight into the common field of interest and into the actual power structure. On the basis of this insight, which will gradually grow in the form of a learning process, it will be possible to minimize the number of unforeseen consequences of the actions to be taken.

In this way we are presenting a decision continuum in which the three actors go through the complete planning process together, although they each stress specific aspects which are related to the characteristic roles they have to play. This implies that the traditional elements of rupture, which lie between preparation, decision and implementation will be eliminated. The transition from one step to another in the - enlarged - planning process, will be prepared, accompanied and decided by three actors (Albrechts, 1982).

3. Accent on personal experience, significations and values

A brief analysis of the present day approaches concerning man-environment relation can be looked at from several completely different points of view.

- The first approach emphasizes the physical-morphological and functional aspects of the environment.
- The second approach stresses to a large extent the activities of man. Within behaviourism man is an acting subject in an environment.
- The third starts from the analysis of the habitat as the result of a specific decision process among several interest and power groups (politicians, individual inhabitants, action groups, planners and others).

Another aspect of the man-environment interrelation concerns the domain of perception and signification. Although this is being touched upon in several present-day approaches of man-environmental studies, it has a rather secondary function in modern planning practice.

Meanings, according to perception and significations, may be situated, within the use value; they may refer to subjective and emotional dimensions of the human existence, or they may be looked at from the point of view of the history of their origin within a given socio-cultural or political-economic context (Tafuri 1973). Important fields of research are transactional perception theory, interactionalism and semiological studies.

4. The method of the differentiated habitat constructs and the mixed-setting approach

The functional zoning concept is still being actively used on different planning levels and in the corresponding instruments of policy and design (Lombaerde 1977). This is surprising because in the course of the last 35 years important theoretical shifts have taken place in the field of research concerning environmental studies and the way in which the relation man-environment can be influenced.

A lot of human characteristics and environmental qualities are neglected by functionalism and by the functional zoning instrument. Zoning initially aimed at a simple and clear confrontation of the diversity of living aspects and functions of a number of interest groups on different physical scale levels (Mancuso 1978). It has now developed into a rigid instrument of allocation of land uses which imposes its own formal projection system in the subsequent phases of design, even in the normative field.

Going back to the initial zoning system, as it was used in Germany in the second half of the nineteenth century, and taking into account new scientific trends in environmental studies we find the roots for a new coherent conceptual scheme. In this scheme the form and direction of the planning framework will be defined by the new planning model (Albrechts 1982), whereas its contents will be determined by the approach of the differentiated habitat constructs. The procedural aspects can be related to the substantive elements by means of the mixed-setting approach (Albrechts, Lombaerde 1981).

We do not want to relate the substantive components of living to each other in a stereotyped and single way, typical of functional zoning. Therefore, we start from the hypothesis that several substantive aspects of human behaviour and of the physical environment can not be considered as being directly dependent on each other. Physical and functional characteristics of a certain environment do not necessarily conform to the activities of its users and need not coincide a priori with specific values or meanings. In the functional zoning concept, however, one does simplify the reality of living: from the overall split of activities as a starting point corresponding functions are defined, to which specific land uses are allocated in successive and adjoining zones. How then can one make the link between different substantive aspects of living? The approach of the differentiated habitat constructs will

attempt to answer this question.

Habitat constructs are described as specific combinations of characteristics belonging to three observation levels:

- physical-morphological and functional aspects of the living environment;
- individual and group activities performed by the inhabitants;
- personal experiences, significations, values and (mental) images which are considered meaningful by the inhabitants.

By taking into account these three substantive fields of living, one also calls on the substantive components of present-day research directions. Although in planning the area of personal experiences, significations, values and mental images are treated rather subordinately the differentiated habitat construct approach puts an important accent on it by dealing with it as a separate observation level.

The differentiated character of the habitat constructs refers to the different ways in which the observation levels mentioned above are attuned to each other. The point of view from which the descriptive terms are used is connected to the hypothesis of the mixed-settings. The mixed-setting approach uses different physical scale levels (house, building parcel, territory and orbit) and examines which activities and personal experiences (significations, values and images) are related to these scale levels (figure 1). This approach makes it possible to relate very specific activities and personal experiences to a certain physical scale level (e.g. the neighbourhood) in function of the various actors who take part in the living process.

The differences in combination of observation levels as well as the way in which mixed-settings come into existence reflect the result of a number of decision-making processes among several groups of actors : society, government and experts. According to the approach of the differentiated habitat constructs, living is related to a double integration process:

- On the one hand, on their purely substantive domain, different fields of the three observation levels will be related to each other.
- On the other hand, these different substantive aspects will be the descriptive elements and the terms through which the dialogue and the decision-making process among the different groups of actors (inhabitants, government and designers) can get started.

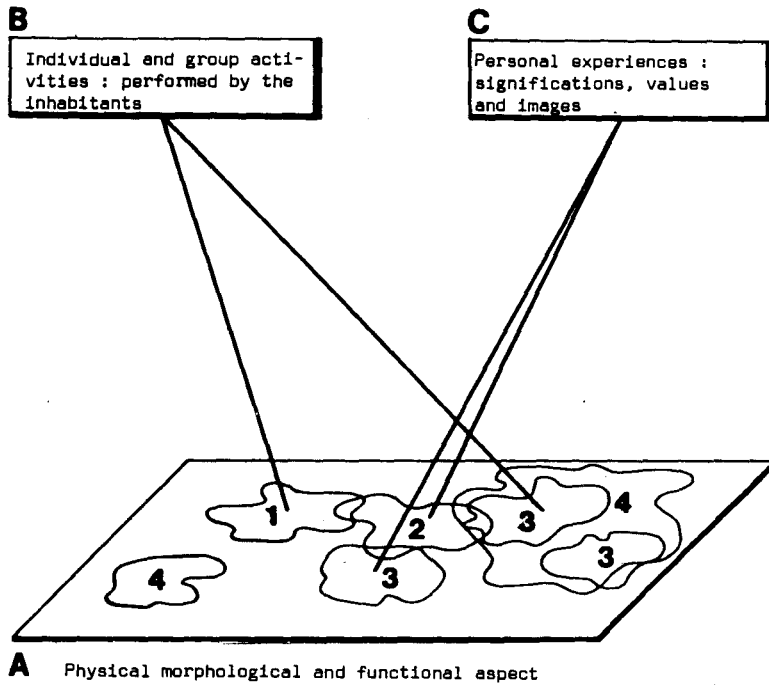


Figure 1: The mixed-setting units and their relations to the three observation levels, belonging to differentiated habitat constructs

It is precisely within this procedural framework that the relations between the different substantive aspects of living come about. This integration takes place on the different hierarchical levels of the planning process. Therefore, we used the method of the mixed-settings. The terms which make the transitions between the different observation levels possible within the voluntaristic planning framework are the four-mixed settings : the house, the building parcel, the territory and the orbit.

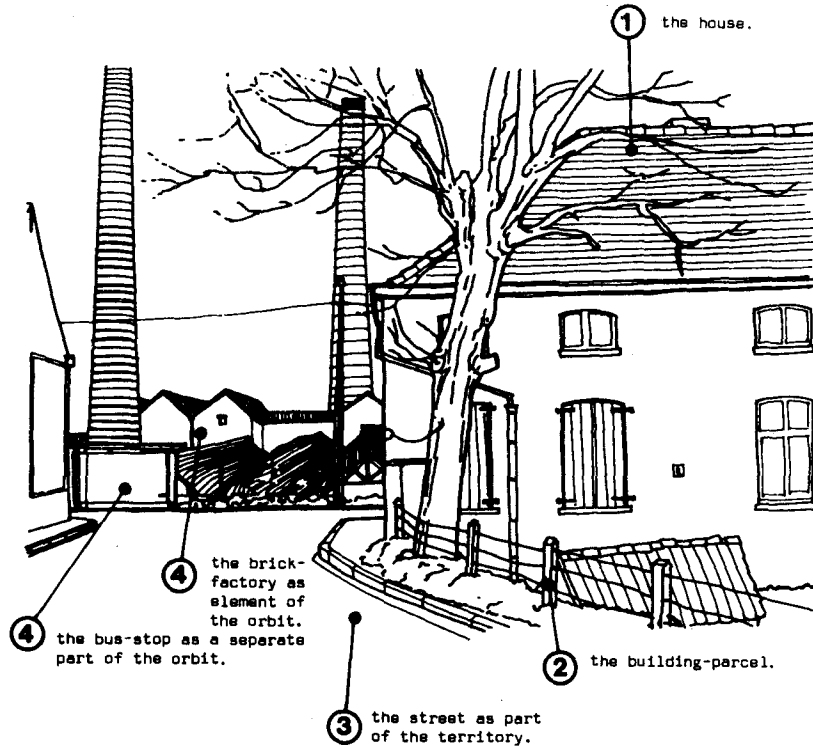


Figure 2: Elements of the orbit in the area of the territory

5. Characteristics of the region under consideration

The physical, morphological aspect of the Rupel Region is to a great extent determined by the economic activities which developed in the area:

- The oldest was the brick industry which since the middle of the sixteenth century flourished in particular at Boom along the Rupel River (with approximately twenty brickyards). This traditional brick industry extended along the Rupel above all from the nineteenth century up to 1960. It has traditionally given rise to unrestricted building up of physical plants resulting in an industrial landscape marked by a disorganized and chaotic usage of space.

As a consequence of the loss of the brick industry, the decline of what from a historically cultural point of view was a very characteristic landscape resulted: the brick yards were abandoned or transformed into other methods of production; the population emigrated and the clay pits were filled in to be used again (for

housing and industry) or used as a dumping ground (for asbestos cement, fly ash, plaster of Paris, household refuse).

The left bank of the Rupel remained a natural landscape with marshes, ponds, small localities, mansions and forests.

- The transportation of coke from the Charleroi basin, the conveying of bricks along the River Scheldt and the Rupel Canal and the increased need to mechanize the brick production gave rise to a limited development of a metal industry.

As has already been mentioned, the physical structure of the landscape has not been completely affected by the industrial development. On the older cuestas plateau the communes of Schelle and Reet still remain traditional agricultural areas.

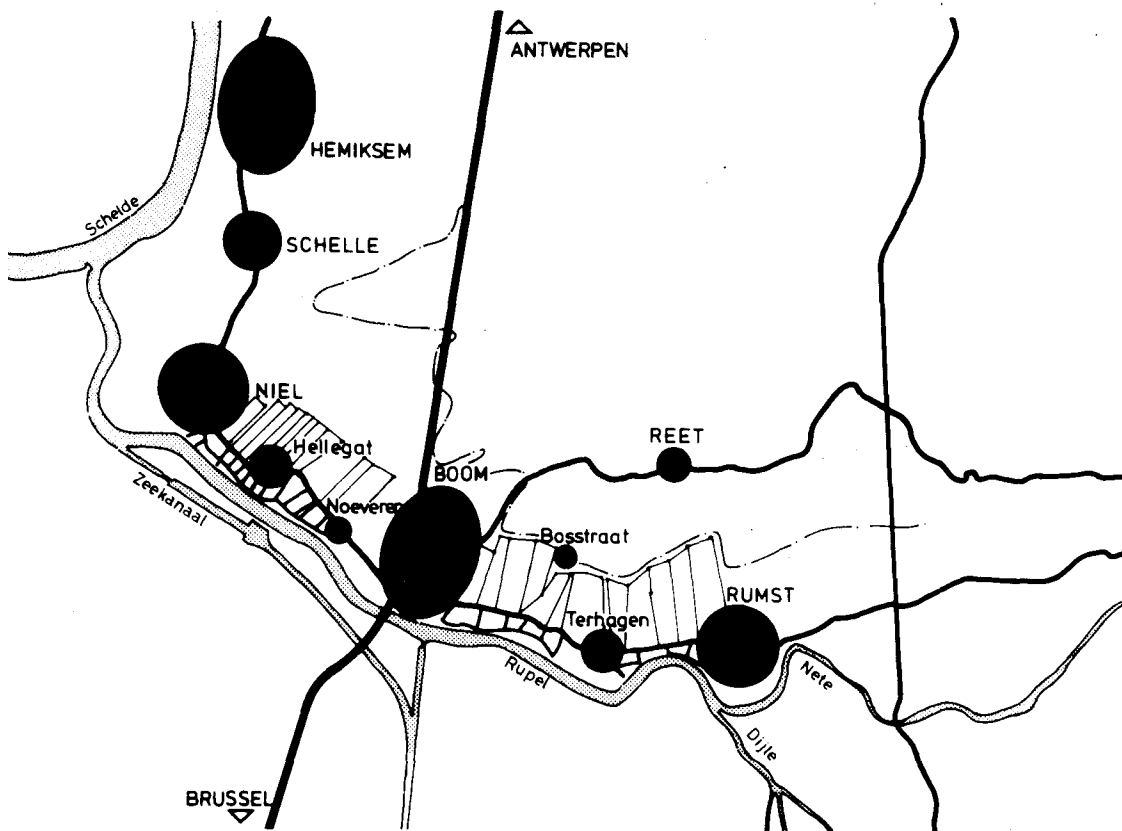


Figure 3: The Rupel-region : a schematic situation plan

A visual aspect of the Rupel Region is to a great extent characterized by long narrow parcel structures, mostly perpendicularly oriented towards the river banks and bordered by the upper end of the slope of an ever widening cuesta. The cuesta landscape is made up of meadows, agricultural lands and forests, and is partially cut up by a number of localities. Between the private parcels a number of localities are situated (Niel, Hellegat, Noeveren, Boom, Terhagen and Runst). A number of smaller traffic loops are connected with the provincial road which runs parallel to the Rupel. These secondary roads provide an entrance to the storage depots, the private houses and the kilns of the brickyards. They also serve as a link between the inland region and the Rupel. The provincial road, the Rupel as well as the elevation of the embankment may be considered as a structural element on the fourth planning level. Between these lie several local connecting loops which provide an outlet for the various localities and industrial plants to the provincial road.

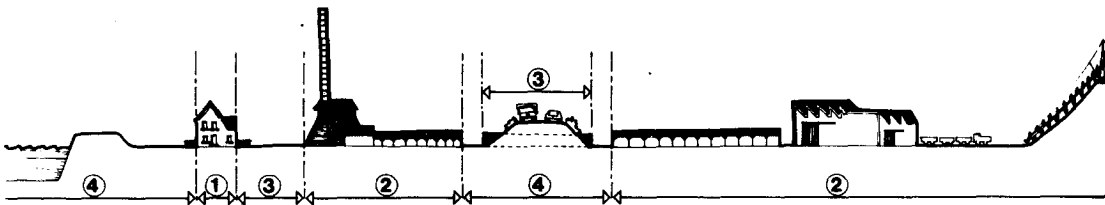


Figure 4: The different parts of a typical parcel structure, oriented perpendicularly toward the river bank.

A regular succession of underpasses (subways) under the provincial road enables pedestrians to communicate easily between the parcels and territories on both sides of the road.

6. Application of the approach to the region

A first encounter with the zoning method based on the use of differentiated habitat constructs and mixed settings as applied locally gave rise to a number of specific findings which could also be used as directive elements for resolving the specific problems of the Rupel Region.

6.1. The most important problems within the Rupel area are apparently not separated from the proper physical-morphological structure of the region. This was, indeed, repeatedly underscored in public documents. Elements of a fourth planning level are responsible for the deterioration of the components belonging to each of the lower planning levels:

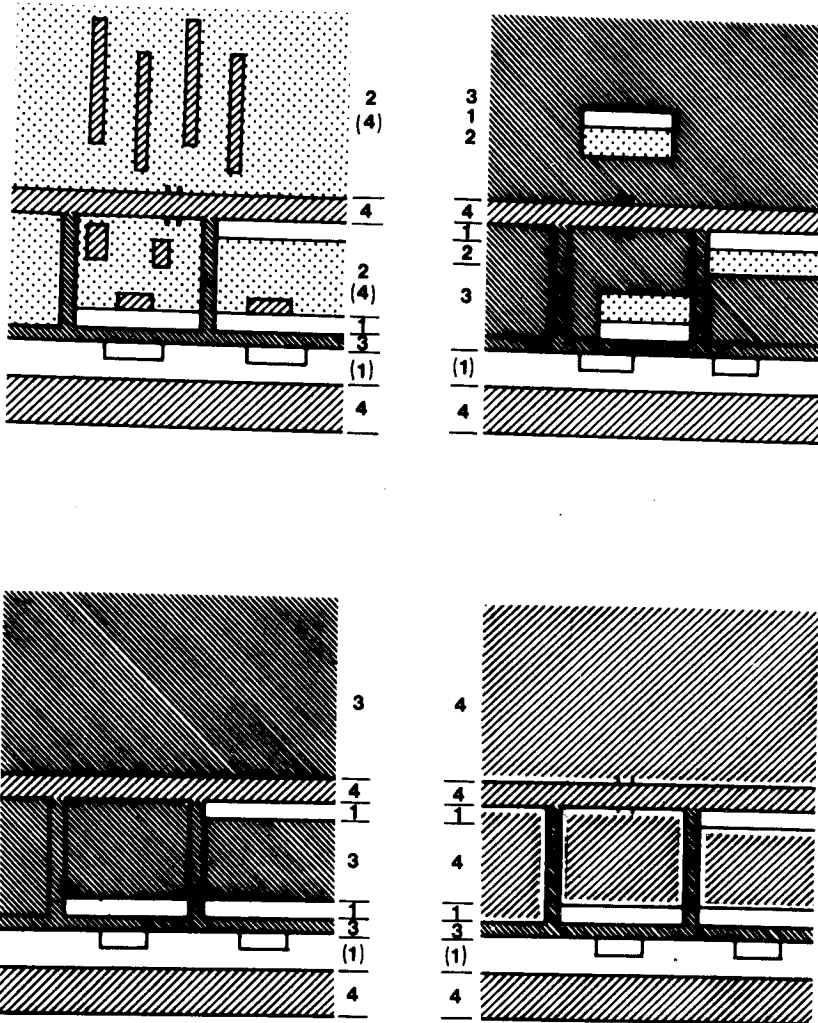


Figure 5: Variations of different uses of the initial landscape.
 The numbers refer to the four mixed-settings :
 1. houses; 2. private parcel; 3. territory; 4. orbit activities.

provincial services and the central authorities, it is very difficult to realize an interaction between the various problems proper to the regional and local level in the Rupel Region.

- the filling up of the clay pits with industrial and household refuse transported by trucks using both the provincial and the secondary roads. Not only does the traffic appear to ignore the required regulations but it also renders impossible a considerable number of activities of the neighbourhoods (third level); blowing dust and earth tremors damage the houses (first level) and the gardens (second level).
 - The widening and the heightening of the river banks of the Rupel and the Scheldt to a great extent destroy the visual relation between the houses and the river landscape. This leads to a depreciation of the values of personal experiences and mental images between the fourth and first observation levels.
- 6.2. The systematic removal of chimneys, round kilns, storage depots as also the filling up of the clay pits results in a complete effacing of the "memory" of this region. Partly due to the options of the public authorities reflected, for instance, in the physical planning of the region, one intends to sanitize this area through integral zoning.

The characteristic image of the Rupel Region, however, is not based upon a rigid zoning principle but upon a close integration of the natural landscape (the Rupel and the cuesta), industrial witnesses (brickyards and storage depots), small localities and hierarchy of traffic roads. This method of differentiated habitat constructs emphasizes that the proper physical-morphological aspect of the Rupel Region should not be transformed to achieve a reconversion of the activities and the purposes of the region.

The same physical aspect can be respected and integrated into totally different forms of landscape depending upon the specific needs and priorities determined by the inhabitants, the planning authorities and the experts (cfr. Variations on figure 5).

The Rupel Region can retain the same image value but its physical components which constitute the mental scene for the inhabitants have to undergo, with respect to their functional value and with the help of a structural planning process, a substantial change. In the course of the planning process, problems of economic regression (cfr. brickyards and clay pits) of socio-cultural stagnation and the neglect of the physical landscape have to be dealt with on the level of the entire region as well as on the communal and local level (the neighbourhood, the organization of the parcel and the individual buildings). Due to the numerous differences and contrasts between the morphological characteristics of the region, the activities, experiences, signification values, mental images and interests considered as meaningful to the inhabitants, the industrial bodies, communal administrations, the

This can be illustrated by the fact that it is difficult - almost impossible - to dialogue with (in connection with this see the section on actors in the process) the various brickyard industries which are predominantly family enterprises. Too many intermarriages between the families of the communes of Niel, Terhagen and Rumst lie at the basis of the origin of a number of clans of brickmakers (generations of some families date back to the sixteenth century). The impact of personal interest and private property rights of these families must still be reckoned with and gives rise to a strong contrast between the labourers and those who wield financial power.

Conclusion

Our approach using various observation levels attempts systematically, in respect of the proper physical-morphological structure of the region and the point of view of the different actors, to acquire a first insight into the broad spectrum of activities, experience values and significances.

Secondly, this approach purposes to apply a similar method to resolve the urgent crucial problems (second field of action) on the local level of the territory.

For the moment with regard to the Rupel Region - because the planning process has only recently been started in a definite way - we limit ourselves to a refined discovery and formulation of problems from which all solutions must issue. In the meantime this approach provides the adapted terminology for a learning process and serves as an initial framework from which immediate action can proceed.

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Abstract

In this paper we will give a comment on the results of a research program emphasizing the integration of qualitative-substantive aspects (significations, values and mental images) of the living environment into an action oriented process of physical planning. Through the mixed-setting approach we strive for differentiated habitat constructs on different planning levels. This method react against zoning that has been developed into a rigid instrument of allocation of land use. Zoning imposes its own formal projection system in the subsequent phases of design. The starting point for the description of differentiated habitat constructs is the recognition of three observation levels:

- physical-morphological and functional aspects of the living environment;
- individual and group activities performed by the inhabitants;
- personal experiences, significations values and mental images which are considered as meaningful by the inhabitants

The differentiated character of the habitat constructs refer to the different ways in which the three observation levels are attuned to each other. Far too often these relations are still imposed by designers and policymakers on the concrete inhabitants. The terms which make possible the transition between the different observation levels. Within the planning framework are the mixed-settings: the house, the building parcel, the territory and the orbit.

This method is developed as a valid alternative for the zoning principle which dominates Belgian physical planning. In order to make this method operational we use it to draw up a structure plan for a very problematic region between Antwerp and Brussels -the Rupel region-. This region is confronted with a heavy economic regression (brick-works and clay-pits), socio-cultural stagnation and a physical-visual neglect.

In the process of working out a structure plan we have to consider the problems of the region as a whole as well as the problem on municipal level and below (neighborhood, the organization of the parcel, and the buildings).

Opposite mental images and visual appreciations based on typical socio-economic positions of the inhabitants, are relevant for a very complicated semantical interpretation of this region. In our research we try to identify these substantive elements in function of socio-economic and physical characteristics of different neighborhood in the Rupel-region. These elements will serve as the key-data on which the different actors (Regional Development Corporation, private planning consultant and the inhabitants represented by different (pressure) groups) rely during the planning process.

L'ÚS DE CONSTRUCTES D'HABITAT DIFERENCIALS COM UNA ALTERNATIVA DEL PRINCÍPI DE "ZONIFICACIÓ" (ZONING) APLICAT A UNA REGIÓ ECONOMICAMENT DEPRIMIDA

Resum

En aquest treball comentem els resultats d'un programa d'investigació que en enfatitza la integració d'aspectes qualitatiu-substantius (significacions, valors i imatges mentals) de l'entorn en una acció orientada en els processos de planificació física. A través d'una aproximació a la composició d'elements (mixed settings) tractem de fer emergir els constructes d'hàbitats en diferents nivells de planificació. Aquest mètode es presenta com alternativa al procés de zonificació (zoning) que ha esdevingut un rígid instrument d'assignació i ús del terreny. Aquest procés de "zoning" imposa el seu propi sistema formal i les seves fases de disseny. El punt de partida per la descripció de constructes d'hàbitat diferencials és el reconeixement de tres nivells d'observació:

- aspectes físic-morfològics i funcionals de l'entorn;
- activitats individuals i de grup dels habitants;
- experiències personals, valor de les significacions i imatges mentals que són considerades significatives pels habitants.

El caràcter diferencial dels constructes es refereix a les diferents maneres en que els tres nivells harmonitzen entre sí. Massa freqüentment aquestes relacions encara són imposades pels dissenyadors i polítics sobre els habitants. El que fa possible la transició entre els diferents nivells d'observació en el marc de planificació és la composició d'elements (mixed-setting): la casa, la parcel·la, el territori i l'òrbita. Aquest mètode hom desenvolupa com una alternativa vàlida per al principi de zonificació que domina la planificació física a Bèlgica.

Per a fer operacional aquest mètode l'utilitzem per dibuixar un pla d'estructura per a una regió molt problemàtica entre Antwerp i Brusel·les, -la regió Rupel-. Aquesta regió està enfrontada a una forta regressió econòmica, estancament socio-cultural, i negligència físic-visual.

En el procés de treure endavant un pla estructural hem de considerar els problemes de la regió com un tot així com el problema a nivell municipal i per sota d'aquest (de barri, d'organització de parcel·les, d'edificis). Les imatges mentals oposades i les apreciacions visuals basades en típiques posicions socio-econòmiques dels habitants, són rellevants per a una molt complexa interpretació semàntica d'aquesta regió. En la nostra investigació tractem d'identificar aquests elements substantius en funció de les característiques socio-econòmiques i físiques dels diferents barris en la regió de Rupel. Aquests elements serviran com dades-clau en les que els diferents actors (Corporació de Desenvolupament Regional, consultors de planificació privats i els habitants representats per diferents grups), confiaran en el procés de planificació.

EL USO DE CONSTRUCTOS DE HABITAT DIFERENCIALES COMO UNA ALTERNATIVA AL PRINCIPIO DE ZONIFICACION APLICADO A UNA REGION ECONOMICAMENTE DEPRIMIDA

Resumen

En este trabajo, comentamos los resultados de un programa de investigación que enfatiza la integración de aspectos cualitativos-sustantivos (significaciones, valores e imágenes mentales) del entorno en una acción orientada en los procesos de planificación física. A través de una aproximación a la composición de elementos (mixed settings), tratamos de hacer emerger constructos de habitat en diferentes niveles de planificación. Este método se presenta como alternativa del proceso de zonificación (zoning) que se ha convertido en un rígido instrumento de asignación y uso del territorio. Este proceso de zoning impone su propio sistema formal y sus fases de diseño. El punto de partida para la descripción de constructos de habitat diferenciados es el reconocimiento de tres niveles de observación:

- aspectos físico-morfológicos y funcionales del entorno;
- actividades individuales y grupales de los habitantes;
- experiencias personales, valor de las significaciones e imágenes mentales que son consideradas significativas por los habitantes.

El carácter diferencial de los constructos se refiere a las distintas formas en que los tres niveles armonizan entre sí. Demasiado frecuentemente estas relaciones aún son impuestas por los diseñadores y políticos sobre los habitantes. Lo que posibilita la transición entre los distintos niveles de observación en el marco de la planificación, es la composición de elementos (mixed settings): la casa, la parcela, el territorio y la órbita.

Desarrollamos este método como una alternativa válida al principio de zonificación que domina la planificación física en Bélgica.

Para operacionalizar este método lo utilizamos para diseñar un plan de estructura para una región muy problemática entre Antwerp y Bruselas -la región Rupel-. Esta región está enfrentada a una fuerte regresión económica, estancamiento socio-cultural y negligencia físico-visual.

En el proceso de desarrollar un plan estructural debemos considerar los problemas de la región como un todo, al igual que el problema a nivel municipal y por debajo de este (es decir, de barrio, de organización de parcelas, de edificios).

Las imágenes mentales opuestas y las apreciaciones visuales basadas en las típicas posiciones socio-económicas de los habitantes, son relevantes para una interpretación semántica muy compleja de esta región. En nuestra investigación tratamos de identificar estos elementos sustantivos en función de las características socio-económicas y físicas de los diferentes barrios en la región de Rupel. Estos elementos sirvan como datos-clave en los que los diferentes actores (Corporación de Desarrollo Regional, consultores de planificación privados y los habitantes representados en los distintos grupos (de presión) confiaran en el proceso de planificación.