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The identity of new settlements

A New Experimental Town: Layenhof near Mainz¹

1. Introduction

Recently the problem of designing new urban development centers seems to be entrusted to experts only for historical and teaching purposes and not for practical and operational ones. Even though at present the attention of European planning agencies is focused on issues of re-use and green areas, a number of events are again raising the need to define proper answers to problems of new urbanization, not only in developing but, also in economically mature countries.

The problems of colonisation, realisation of new government centers or the organisation of large industrial plants are certainly not on a daily agenda, while deconcentration phenomenon in metropolitan areas seem to find solutions outside and sometimes despite planned interventions. However, relevant migratory flows, together with on-going transformations in the very concept of *city* or rather in the life-styles and in the physical transcription of change, are leading to new views on development phenomena and to solutions consistent with the problems.

Unfortunately, as Lord Keynes said, it is much easier to develop a new idea than to get rid of an old one (this applies even more to our discipline – institutionally based on long time spans and historically unequipped to react to fast, unexpected or turbulent changes – almost incapable of paradigmatic solutions). Thus, at first we try to arrange innovative phenomena beside and within familiar ones, considering them as variations and not as numerous symptoms of a general transformation; even more, while we hope to find “strong” and univocal interpretations, actual changes seem to result from many minute and often conflicting behaviours, more than from a large, univocally oriented trend. Therefore, the latest urban plans, for the most part, don’t conform to ongoing changes, and often lead to a refusal of the new, rather than to attempt to understand and guide them: this means that changes are detected, but, since their framework and meaning cannot be identified, they are perceived as hindrances, inconveniences, irregularities to be amended, reducing unexpected and misunderstood events to more familiar models.

This can explain the trends for defining city borders, densification of peripheral fragments bringing them back into geometrical and regular orders, identification of axes and alignments (often existing only in the two dimensions of a technical plan and not in the multidimensional experience of daily perception) or the “out-of-context” reproposal of urban places, mythically related to the historical conception of the city: squares, public parks, commercial streets, gates.

2. Attempts at re-definition

Actual attempts to reconsider the current meaning of the components of the urban phenomenon and of their set of relationships, even when this chance is offered, are infre-

quent. New towns or new parts of towns displaying strategic regional values have recently been designed or built in Asia – starting from Japan, in the USA, Netherlands, Germany and Israel.

The proposals, considering also rejected ones, can be grouped as follows:

1. reproposal of the idyllic life of small towns (in a “green” or “new urbanism” version), communities of according dimensions, expressing the ideology of the fragmentation of the urban phenomenon into discrete parts as a tool to keep the whole under control according to, at least, perceptively acceptable levels.
2. localization of centers based upon a large technostucture, relevant at a regional level, within new strategic areas where these centers’ strong visibility can be best appreciated, related as it is, to the scale of the installation and to the modern style of the buildings.
3. “mimesis” of the new, of those spaces which are developing in recently urbanized areas. Borders, sense of belonging, connections and identities are hardly recognized by those planners who are used to reading traditional cartographic documents; non-Euclidean geometry, where time has a fundamental role in defining the whole, should probably be applied. We still don’t understand the syntax of this language, yet the simple readjustment of words seems to grant the fascination of the already known to the suburbanite.

All these approaches seem to share the same point of view, focused on the existent; it doesn’t matter whether the goal is to redesign inherited cities, to set linguistically dialectic outposts for them or to consolidate the style of the most innovative fragments. What seems to be missing is the proper perspective, as to scale and position, on current phenomena:

1. **with regard to the scale**, because the size of urban problems seems to have gone beyond an important threshold and cannot be detected as part of existing centers, which have long since been emptied of most of their “central”, functions;
2. **with regards to position**, because the problems of new settlements, as well as those of reuse and upgrading, should be confronted from an external and higher point of view, allowing qualitative action – establishing new connections and new roles and underlining their derived regional structures – and not a quantitative action of adding cubic meters to a predetermined plan.

2.1 The poly-centric city region

On the other hand, Europe is facing the crisis of the city-centred interpretative model while new built-up areas display, for the most, a self-referential settlement logic of their own. New city portions don’t seem to belong to **one** city, but develop outside the city, using the whole regional system to overturn its gravitational characteristics. What seems to be emerging is not a new city or a non-city but many kinds of simultaneous city, which no longer have a centre, but **several** centers. On one hand, the constituents of this new organization seem to be without “topos”, basically identical everywhere. On the other, the spatial product is far from homogeneous. In short, the overcoming of traditional hierarchies

doesn't give rise to an amorphous structure, but a complex system where areas characterized by stability and invariance coexist with networks characterized by flow and mobility. All areas tend to increase their specificity, nodes tend to become differentiated among themselves, axes tend to reduce their diversification.

In such a system, compared to the unity of a hierarchical, vertical organization, the multiplicity of horizontal connections is the prime focus: a city of differences, which tends to be "rooted" in places, leaning against persistence, using the code of the settlement tradition not as a constraint but as a support, with and within which new urban landscapes can be built.

This polycentric and differentiated city-region, demands that we operate neither inside nor outside existing centers, but, one might say, above them, without resorting to "big projects", which are perpetually chasing the growing scale of ongoing processes, but using ordering elements, able to "give meaning" to emerging structures, to underline their constituents, evolutionary grammar and compositional syntax. It is a matter of drawing on Geddes' suggestions and using new settlements as catalysts which can consolidate conurbation.

In such a case, a new settlement, would need to be neither a satellite city, nor a new town, but the missing link in a system of central places, capable of leading to a whole complex leap to another scale of manifesting the order lying under a system of interwoven and overlapping hierarchies.

2.2 Operative instruments and the element of time

First of all, implementation seems to require an adjustment in the operative instruments, currently focused on the intermediate level, yet "out of focus" as to the crucial higher and lower scales. Second, relations to a new faculty of thinking in three dimensional terms and operating on density are needed: design tenders more and more often demand the design of a "city of short roads", able to reduce land consumption. In the third place, we should create settlement models able to internalize the projects of green areas, overcoming traditional dialectics of empty-full, city-country, sublimating them into a more complex, coherent design.

Finally the planning of times should become a basic constituent of urban planning. Two phenomenon can be formulated:

1. Traditional urban planning was characterized by the relation between spatial concentration of resources and the temporal compression of processes, while today we are witnessing the acceleration of change, although marked by urban diffusion with a lower density, where exchanges seem to modify their range and level, rather than their intensity. Innovative processes instead, relate to dispersion rather than concentration, and we seem to intervene more and more often to meet deadlines (important events, jubilees, championships, etc.) in order to speed up processes of resource concentration around some spatial nodes.
2. There is a growing difficulty in thinking "long" rather than "big", to forecast the final layout resulting from long term processes: physical planning seems to be univocally determined, to accept a single outcome and to have become unable to combine the control of the whole with the

flexibility of its parts and to organize a form which accepts and internalises many individual variations. Old scholars used to say: order in the whole, disorder in details; an architecture of flexibility, not of masses, usually corresponded to an inability in urban planning of thinking in terms of "open-minded" spaces. Now individual "pieces" often change their function and must assume change as a goal from the beginning.

3. A new settlement – Layenhof near Mainz

It is strange that there is a theoretical awareness of these problems, but tender specifications are often more interesting than submitted design proposals. For example, this is the case of a call for tenders for a new settlement in Layenhof, near Mainz, in an abandoned military area (a NATO (USA) airport, with a wide area of observance in the centre of a metropolitan built-up area). After an exhaustive preliminary phase, the area was chosen for a model intervention, in order to solve specific problems, but also to stimulate solutions which could be reused in numerous areas in strategic locations, recently abandoned by the armed forces.

The request concerned a settlement for 12.000 inhabitants; its construction had to proceed by progressive densification and not by portions, its urban structure and not just its single buildings had to be conceived to favour energy saving and to allow innovative life-styles, particularly with regards to home-work integration and to the role of women and associationism. A high level of flexibility had to be granted to individual lots in order to confront the evolution of technology and needs.

General Data

10.000 – 12.000 inhabitants
 overall area: 246 hectares
 green area: 120.000 m²
 sports and recreational areas: 40.000 m²
 gardens: 60.000 m²

Housing

55 % multi-story housing
 45 % detached, semi-detached and terrace housing
 100 old people's residences

Public facilities

6 kindergartens (12.000 m²)
 23 elementary school classes (8.400 m²)
 1 Secondary school (17.000 m²)
 1 old people's centre (8.000 m²)
 Integrated area for social project (7 hectares)
 2 churches
 cemetery of 5 hectares

Sports Facilities

4 gyms of 27 x 60 m
 2 hectares for open-air sports fields
 3.000 m² or tennis courts
 23.000 m² for baseball pitch

Commercial and Manufacturing activities

4.800 m² for commercial activities (3.600 of which for shops)
 Administrative centre of 10.000 m²
 30 hectares for new types of manufacturing activities, compatible with residential areas.

At the same time, specific solutions had to "re-connect" an area heavily compromised by military uses. Following changes in the local government, the whole tender procedure was cancelled by a decision to revise all previous basic choices, re-using a number of military areas within the urban centre and concentrating the armed forces in the development area at present identified by the tender specifications.

3.1 The proposal

To establish the identity of the new town it is necessary to:

1. Define it in relation to its surroundings and define the criteria of belonging;
2. Establish true roots in local history
3. Establish the individual character of the town, which means a strong and immediately recognisable self-image in which the residents can take pride.

Therefore, borders must be established and the maximum extent of the urban area must be fixed, with a sharp distinction between built-up areas and open spaces. At the same time, a system of relations must be created which establish the new area's place within the heart of the city thus facilitating communication.

• Roads and linkages

The extension within the residential area of already-existing natural roadways, together with links to the old agricultural roads and the use of the runways and other traces of the previous military use of the area would serve to maintain the historical memory of the site.

The traffic project aimed at reducing the use of private cars, paved areas, cross-roads and open-air parking spaces to a minimum. The aim was to maximise space for pedestrians and cyclists and to encourage the use of public transport. This would be achieved by means of a system of concentric circles; the innermost of which is reserved for pedestrians (its outer limit is marked by the O-Bahn). A second ring, sub-divided in four sections, contains the roads for residents. The external ring permits movement from one section to another, and would also handle traffic to and from Layenhof.

• The built-up area and energy consumption

Not all the surfaces would be used in the building programme, some can be returned to agriculture, thus balancing the area used for housing. We also planned to extend the wooded areas to the north and south, to filter out noise and air pollution from the surrounding areas.

What is more, we did not want to limit ourselves to the design of low-energy-consumption housing and "short roads", but use the question of energy as a feature that could be the basis for new urban morphologies and new types of collective living.

Complementarity is the word for a plan which doesn't want to compete with existing similar examples, but anticipates probable needs characterising the near future.

For the same reasons, the chosen planning principle was that of stratification: adding something new to the existing situation rather than destroying a site to build a new one.

Past experiences teach us to avoid policies of waste disposal, quarry filling and demolition of industrial buildings: at the end of these expensive activities we would be faced with a flat and desolate land without quality and without history, where the new plan would grow rootless, parachuted in from outside. On the contrary, by using the traces from the past as the material to build the future with, we are able to discover new potential and to give start to innovative and unconventional plans.

This last point seems particularly relevant: until the present, the realisation of new settlements has been addressed to "standard" households. However, the present and future society require the coexistence of different life styles, even among people with identical incomes, yet coming from different cultural backgrounds and pursuing different goals.

The choice is to offer from the start, a stimulating mix, giving a typological answer which is consistent with social fragmentation, through a large number of differentiated architectonic options, all focused on shared and communal spaces.

Flexibility is pursued through hard borders on the outer edge, so as to underline the formal identity from the early stages, but also through plenty of open spaces in the inside, where "soft" centers could develop later, responding to future needs.

The same process is valid for the entire scheme: the first parts to be built will be the noise-abating barriers and the external ring, making them recognizable from far away and self-advertising. The settlement's overall form, egg-shaped so as to adhere, at its best, to the lot's borders, slopes down with terraces along the E-W axis, in order to allow the penetration of prevailing winds and offering a view of the valley.

• Housing – sites and types

The housing tends to be integrated with the other functions located at the borders of the districts, whilst privacy increases as one moves towards the centre. The idea is to guarantee a social and functional mix throughout the city. The multi-storey buildings look on to the cross formed by public facilities, but there are a number of options available – depending upon accessibility of public transport, on whether the area is classified as a "blue zone" and in the vicinity of public transport routes (a mixed diesel-electric system is envisaged, like the O-Bahn designed by Mercedes), wooded areas, sports fields or public gardens.

The other great variable is that of type, given that within areas of the same size, plots of different shape can be combined according to the type of housing they contain (group housing around internal courtyard, terrace housing, detached or semi-detached, "stadtvillen", "Anlieger" or home/workshops). For each area a density ceiling is fixed, which gets lower as one moves from the roads containing a particular plot inwards towards the centre of the plot. Parking for visitors would also be fixed, again varying according to the type of road and the side from which the particular plot is accessed.

There are a few simple rules for the individual buildings: at least one wall must be shared with another apartment, and the roofs must be aligned towards the South – or if the roofing is flat it must make use of greenery. Further el-

ements in the differentiation between areas comes from the way public bodies or private individuals choose to use such greenery, and the availability of collective and individual garages.

The arrangement of the roads is clearly marked by lines of trees. Bends in roads through residential areas will be marked by the presence of buildings. The design seems able to guarantee overall control over the urban form – even before the plots are totally built up – and a great deal of flexibility in the use of the individual lots. Mixes of type and function are an essential condition for the variety of the areas; no road in this settlement will run unvaried from one end to the other.

The planting of roads and plots will be the first operation to carry out – so that those building on their own plots will do so in relation to already existing green areas, and will not have to wait for years for shrubbery and trees to grow.

This is especially important because we have adopted an approach that means developing the settlement not piecemeal but as a single whole, by progressive densification. Initially there will be a few houses amongst low greenery, and eventually a lot of houses amongst tall trees.

• **The energy park and fair**

The energy park in the central space will be aligned E-W, so as to have a channel for the prevailing winds. It is intended as a catalyst for the social activities within the new town; but given its unusual size and the clear visibility and functionality, it is aimed at a wider area as well. It is hoped that it will be a permanent fair, with a continual display of new experimentation to develop technologies based on recyclable energy.

The companies exhibiting in the fair will continually up-date the material on show and thus offer visitors an overview of the patents and solutions presently available, providing information on energy production and energy saving.

This new centre should avoid the risk of being just another settlement in the metropolitan suburbs, and make a real contribution to an important jump in scale for the entire Rhein-Main conurbation – a jump made possible by precisely-targeted projects that also make the most of external economies of scale.

4. Concluding remarks

The new city is in part inspired by Urtypus (the Middle-eastern Ideogram for the city) which takes form through the dialectic between the actual history of the area covered by the planning project and the future tasks outlined by the tender specifications.

This new type of Gardencity aims to integrate housing, manufacturing activities (situated on the outer boundaries of the settlement) and public services (located on a N-S axis) together with the service industries and the system of borders of the central space (the wedge formed by the runway and other roads of the old military base). Thus there will be four distinct districts, with their respective social services at the centre – and no point will be more than 400 metres from public transport.

For it to be attractive, the functional mix must be complete: the offer of jobs and housing by itself is not enough: modern urban planning has always seen “leisure” as an additional, not constitutive element. Therefore the plan includes and underlines what the neighbouring areas are lacking: first of all, plenty of fresh water, green areas and differences in level, followed by richness of private open spaces and meeting places and finally a variety of leisure, sports and cultural facilities.

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Notes:

¹ The international urban design competition project was carried out by Marco Venturi, Clemens Kusch, Roberto Berti, Oscar Brito, Pierluigi Chinellato, Barbara Hertle, Lara Rettondini

Pictures

Figure 1: A view of the central axis and built-up structure

Figure 2: Constitutive parts of the town

Figure 3: Housing types

Figure 4: Elements of the central energy park – fair

Figure 5: The traffic system

Figure 6: First greening and then building

Metka SITAR

The New Planning Culture – An initiative for environmental protection

Although the second millennium is coming to a close, the answers to questions concerning survival of mankind and establishing healthy and pleasant environments, are still evasive. It is encouraging to note that today man is determined to preserve the natural balance for life by being strongly personally committed. Moreover, he is even prepared to change his earlier way of life and adapt it, in conformity with limited natural resources, to the development capabilities of our planet.

These questions, which are essentially questions about personal responsibility for the environment, concern us both as individuals, as well as members of the wider society. They should be the basis of all deliberations about urban planning, which in its contents and by the role it plays in society, protects and preserves the quality of the environment. Its decisions fundamentally influence environmental development in the desired direction.

1. Is the planning profession still capable of preserving its traditional mission in the present conditions of globalisation?

Changes in society which directly or indirectly affect the environment are becoming more complex. It seems that the present phase of economic and social development in nu-