

# Public Cyberspace Planning and Design

## *Architect's role in the construction of the virtual city*

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*Architects need to consider ICT not as a tool for design but as a space to be designed. The relation between this space and the physical city must be driven from an impact to a positive and needed expansion of the urban space; an occasion to support and foster social integration and development. To achieve this, it is needed to put an effort in evolving both planning and design techniques as well as public policies for this mixed (physical/digital) urban space. The references for doing it may be found more in the history of technology developments than in the technology itself, but a wide contribution from diverse disciplines is needed. How to do this, it's mostly to be found out through projects, in which architects can play the fundamental role of planners that coordinate the activities of actors involved, while taking care of the public interest. Many cities are progressively losing the space devoted to foster solid social structures, so a relevant focus for projects may be aimed at the design of public cyberspace to recover the building of local social networks. A starting point could be found in the Community Networking movement, which architects could build upon, using their design skills in order to evolve this kind of spaces beyond the spontaneous and random phase. A wide range of issues are to be addressed: from needed public policies to accessibility that must be provided to anybody in order to avoid sharpening social alienation due to cultural, economical or physical reasons. An experiment is going to be carried out within a local development project promoted in Rome.*

**Keywords:** *Cyberspace design; urban planning; e-society; community networking; self-sustainable local development.*

### **Not tool but (urban) space**

ICT (Information and Communication Technologies) relate to architects not merely as a tool for their traditional activity but as a completely new space that needs architects for its planning, designing and building.

The concept of space is a cognitive characteristic of our brain (Levi Montalcini 1999) and is not necessarily related to three dimensional technologies as Virtual Reality; what matters here is the information flow and the form of communication between inhabitants of this space.

It is a complex hybrid space that we dwell at the same time as the physical one, which is also expressed by names chosen for those artificial environments (for instance when we enter a IRC room, we go back to home page, and so on).

Besides, by observing the activities carried out in this space, ranging from socializing to learning as well as from leisure to working, we can argue that it can be defined as an urban space (Morris 1989; Strojan 1999).

Technological innovation has usually been studied by planners, considering its impact on cities, in terms of globalization, de-localization and so on. This approach is aimed to forecast the future of cities, meant as driven by economical streams (Sassen 1991); unfortunately often it doesn't consider the possibility of an active, positive intervention in terms of projects and policies. Urban sociologists stress that urban dynamics tend towards a new social polarization (Peruli 1992); yet forty years ago, Mumford showed the risks of a technological innovation that is introduced without the effort of a proper social aiming to improve the quality of human association. The risk is to passively observe the phenomenology of a transformation toward instability; this could widen the digital divide that pushes on the borderline disadvantaged people or even tend to marginalise everyone who doesn't fit the global request of the moment, which is very inconstant indeed.

A change of paradigm is necessary to actively take the decision of building those spaces, expanding the physical ones, to offer new possibilities to the growing amount of people that tend to be marginalised from the society.

### **Architects' role**

Transarchitects get design ideas about new architectural forms from cyberspace, but who does the opposite?

Architects need to take responsibility about the planning and design of this kind of spaces as well as architecture schools have to do, about forming the next generation of practitioners who will face this

new responsibility (Bendikt '91 Bridges '97). The culture and the professional skills of architects are needed even though the evolution will be difficult to predict; often in the history of architecture, new technologies emerge through the mimesis of familiar concept and thereafter develop mature, peculiar characteristics.

The dynamism of this field makes difficult to develop a theoretical framework so, even though there is a rich harvest of methodological and scientific references that can support this evolution, the main contribution will come from applications and design experiences, seeking a wide range of inter-disciplinary contributions (as architects are used to do).

However a great effort is needed to foster the social role of the architect; role that, among others, has historically been about planning suitable spaces for social interaction, to improve people's quality of life.

Obviously architects should be involved in the design of the virtual space as well, using their traditional skills to interpret the meaning of the place and adding value to it through a communicative and functional design.

### **Which technology?**

This space has opened up with the rising of new ICTs but it is not possible to develop complete projects focusing only on technologies themselves (it would be same as trying to design a single building suitable for any use, to be at the same time a school, a hotel, a museum, etc.). As in any architectural design, it is the social content that will shape the project. It is even more relevant in this case in which the specific culture and the design experience we need to rely on, don't exist yet and have to be built.

The ICT research keeps on working on more advanced technologies, but in projecting we must look at the technology to use critically; we have to evaluate its characteristics with the measure of the aims of our design and its context. In fact, the use of the most advanced technology could lead to dramatic consequences if not properly implemented in the

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project (as it will be described in the “issues” paragraph). So far it is enough to take as an example a twenty-five years old technology, textual shared realms, that can actually be more suitable to represent a space and communicate the peculiar values about it, than more recent and very demanding ones, as Virtual Reality. In fact, there are many cases in which the most important information is not the geometry of places but emotional attributes and conceptual values about them. Those attributes and value could easily be lost in the formal abstraction of a 3D model: a textual description is likely to be more effective, involving and evocative. Moreover, this technology not only that avoids to marginalise people who can't afford expensive devices, but it even makes use of obsolete hardware.

### **How to achieve it: through *hybrid space* projects**

The knowledge needed to develop design and planning techniques for the hybrid urban space, will grow up through active experiences. Architects are meant to interpret the public interest of different groups of citizens as well as the interest of enterprises, associations, public administration, etc. in innovative projects.

Those projects should consider the whole expanded urban space, from the cyberspace itself to the interface with the city (digital gateways, etc.), including the range of not well-defined inter-permeating spaces and eventually the physical urban space itself.

Digital gateways, as telecottages, digital cafés public libraries and so on, are seen as a critical factor to consider for their central position in this realm; their characters are to be planned carefully as they are likely to steer the whole project.

### **Public (cyber)space**

The design of a real virtual public space can be a promising resource for urban societies in this historical moment in which cities are rapidly loosing their traditional third places (Oldenburg, 1989), and the lack

of sense of belonging to the place and community is blamed for an increasingly wide range of urban failures.

This kind of spaces are required to develop a robust social structure, able to sustain the urban life and environment on the long term. Triggering discussions between citizens, is a way to build up an interlocutor for the other actors, that is aware of its needs and resources. The lack of this awareness leads to the decay of the social fabric and, on longer term, of quality of the urban environment itself.

Now ICTs offers the possibility to create new public space or to extend physical ones. This is not only a possibility but a people's need as well; for example, even before the diffusion of the Internet, local BBS had an effect in developing local communities that surprised even the project promoters themselves (Shouler, 1995).

The public character of this space is not granted by the technology used; it implies a number of issues that must be addressed by the design, and by the public policies to support it.

### **Communities and communication**

Community is a relevant but complex issue in many disciplines; however from many diverse points of view the concept seems to converge to the essence of community as a network of interactive communication (Webber 1964).

The network paradigm in modern societies is considered to be promising in overcoming the failures of hierarchic organizations. The same idea was the base of ICT spaces and it characterizes them. They started as Community Networks in the '70s, characterized by horizontal bi-directional communication and strong local ties. Thereafter they evolved as Civic Networks and Digital Cities, often losing the original characteristics and shifting to a vertical one-way communication from local administration towards citizens (e-government). A strain on local ties also came from the globalization of the Internet but the same network paradigm can be a chance to find a new balance in the local/global

relationship. This one, as many other new problems and issues, requires a big effort from researchers and practitioners to find out innovative solutions.

On the other hand benefits can be very promising starting from fostering, or even founding, the local community, continuing with improving the life quality of citizens (socialization, culture, economy, etc.) and finishing with the improvement of the physical neighbourhood itself.

## Public policies

As in a physical city, there is a strong need for planning and public policies in public cyberspace (Avis 1995). In fact those spaces, that we inhabit through the window of our computer screen, grew up as public spaces, by the effort of passionate communities and by mean of public funding (Rheingold 1993, Schuler 1995).

Now, the lack of planning activities and the lack of public policies leave those spaces free to be colonized by commercial companies, exactly what would happen in a physical city to any public park or square lacking proper protection of its public functions. European Union, in its recent documents, considering to leave the responsibility for this sector to private enterprises by offering them a large deregulation, tends to passively replicate USA's policies that are largely driven by the interest of big economical lobbies. This can lead into the trap of technological determinism (Bell 1962, Giner 1976). Moreover it doesn't take into account how a strong policy, aimed to foster public interests, could be potentially invaluable for European society, on the long term.

The newborn local expanded public space can't be left in "free competition" with large global corporations, at least because it has to take care of the most disadvantaged ones who are not commercially interesting.

## Issues: accessibility

The public character of the cyberspace designed, unlike apparently similar commercial initiatives, implies a number of issues to be considered, like

accessibility by everybody, with the special care for minorities and people with difficulties.

For those reasons the technology to be used must be carefully evaluated, and more advanced or sophisticated ones will not necessarily be the best for the project.

In fact, to avoid the risk of sharpening the *digital divide*, the project, being it *public space* (differently from commercial initiatives), must be able to involve:

- people with physical characteristics that could make difficult for them to use digital appliances or interfaces. For example the wrong use of animation technologies prevents visually impaired from using screen readers;
- people that cannot economically afford some of the expenses taken for granted by the project. In some cases, even if an alternative was provided, most of them could eventually end up being cut-off the project. A technology that relies on proprietary platforms or very demanding in terms of system resources would be a limitation as well;
- people whose cultural background puts them in an uncomfortable relationship with ICTs thus preventing them from fully *inhabiting* the space designed. For example for some people it could be important to provide *guides*, not necessarily to train them on the use of the technical device itself, but to make them know what is behind it and what they could expect and how to relate to it.

## An experimental project

An experimental project of this kind is going to be developed for two years period in the Ostiense neighbourhood in Rome.

The project should start contacting and involving locally active and potentially interested actors (i.e. local associations, community groups, public administration offices, enterprises, etc.) to gather resources and contributions (mainly informative) aimed to realize a self-sustainable project.

But, as any other urban project, the planning of public cyberspace can't ignore social and economical

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aspects as well as physical ones. Hence the first phase must be the analysis of local characteristics, for identifying unsatisfied needs and unexpressed potentials in order to plan effectively cyberspaces that could serve those needs, even the implicit ones.

At the implementation stage, initiatives in physical space and properly designed virtual spaces should be realized to build up the knowledge of, and then foster the connection between, resources and needs, providing proper information, aimed at the creation of local networks between citizens, organizations and other locally active actors that are expected to improve the quality of the cultural, social, economical and physical environment.

## References

- Avis, A. 1995, Public Spaces on the Information Highway: The Role of Community Networks Mr th., Calgary.
- Benedikt, M., 1991, Cyberspace – First Steps.
- Bridges, H.A., Charitos, D., 1997, On architectural design in virtual environments, Design Studies 18.
- Levi Montalcini, R., 1999, La galassia mente.
- Mirabelli, P., Fortuzzi, A., Petric, J. and Maver, Th., 1994, Archive of European Architecture in The Virtual Studio, eCAADe Proceedings.
- Morris J. H. 1989 Our Global City in Communications of the ACM vol 32 n.6, june 1989.
- Mumford L., 1961 The city in history, Harcourt
- Oldenburg, R.: 1989, The Great Good Place: Cafés, coffee shops, community centers, beauty parlors, general stores, bars, hangouts and how they got you through the day, Paragon House, New York.
- Peruli, P., 1992 Atlante urbano, Il Mulino.
- Rheingold, H., 2000, The Virtual Community, MIT Press.
- Sassen, S., 1991, The Global City. Princeton University Press. Princeton
- Schuler D.: 1995, The Rise of the New Community Networks Internet World.
- Strojan, T.: 1999, CyberUniversity in Architectural Computing, eCAADe 1999 Conference Proceedings.
- Webber, Melvin, 1964, in Urban Place and Nonplace Urban Realm.