Chapter 41

Cyberspace and the City: The ''Virtual City'' in Europe

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Introduction: What is a ''Virtual'' City?

The Internet is a global grid of computer networks. It encompasses a burgeoning universe of transaction, exchange, representation, and communication. "Virtual communities" allow all sorts of groups to maintain interaction across distance. Electronic commerce supports online trading of a fast-growing range of goods and services. And complex combinations of images, sounds, and text, interconnected into the global hypertext labyrinth of the World Wide Web, provides, in a sense, a "parallel universe" (Benedikt 1991). The Internet is intimately interconnected with the social world while always being "one click away."

From *Wired* magazine to *The Economist*, we are constantly assailed these days by excited articles alleging that we are in the midst of some liberating "Digital Revolution" in which distance dies as a constraint on human life. With the rapid growth of "cyberspace," many such commentators have alleged that the online realm will grow to simply replace or transcend the material and social realms of the tangible urban world. All the rudiments of this world – the body, the book, physical transportation, place, and the city – have been alleged to be under threat from the pure, clean, dematerialized world of Internet-based existence (Negroponte 1995). As time and space barriers compress or collapse, human life, it is alleged, becomes less reliant on place in general, and urban place in particular. This global rush on-line, such commentators argue, heralds nothing less than global time-space omnipotence for the cyberspace *flâneurs* (Mitchell 1996). For the "terminal citizens" (Virilio 1993) of the planetary cyberspace realm, the "global village," rather than the city, is now the only meaningful community. Traditional notions of city life – the importance of propinquity, face-to-face interaction, street life, shopping and consumption, urban "community," neighborhoods, the particularities of urban culture and identities, etc. – are rendered extremely problematic, even anachronistic.

Clearly, electronic networks *can* substitute for some physical travel and face-to-face encounter, as phone banking and online shopping demonstrate. But it does not follow that cities will somehow "vanish" with the growth of the online realm. Rather, there is a complex *articulation* between cities, urban life, and the Internet

(Graham and Marvin 1996; Graham 1998). Metropolitan regions, in fact, dominate the physical infrastructure of host computers and telecoms links that make up the Internet; in the United States, moreover, this dominance may actually be growing (Moss and Townshend 1997). In fact, the global rush to urbanization and rising, although highly uneven, physical mobility is happening *at the same time* as the pervasive, although once again highly uneven, growth of electronic communications.

The extended, polycentric urban regions that are resulting from current urbanization trends are, essentially, giant *engines* of electronic communication of all types. Physical movement, face-to-face interactions, and urban life are, in fact, closely reliant on widening infrastructures of phones, mobile phones, electronic monitoring devices, Internet networks, TV and radio networks, electronic transaction and surveillance systems, and the like. New urbanization trends, based around electronic interaction, reflect this: "back-office" zones, multimedia districts, technopoles, "intelligent" buildings, "smart" communities, etc. (Graham and Marvin 1998). And, as well as global connections, the growth of the Internet is also powerfully fueled by local interconnections and transactions at the level at or below that of metropolitan regions, by representations of urban places, and by electronic communications that articulate closely with the dynamics of cities and urban regions. As with newsprint, the film theater, radio, and television before it, then, the Internet is, in essence, a medium of urban modernity which is closely bound up with the restructuring of old urban forms and the production of new ones.

But how, in detail, are cities articulating with IT-based exchanges and "cyberspace"? One particularly interesting phenomenon developing here is the so-called "virtual city." Through this phenomenon most European cities are, in effect, busily starting to construct electronic analogies of themselves, based on the Internet. A virtual city, such as the Amsterdam example in Figure 41.1, is an Internet site designed by urban agencies or Internet providers to directly represent, and articulate with, the dynamics of a specific "real" city. Virtual cities can be seen as a reaction to the fragmentary relationship betwen the Internet and particular cities caused by the fact that it is often as easy to interact with a computer on the other side of the world as with one in the next room. In the UK, for example, the US dominance of the Internet means that it is often easier to find weather information in Phoenix, Arizona, than in one's home city.

Virtual cities, then, are attempts to "ground" the globally interconnected online realm in real urban areas. In essence, they try to make the relationships between real places and online realms more clearly legible and comprehensible (in ways that are analogous to the efforts of urban designers to make urban spaces more legible and imageable in the minds of urban citizens). Thus, what we call "grounded" virtual cities attempt to provide a single, integrated Internet site through which some or all of the Internet services located in a particular city can be accessed. Again, *De Digitale Stad* (Figure 41.1) is the best-known example of a grounded virtual city which explicitly uses the "city" as a design metaphor for organizing services, chat rooms, debates, and information on the web site. In this case, the "map" of the virtual city is made up of themed city "squares," each of which contains all information and services related to its themes (politics, gay issues, transport, technology, sport, etc.). Thus, an explicit connection is made between the "virtual" with the

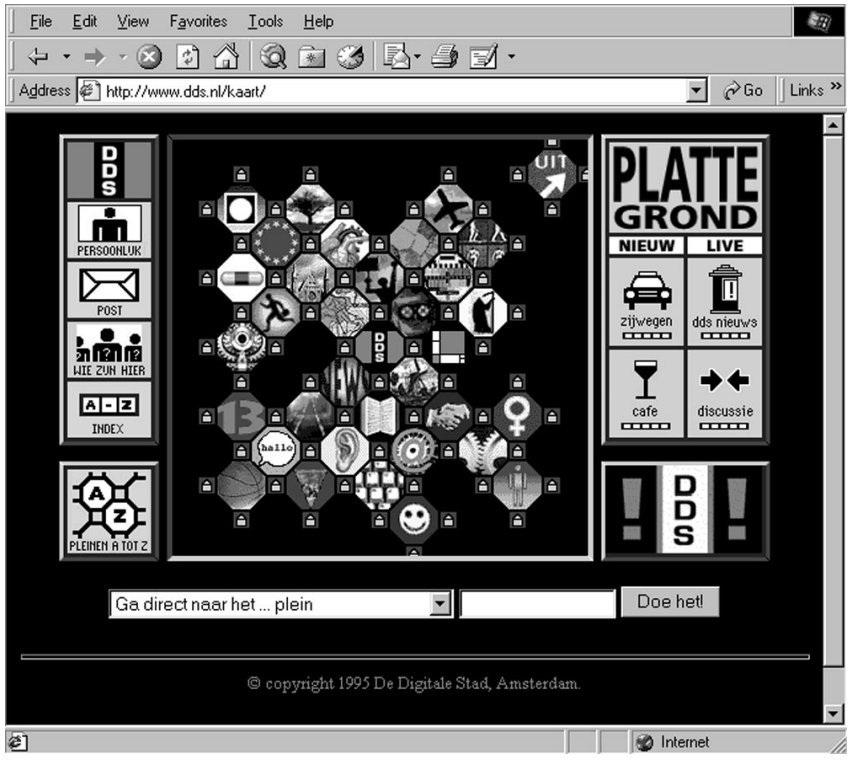

Figure 41.1 The Internet interface for *De Digitale Stadt*, Amsterdam, one of the best-known examples of a "grounded" virtual city which uses the urban metaphor of "town squares" to organize its services (at http://www.dds.nl/)

Figure 41.2 Cybertown, a "non-grounded" virtual city (at http://www.cybertown.com)

"real" city in the mind of the user (DDS even has 50,000 signed up electronic "residents" and its own electronic "city mayor").

In an interesting twist, however, virtual cities can also be "nongrounded," as the example from Figure 41.2 shows. So woven is the notion of the city into the mindset of the modern condition that the city can simply use some idealized urban metaphor as a legible interface for Internet services which are, in fact, scattered across host computers distributed right across the planet.

Forces Driving the Construction of ''Grounded'' Virtual Cities

Most often, "grounded" virtual cities signify the ambitions of innovative municipalities, keen to be seen to be "switched in" to the blossoming worlds of high-tech modernity centered on the Internet. They embody many ambitions, dreams, orientations, and configurations. In a sense, this is not surprising, as many key questions in contemporary urbanism can, in essence, be boiled down to questions of communication, information, and transaction. Thus, attempts to construct virtual cities necessarily have to engage with many of the key issues of social divisions, citizenship, civic culture, and urban policy and planning explored elsewhere in this book. And because of the globally interconnected nature of the Internet, they also tend to combine inward-looking and outward-looking functions.

On the one hand, as electronic versions of the classic discourse of place promotion, virtual cities can attempt to position cities within globalizing circuits of investment, tourism, conferences, and urban sports and cultural events. On the other, virtual cities can attempt to build up connections within cities. Many orientations are arising here. First, there are attempts to use virtual cities to stimulate local economic development, through the provision of incentives to high-tech innovation and "friction free" arenas within which linkages can be created between local firms, service providers, and consumers. Second, virtual cities can be "electronic democracy" initiatives, aiming both to widen social access to the Internet and improve relations between citizens, elected representatives, and public and private service providers. Third, they can be attempts to engineer a new "electronic public realm" for cities, supporting the development of online debates, discourses, and "communities" which feed back positively on the social dynamics of the "host" metropolis. And, finally, they can be purveyors of new practices of urban management, supporting the electronic delivery of public services and "intelligent" ways of managing urban services such as education, transport, waste, social services, and planning.

Some virtual cities attempt to address two or more of these interconnected areas. But there are clearly tensions here, as each orientation will suggest different practices of design, development, and management for the virtual city, different topologies of connection, and different criteria for evaluating success.

Surveying Virtual Urbanism

Such general aspects of virtual city innovation are now well documented (see, for example, Graham and Aurigi 1997). What is less clear, however, is the bigger picture. How, for example, are virtual cities, as electronic reflections of cities and systems of cites, developing across regions, nations, and continents? How can we

understand the different types of virtual city that are emerging? And which actors and agencies are most active in shaping them?

In what remains of this brief chapter, we address these questions, looking in particular at the picture in Europe. We do this through the construction of a typology of virtual cities and an analysis of what types of virtual cities are developing where across Western Europe. This is based on an extensive web-based survey of the virtual cities directly related to major European cities of at least 200,000 inhabitants, completed during 1997 (a sample of 213 initiatives within 14 countries of the EU). Through it, we aimed to evaluate the scope and potential of virtual cities across Europe for achieving all the many objectives ascribed to them. Three essential principles, in particular, were the basis for this evaluation.

Informativeness

First, and most obviously, the richness of up-to-date information and the provision of useful services for citizens are fundamental features of virtual cities. The ability to overcome the barriers of space and time through the implementation of virtual city initiatives is seen as one of the crucial factors that can enhance the efficiency of the urban environment. In theory, highly effective services can also play an important role in the economic regeneration of a city, as well contributing to improving the relations between citizens and local administrations, both quantitatively and qualitatively.

Participation and social access

The need for urban IT initiatives to guarantee wider social participation and access in new technologies is a key issue from the current standpoint where elite social groups dominate access to computers and advanced telecommunications. Urban social polarization threatens to be deeply marked in access to new technologies. All studies about the demography of the Internet indicate that user groups are highly unrepresentative of the whole population. Usage of the Internet is still strongly polarized towards wealthy, relatively young, highly educated people. Moreover, many of the active users, by connecting from the workplace or the university, do not pay the bill for their "surfing." The idea of a wholesale diffusion of computers throughout our society is still more myth than reality; sales of personal computers tend to be targeted at customers who already own a PC and want to upgrade, rather than at beginners (Bannister 1995).

Social inclusiveness of urban citizens in virtual city initiatives is therefore our second key evaluation principle. It is also a point highlighted in the Interim Report of the High Level Experts Group of the European Union, titled "Building the European Information Society for Us All" (European Commission 1996). The authors recommend that particular care should be taken in including in the Information Society those groups that tend more often to be most marginalized, such as "the elderly, early and 'active' retired people, the unemployed and women" (p. 35).

Moreover, it must also be stressed that simply granting access to the Internet per se is not some ultimate answer to the problems of social inclusion, as is often implied. Some authors have noted that giving people the ability to retrieve information – however important this ability can be – is not enough to ensure real participation in the development of the "Information Society". Hoogvelt and Freeman (1996: 3), for

example, note that "communities online grow from *communication* rather than information retrieval" (original emphasis). Being able to "read" information on your monitor does not equate with being visible and empowered in the vast electronic environment. Virtual cities therefore need to stress interactive communication (through e-mail etc.) rather than just passive information consumption (of web pages). Citizens, voluntary groups, and organizations therefore need to take an active part in the life of the virtual city, in the same way they should be able to do in the "real" city. This can be promoted through several forms of interactive communication, such as letting people publish their own information and contributions (one-to-many communication), or organizing virtual spaces for public discussion (many-to-many communication).

''Groundedness'': the relationship with the host city

Our final principle is the degree to which virtual cities can demonstrate positive relationships with the city that host them, rather than merely operating as another Internet site geared towards global users. One of the main ideas stemming from the entire virtual cities movement is the claim that binding public cyberspace initiatives to precise places and communities is a great opportunity for social and economic regeneration, as well as for equality. This concept has been used to reaffirm the appropriateness of local IT developments as an alternative to utopian conceptions of cyberspace taking over reality as a nonplace inhabited by communities of interest that deny proximity, the meaning of urban places, and which imply that all human needs can now be met through a limitless, global electronic web which transcends the meaning of place. Dave Carter, a policymaker in Manchester and one of the initial promoters of virtual cities, argues that the ideas supporting a civic, localized cyberspace constitute "a critique of what might be termed the 'Utopian school' of future 'cyber-lifestyles' which sees cities becoming depopulated, 'instant electronic democracy' replacing the need for governmental structures and services and a dominant 'ruralist' lifestyle emerging" (Carter 1997: 139).

The concept of a "local" cyberspace, and that of a virtual city, thus stands as a vision of a collaborative and regenerative relationship between new technologies and the city. It asserts that positive articulations are possible betwen IT and the economic, social, and cultural fabric of cities which both benefit cities and make IT-based interactions more meaningful. To achieve this, of course, it is necessary to be as "grounded" as possible by primarily gearing toward local users. As Nina Wakeford suggests, "the advantage of community networks is in comparison to other forms of virtual community, which have only intermittent or an absence of shared geographic space" (Wakeford 1996).

Thus we need to assess how grounded Europe's virtual cities are. The presence of debate areas and forums, for example, can be a sign of an orientation towards inclusiveness and participation. But these forums must be dedicated to local problems or topics for virtual cities to be truly "grounded" experiments. Another example could be the choice of language to be used in the web pages. Multilanguage sites can be good for the inclusion of immigrant groups and for our increasingly multiethnic cities. But sometimes the opposite may happen, as local languages are neglected in an effort to attract the attention of global English-speaking business elites or tourists. A Spanish or Greek site that presents all of its information

exclusively in English, without using the local language, inevitably establishes an extremely weak relationship with the local communities it is supposed to refer to.

The imperative of economically regenerating Western European cities adds another rationale for being as locally oriented as possible. Although the potential of the Internet as a mean of accessing global markets and arenas is an important aspect of the advent of the Information Society, a survey carried out in the US demonstrates that a great potential is embedded in the local markets. This probably stems from the people's natural need for a sense of place and proximity, even when they are purchasing goods or services. In fact, 80 percent of the purchases in the US are still carried out within a radius of 20 miles from home, primarily within the orbit of the metropolitan region (McElvogue 1997). Awareness of this trend is causing, if not a U-turn in the global orientation of electronic commerce services, at least a growing awareness of the potential of commercial Internet initiatives geared to local audiences. It is a fact that several well-known Internet directories, gateways, and search engines such as Yahoo, Lycos, or Infoseek – traditionally the symbols of the "global" Internet where information was available from any part of the world – have recently started providing local, national, or even "metropolitan" sets of information.

Virtual Cities: Mapping Ideal Types

Combining our discussion of these three dimensions of virtual city policy, it is possible to define a typology of "ideal types" of virtual city which we will use to inform our survey. This is shown in Figure 41.3.

● = Yes ○ = No	Informative	Participative	Grounded
"Brochure"	○	○	
"INFORMATION DESK"			
Tourists'/Investors' Kiosk	●	○	○
Civic Database	●	○	●
"ELECTRONIC PLACE"			
Cyber Mall	○	●	○
Cybersquare	○	●	●
"HOLISTIC–URBAN ANALOGY"			
Global Cybercity	●	●	○
Holistic Virtual City	●	●	●

Figure 41.3 "Ideal types" of virtual city

To define the six ideal types we have tried to relate our three principles to the content and orientation of the different types of virtual cities. For example, a "global cybercity" is a virtual city that is basically geared to a global audience. Such a site, while effectively exploiting the urban metaphor and providing a certain degree of complexity in information and communication, retains a very weak bond with the place it is supposed to belong to. On the other hand, a "holistic virtual city" tends to exploit the urban analogy primarily for a broad range of interrelated applications geared towards local purposes.

Virtual Cities in Europe

So what did our survey of 213 virtual cities, located within 167 European cities, reveal about the scope and orientation of digital urbanism in Europe? Three issues, in particular, are worthy of brief discussion here: the overall balance in Europe between different types of virtual cities, differences between the virtual cities, in different nations, and links between driving institutions and virtual city orientation.

The distribution of virtual city types in Europe

First, at the European level, it is clear that the percentage of the observed sites that can be included in the "holistic virtual cities" category is relatively small at around 10 percent (see Figure 41.4). This demonstrates that, despite all the hype, the use of the Internet for "civic" purposes is still quite limited and is used primarily as an electronic "brochure" or "data base" – a means for the one-way distribution of information to "consumers" of cities (citizens, businesses, tourists). Cities' use of the Internet is still overwhelmingly dominated by exploration of its potential as a cheap and innovative tool for information and, above all, promotion and place marketing. While this reflects the growing importance of city marketing to urban

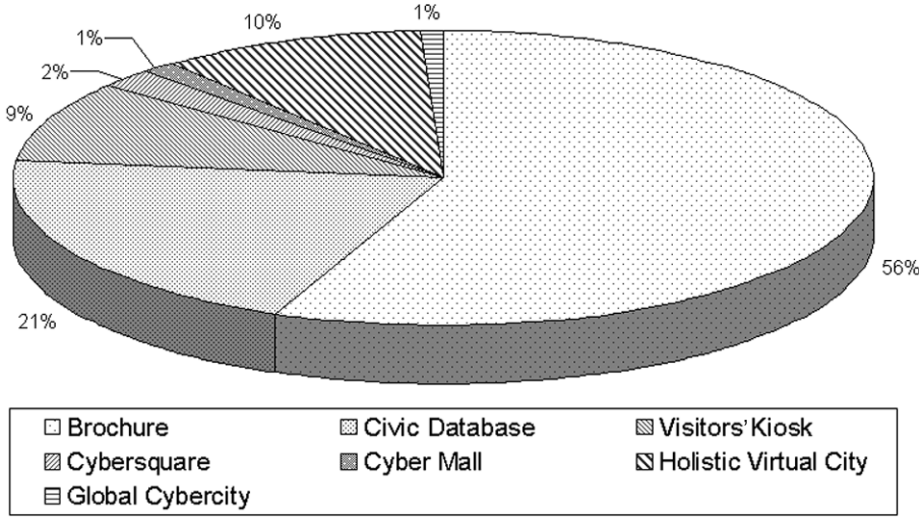

Figure 41.4 City-related Internet sites in the EU, 1997

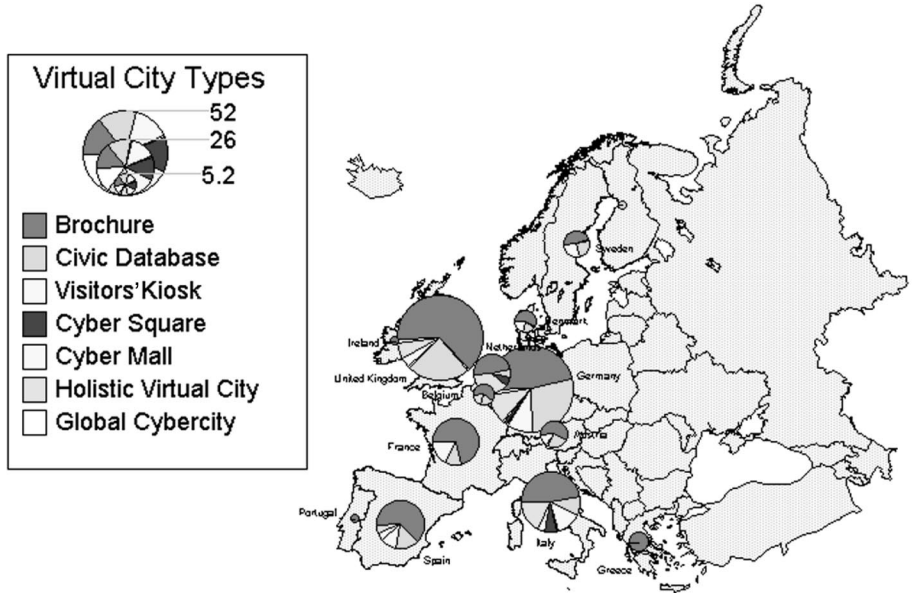

Figure 41.5 Distribution of virtual city types in the EU by nation, 1997

policy, the danger is that, in using the Internet to sell itself as convivial, clean, safe, well connected, and endowed with a high quality of life, every city offers a bland, similar, even standardized message.

Thus, paradoxically, virtual cities often become indistinguishable from each other, sanitized idealizations of postmodern consumption spaces which neglect or ignore real specificities of urban culture, politics, esthetics, or place. The point here is the way in which the dominance of virtual cities by urban marketing may effectively be contradictory. If, as many now argue, "cities are competing, and their edge is livability" (quoted in Boyer 1993: 125), virtual cities configured entirely to the serial repetition of "postmodern" urban icons for outside consumers prioritize the former but ignore the latter. From the point of view of technological innovation, a better urban "liveability" might be achieved through the provision of an effective public cyberspace that includes useful services and a democratic and participatory environment designed to address the needs of city populations and institutions.

National variations in virtual city orientation

Second, as we can see from Figure 41.5, there are clearly some notable differences in the development and orientation of virtual cities across the EU. These differences belie easy assumptions that a sharp divide exists in technological advancement between southern European and northern European countries. Italy, for example, has relatively advanced and sophisticated virtual cities, with a higher than average number of interactive and "holistic" virtual cities. The most well-known of these is the "Iperbole" initiative from Bologna city council (see Figure 41.6). Here, the relatively centralized power of Italian local authorities in determining local development policies is a key factor.

Figure 41.6 The *Iperbole* virtual city, Bologna, an example of an Italian "holistic" virtual city (at http://www.nettuno.it/bologna/MappaWelcome.html)

In France, meanwhile, virtual cities remain poorly developed. High-profile virtual city initiatives of the "holistic" kind are practically absent, in a nation that has recently been extremely sensitive towards the potential of new telecommunication technologies. The reason for this is the barrier presented by earlier IT technologies such as the Minitel systems, which have been widely adopted throughout France. The widespread use of city Minitelbased systems has prevented French municipalities from developing Internet-based initiatives.

The urban governance of virtual cities

Finally, it is interesting to analyze the links between the types of virtual cities under development and the institutions and sectors which instigate them. Not unsurprisingly, it seems that virtual cities present an interesting reflection on broader differences in practices and structures of urban governance as a whole across Europe (see Figure 41.7).

The contrast between Italy and the UK helps illustrate this point. The Italian chart shows quite clearly how local municipalism, and the role of the local councils, totally dominate local virtual city policies. In Italy, local authorities still tend to

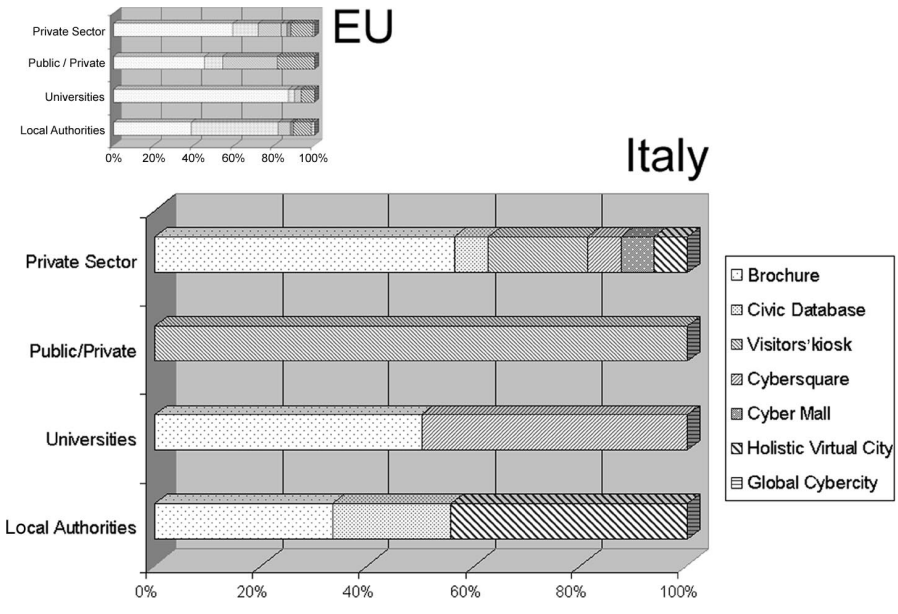

Figure 41.7 Relationships between originating institution and type of virtual city in Italy and the EU

identify themselves with the whole city, assuming a central, sometimes hegemonic, role in the management of the urban territory. Local councils remain the main actors and decision makers shaping the development of "public" cyberspace in Italian cities in the form of holistic virtual cities which tend to emphasize public service and links between municipality and citizenry. The participation of the private sector, while not completely absent from the picture, is often limited to the technical assistance from some IT firms. A precise and strict hierarchy maintains the role of the local council as the dominant force shaping all decisions about the design, content, and orientation of Italian virtual city initiatives.

The case of the UK is very different. Most of the relatively sophisticated virtual cities in the UK involve the establishment of "true" public–private partnerships with a good degree of collaboration among the different partners (local authorities, regeneration agencies, training organizations, universities, private firms, etc.) in shaping virtual cities. British virtual cities reflect the complex, competitive, and fragmented nature of urban governance in Britain. In British cities it is not uncommon for there to be several, competing, virtual analogies under development, arising from different partnership bodies, private sector agencies and universities. Each jostles for the attention of specialist audiences; the idea of a coherent "plan" to bring together all aspects of "local" cyberspace, as in the Italian model, might be seen to be as unrealistic as the idea that a single master plan may shape the physical development of a British metropolis in some dictatorial fashion. As Simon Davoudi notes, British "city governments are no longer the key locus for integration of urban relationships, but merely one of many actors competing for access to resources and control of agendas" (Davoudi 1995: 226).

Conclusion

The widening application of advanced information technologies, as a dramatic technological reconfiguration of urban society, is interwoven with all the aspects of city development addressed in this Companion: the material city; citizenship, civic culture and the public realm; and urban policy and planning.

Constantly at play in such city–IT relations is a central dynamic tension. On the one hand, there is the use of networks to support globalization, the collapsing of boundaries between urban spaces, and, consequently, the threatened loss of the notion that cities are anything more than arbitrary collections of activities within a physical space which are seamlessly integrated in a global space. Here, the citizen's urbanity transcends its reliance on a particular place; her experience of urban life, like that so often portrayed in the cyberpunk science fiction of the likes of William Gibson, becomes that of a limitless, planetary grid of nodes and services that are always "one click away." Here, the very notion of the city becomes problematic, as limitless electronic connections bind physical space into a pervasive electronic network space accessible from anywhere.

On the other hand, though, IT networks may rework the positive contributions of urbanity. They may add a whole new set of feedback loops through which the information, communications flows, representations, and transactions that bind us to city life become enlivened, coordinated, and supported. Electronic interactions reaffirm the complex fabric of city life, affording new potential for exchange, debate, inclusion, and dynamic mixture, improving the city in the process.

In essence, virtual city experimentation can be considered to be a small, although increasingly visible, attempt to maximize the latter while minimizing the former. At best, beyond the incessant hype about the Internet, it reflects real and concrete attempts to use IT in the search for positive articulations between urbanism and the "network society": what Manuel Castells has called "grassrooting the space of flows" (Castells 1996). Our research has shown how the electronic analogical world of virtual cities is blossoming across Europe; how a wide range of different virtual cities is being constructed; and how virtual cities reflect the particular styles of urban governance in different nations. We have seen that there is not some single "cyberspace" nor some single "virtual city movement"; rather, there is a contested terrain of differing models, orientations, and experiments. Information technologies, far from being some determining force in changing cities, are being woven into existing urban practices in complex and diverse ways that are only just starting to become apparent.

We have also shown, however, that attempts to genuinely harness IT as a new interactive public space at the urban level remain relatively insignificant. Much more powerful is the pervasive and hopeful flood of the one-way marketing of cities to the potential audience of elite Internet users across the planet – perhaps not surprisingly given current trends in urban development. The majority of the city-related Internet sites are configured almost entirely as glossy electronic brochures. In designing them, many decision makers are sticking to old, reassuring media paradigms based on the ideas behind TV broadcasting and paper-based publishing. These "models," which make alleged "virtual cities" extremely cheap to create and run, are being widely

transferred and embedded into the new technology, to the extent of substantially limiting its potential for stimulating genuine local interaction and exchange.

It seems likely that this picture of virtual city innovation failing (so far) to live up to its hype extends beyond Europe. Recent evidence from the United States, for example, suggests that web cities there also tend to be much more prosaic than the excitedly transformative rhetoric of the Internet there suggests (Nunn and Rubleske 1997). In a detailed survey, numbers of towns and cities in the US actually using the web to deliver services and interactive spaces was far below that implied by national champions of urban IT innovation like the National League of Cities (1997: 72). US city governments were not found to be making the most of grants from Federal Government to develop community-oriented IT networks. And web services tend to be routine, unimaginative, and largely oriented, like those in Europe, towards one-way place promotion and information provision, rather than interactive communication (1997: 72–3).

To resort to an overcrude local–global distinction, there is clearly a danger that, within the virtual urbanism movement, the "global" notion that cities are merely products for international consumption is being emphasized at the expense of the "local" idea that cities are places of meaning, representation, politics, interaction, and experience. The virtual city, in short, is merely a high-tech and technologically modern embodiment of a very old tension.

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