

The sustainable cultural cluster

Notes on agglomeration, tourism policy and information technologies in tourist cities

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Abstract

Cultural resources determine tourist interest for a city. However, the spontaneous organisation of the tourist industry in the space can lead to a loss of competitiveness of the urban region, and in particular to a decline in the same factors that made the city attractive in the first place. Moreover, the inner organisation of the cultural-tourist industry is often not consistent with the features of “flexibility” and “quality” which are required in a harshly competitive market. The spatial management of tourism, as well as the development of “clusters” (not mere agglomerations, but communities of inter-related activities), are spearheads of a wide-ranging strategy for the industry at large.

The score of European cities with tourism policy is more often than not made of failures. The strength and weaknesses of different approaches to tourism policy are analysed here and suggestions for improvement are provided.

The paper concludes with the exposition of two ICT projects to be implemented in Venice, a “problem area” with visitors’ flows. The projects are consistent with the theoretical assumptions, but need to be integrated in a comprehensive support system for tourism management.

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1. Introduction. Cultural tourism and the cultural clusters

Cultural tourism is a booming market. The World Tourism Organisation estimates in 10-15% the yearly growth in travel motivated by culture (WTO, 1996) against an overall average of 4-5 % for the tourism industry in general. Since heritage attractions are mainly found in cities, cultural tourism is naturally associated with urban tourism (Thibaut, 1994; Richards, 1999). Competing urban regions invest in cultural facilities and in the infrastructure needed to host cultural tourists, seeking direct impacts on the economy and an induced enhancement of the quality of life. Increasingly, a first-class cultural capital represents a precious location factor which adds to other traditional factors (accessibility, the fiscal climate, human capital, stability) to determine the city's competitiveness in the global economy (Van den Berg et al., 1995; Dziembowska-Kowalska and Funck, 2000).

The spatial organisation of cultural resources in the city and their relation with the infrastructure (hotels, transport, shopping malls) are critical to the success of a development strategy based on cultural tourism. As recent research has shown, the territorial agglomeration of cultural assets has a number of consequences for their sustainable use (SPESP, 2000). A concentrated resource base allows the maximisation of the tourist experience and the reduction of information barriers, thus enhancing the value of tourist products, but also increases the potential for conflict with city functions other than tourism. These two contrasting elements have to find a balance in the organisation of the “tourist cluster”.

The cultural sector of a city consists of (1) the physical characteristics of the city and its cultural heritage and (2) of cultural facilities in the broadest sense, including happenings, exhibitions, institutions, and the infrastructure, e.g. theatres, museums, galleries, libraries, recreational facilities, retailers (De Brabander and Gijsbrechts, 1994, p. 828). Jansen-Verbeke (1988) refers to a «derived» cultural product (those activities that exploit the city's cultural attractiveness, such as the souvenir shops and the accommodation-catering sector); and of an «additional» product, which is the necessary infrastructure to make the core product accessible, such as transportation and parking facilities.

In the so-called “heritage destinations”, while core products are (relatively) immobile because of their partially irreproducible nature, the complementary activities are free to relocate in a wide “tourist region”¹. In cities like Venice, Bruges or Salzburg we indeed observe a fair amount of economic activities directed to city users other than the residents, and in particular tourists. Restaurants, hotels, shops of all sorts – from luxury boutiques to cheap souvenir vendors –, art galleries, exchange kiosks, agglomerate around central attractions and variously interfere with the residential function of the city. Some others – a fair part of which are located in the same central areas, but in general are more dispersed – are services whose tourist demand overlaps with that of the residents: laundries, fashion and clothes retailers, craftsmen, catering, hairdressers, food shops, etc.

The spatial divergence between core and complementary activities implied by the spontaneous evolution of the tourist industry, and its relation with the inner organisation of

cultural tourism, are analysed in the next section. Section Three derives some consequences for policy making a reference to the traditional way of coping with unsustainable tourism. Section Four exposes the utilisation of information and communication technologies (ICT) as a tool for sustainable tourism management, presenting two projects under study for the city of Venice.

2. Evolution and sustainability of cultural tourism in cities

2.1 The spatial-geographic approach. The «life-cycle of tourism destinations» theory

According to a well-developed stream of research (for exhaustive reviews of this literature, see Deprest, 1997, ch. 2; Da Conceição Goncalves and Roque, 1997), the development path of any tourist site assumes a cyclic pattern. The original formulation of the «life-cycle» scheme, introduced by Butler (1980), uses as an indicator the absolute number of visitors. In the earlier stages of tourism development, the city attracts visitors that are essentially “pioneers”. The attention for the city may never reach the critical mass to become a destination for overnight stays, but if does, investments are started in infrastructures, services and promotion. The city eventually enters a stage of take-off, in which the material and immaterial benefits accrued by tourism activity increase dramatically and the local economy gets boosting. In the following stage of maturity, the industry consolidates and non-local operators enter the stage. However, as tourist pressure approaches capacity thresholds, overcrowding follows, leading to stagnation and eventually to decline if the environmental characteristics of the site are affected to the point that visitors turn to competing destinations.

The life-cycle model prescribes that tourism management should be pro-active, smoothing the fluctuations foreseen by the cycle and preventing the decline, possibly through a “rejuvenation” strategy. However, this purely descriptive scheme inevitably yields poor policy indications. The normative and predictive value of the life-cycle scheme has been criticised from various points of view (e.g. Getz, 1992). We argue that even if the scheme is accurate as a descriptive tool, a normative analysis requires that the economics at the base of the life-cycle mechanism is adapted to the specific context under investigation. To cope with this task, we make reference to two lines of reasoning, inter-related and complementary yet focusing on somewhat distinct issues.

The first has to do with the spatial consequences of the life-cycle evolution. An extension of the basic life-cycle model introduces a qualitative element, the kind of visitor that is attracted to the destination (Van der Borg, 1991). A close scrutiny of the characteristic of the visitors’ flow in cities at different stages of their life-cycle suggests that not only the absolute number of visitors is changing, but their mix changes as well, with major consequences in terms of associated costs and benefits. In Fig. 1, a “revisited” version of the tourist life-cycle scheme is exposed. Each stage of the life cycle is associated to a specific spatial distribution of the costs

and benefits arising from the tourism activities (lower part of the figure). In the first stage, the area benefited from tourism extends well over the new-discovered destination. As development proceeds (e.g. with the building of hotels) the two regions almost coincide, until the tourist receipts spread again to the rest of the region, while costs remain concentrated. If the core enters the declining stage, the costs imposed by tourism development may diffuse to the rest of the region.

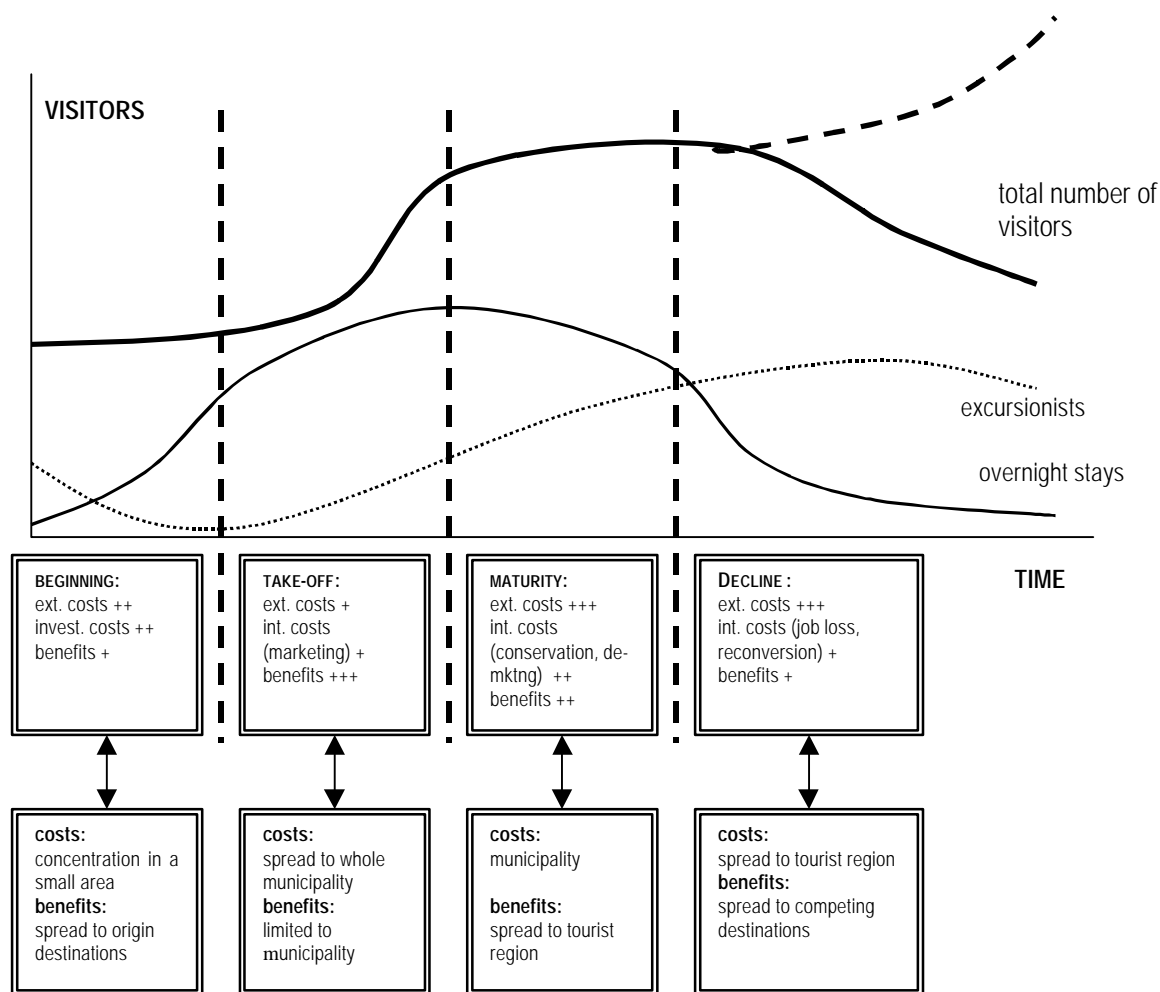


Fig. 1 - The theory of urban life cycle of tourist destinations, "revisited" version

The key object of analysis is thus the "tourist region", i.e. the territory that is economically interested by tourism in a given destination, and its relation with the area bearing the costs generated by tourism. The wider the gap between those two areas, the stronger the diseconomies and the magnitude of the feedback to be expected from tourism growth. The extent of such divergence is determined by the structural characteristics of the destination. The typical middle sized European "heritage destination", with a poorly specialised economic base and a dominant tourist sector, is particularly exposed to the harshness of the dynamics described

above ². This may be smoother in the case of capital cities or metropolitan areas with a huge accommodation capacity and a relatively more dispersed resource base.

This spatial interpretation of the life-cycle dynamics is relevant because it makes it clear that the origins of the stagnation and decline of tourism have to be looked for in the pattern of expansion of tourism itself. Consequently, a sound spatial management of tourist flows is needed for a harmonious tourism development. The privilege to “central” accommodations and advanced bookings, the differentiated imposition of visitors according to their “mode of use” of the city, the management of accessibility, a wise “logistics” of tourist consumption and of tourist-resident interaction, are key elements of this approach (Deprest, 1997, ch. 5; Van der Borg and Russo, 1998).

However, the inner dynamics of the tourism industry might be more complicated than what postulated in a simple, stylised model where “culture” is mere consumption of an irreproducible, immobile heritage. In a normative analysis of tourism development, other structural elements have to be taken into consideration.

What is not explicitly sketched in the evolutionary theories of the tourist region mentioned above is the relation between the tourist industry, the production and the consumption of culture – and in particular the *tourist* consumption, or cultural tourism –, and the relation between such sectors and the other economic sectors of the city. Therefore, we will now focus more closely on the “industrial” characteristics of cultural tourism. The issue we want to untangle is the following. Is the *agglomeration* of tourism-related activities beneficial for tourism sustainability (consistently with the underlying assumption that *dispersion* may lead to the “catastrophic” outcome of life-cycle dynamics)? ³ If this is true, how can such agglomerations be sustained, and how should they be structured?

The theory of industrial organisation, and in particular the analysis of the peculiar organisation of an industry defined “cluster”, may help to shed light into such questions.

2.2 Cluster theory, cultural clusters and the tourism industry in heritage cities

The conceptual definition of clusters is a refinement and a specification of network organisations. The clusters of enterprises or small firm communities are integral elements of the organisational structure of industry known as «flexible specialisation». Clusters may be defined as geographically concentrated sets of relationships between organisations (public and private) in a certain industry, where these relationships may have different goals and come in different forms. Moreover, they are strongly based on collaboration principles, as an outcome of historical and structural socio-economic linkages between agents.

The standard theory of industrial organisation suggests that a clustered organisation of production leads to positive *technological* and *pecuniary* (or *location*) externalities. While the former crucially depend on a certain degree of co-operation of the actors involved in the

regional production, the latter are also present in a strongly competitive environment (Krugman, 1991). Three typical forms of inter-industrial relationships that characterise a clustered organisation of production can be identified:

- vertical co-operation between economic units placed at different stages of the chain of value (product dis-integration);
- horizontal co-operation taking place between units placed at the same stage of the production process (strategic alliances);
- diagonal alliances, according to which economic units operating in different production processes co-operate to realise complex products and services (product differentiation, globalisation).

Obviously, more realistic forms of organisation of a cluster derive from combinations of these three basic categories on different scales. Moreover, in the case of flexible industries – such as the information-intensive sector of cultural services – their spatial evolution is intertwined with the different stages of the industry life cycle (Audretsch and Feldman, 1995). The elements that characterise a clustered organisation of production are recapitulated in Tab. i.

Tab. i - The main characteristics of the structure of the economy defined as “cluster”

<p>proximity: organisations in a cluster take advantage of privileged relationships from direct contact, knowledge spillovers, human capital development and circulation, common physical infrastructures.</p> <p>flexibility: the relationships between firms adapt to changing external and internal circumstances and respond to the stimuli to innovate which are fostered by an increasingly competitive environment.</p> <p>small and medium size of economic activities: small firms have a higher degree of flexibility and better suit the “ecological” dynamics which are crucial for the adaptability of clusters to a changing environment.</p> <p>efficiency: by developing the final product through a parallel process with feedback stimuli back and forth the chain of value, quality is enhanced and response to changing market conditions is improved.</p> <p>co-operation: that may take place according to different time horizons and degrees both in the case of strategic and vertical alliances (ranging from knowledge sharing limited to some parts of the production process to large scale collusion).</p> <p>competitiveness: competition in the cluster may be strong enough to incentive firms to strengthen intra- and inter-industrial alliances, in order to keep pace with innovation and respond efficiently to evolving demand.</p>
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In the case of contemporary heritage cities, a clustered organisation of cultural-tourist activities appears fundamental to support a lively environment, face to the spreading and “banalising” force of tourism economics. For instance, the small software companies and graphic studios working for museums and performing arts centres can easily serve the press

industry, the research institutions, or even the banking and insurance sector. Though it cannot be said with certainty that cultural clusters make the local economy sustainable (environmental and cultural issues are not considered in this analysis), this is surely a model that has proved a motor of strong local development for many cities in Europe.

However, we should consider whether a cluster of cultural activities can be identified in the typical “heritage tourism” destinations, and to what extent, if present, it is beneficial to urban sustainability. This attribution would require a configuration of the relations between actors such as that in Tab. i, which is not guaranteed by mere proximity or functional integration. To grasp the substance of economic relations which we would define “cultural cluster”, it is necessary to analyse how the process of production and consumption of cultural goods is organised in the peculiar contexts considered.

In fact, it is argued that the cultural-tourist industry is presently closer to the “fordist” mass production paradigm than the to post-industrial flexible, innovative and quality-optimising model of successful cities and regions in the global economy (Russo, 1998; Tremblay, 1998; Van der Borg et al., 1998). The economic weight of the packagers of tourist goods dominates the process of production offering little chances of co-ordination to local distributors, scarcely organised and hyper-specialised. To offer a package including a Gondola tour in Venice is still more profitable than to offer “alternative itineraries” or specialised museums, as long as there is no strategic co-ordination between the tour operators and the cultural industry. Even if a potential demand for less standardised products should exist, it may not be convenient for the tourism industry to organise their provision.

In the long term this model proves not suitable to face the challenges of the international competition and to maintain the comparative advantages enjoyed by heritage cities. Moreover, it leads to the weakening of the social and economic bases on which the continuity of the local community depends.

Of course, there is much more to that: a huge stream of research in cultural studies, for instance, analyses the relation between production and commercialisation of culture. When cultural products are assembled and distributed for mere consumption (and profit), unlinked from the peculiar socio-economic and cultural conditions which determined their original manufacturing, the “magic circle” is broken. A heritage destination can be successful in the medium term, but this success poses on fragile grounds, is deceptive and it is doomed to an end. This argument, as elegantly exposed by Bendixen (1997), explains why cultural capital accumulates in “global cities” and not in Venice or Bruges, and why a tourist looking for cultural thrills should stay away from packaged heritage tours.

But, is there a chance for cities like Venice or Bruges to survive as lively and economically viable *cities*, if not as fashionable tourist destinations? Or is their ultimate destiny that of sinking in souvenirs, postcards, lace shops and picnic litter? It is suggested in the above that the organisation of tourism in historical cities normally presents a series of “missing links”, both in the physical and in the functional sense, that should be developed for the cultural-tourist

system to work as a “cluster”. This demands the formulation of a sound and comprehensive strategy. To come to this, though, we analyse first how tourism policy works in practice.

3. A compendium of tourism policies. From regulation to “synergetic” tourism management

3.1 Demand-side policies and supply-side policies

Whatever the angle of observation, cultural tourism is a case for policing. Spontaneous tendencies may prove detrimental. Market failure arguments, as well as the “public good” characteristics of the heritage, demand a corrective action to “steer” the process of development towards efficiency and sustainability.

Policies for tourism development vary in scope and context. If a short-term approach merely focusing on visitors’ flows is adopted, then demand-side measures are typically considered. Their objective is to reduce the stress created by tourism and to smooth congestion, intervening on the volume and impact of the flows. This approach has been a natural “first reaction” to the huge increase of mass tourism that occurred in heritage destinations in the last decades. Zoning and restrictions have been popular throughout European destinations in the years of “heavy planning”, from the 70's to the half of the 80's. Cities adopted masterplans which treated tourism as a sector to isolate from the others in order to prevent conflicts with the resident population, minimising the occasions of “cultural confrontation” and reducing the costs of tourism management. Whole portions of the inner cities were given up to tourism development (e.g. the case of the “concentration model” in Bruges (Jansen-Verbeke, 1990)), while others were reserved to residential use. In addition, softer tools – like tourist taxation, parking restrictions and various incentives – have been implemented with ambiguous outcomes. On the whole, these policies have had limited success (Van der Borg and Gotti, 1995). In fact, they rely on three somewhat unrealistic assumptions and a major weak point. These assumptions are: (i) that the greatest part of visitors are “staying” (residential) tourists, so that regulating the number and location of accommodation automatically constrains tourist demand; (ii) that visitors are sensible to price barriers; (iii) that restrictions are fully enforceable.

In fact, all these statements have proven wrong or seriously faulty. The 80's have seen the boom of “short trips” and the enlargement of tourism regions with the rise of “commuter tourism” or “false excursionism”. If the accommodation capacity is saturated in the city centre, or if prices are too high, visitors choose peripheral destinations and visit the city without spending their budgets there.

Paradoxically, any policy aiming at regulating the flows ends up selecting against the most “sustainable” form of tourism, the paying, residential one, and at favouring the more volatile (and costly) crowds of day trippers. Anyway, there is a higher-order weakness in

policies based on restrictions. It is increasingly inappropriate, for cities that wish to compete on different markets, to present their “bad-face”, discouraging visitors and repelling them. How can a city attract, for instance, business travellers and at the same time make it difficult for them to freely move and consume the city's resources? And can a city justify itself as a convenient residential location if its reputation is that of an expensive, awkward place to strangers?

For the many reasons exposed above, a number of active city managers and tourism authorities in Europe and elsewhere have recently focused their attention on supply-side policies. The rationale is simple. If it is difficult to enforce tourist demand, an appropriate organisation of the tourist products would stimulate its own desired market. Tourist demand is no longer taken as given, but something that must be bred in time and guided. The capacity of managing information and of leading change, the availability of flexible budgets and the involvement of strategic networks of the private sector, are fundamental elements of this approach (Van der Berg et al., 1997; Laws et al., 1998). Needless to say, these elements are often lacking in local administrations. Their budgets for culture and promotion are shrieking and their marketing orientation is generally poor (Garrod and Fyall, 2000). Only a few cities were effective in organising new routes and products with a significant impact on the composition and spending pattern of the visitors' flow (good examples are Antwerp, Bilbao, Rotterdam, Aix-en-Provence, Naples, etc.). Most administrations cannot even convince private and public cultural institutions to co-ordinate calendars and events.

Moreover, as argued above, the sustainability of tourism is not sufficient for urban sustainability. That is, even if a city is very successful with its tourist sector, and manages to increase the receipts from tourism maintaining a high quality level of products and attractions, this does not guarantee that other sectors will score well. In fact, it is possible that they are *crowded-out* by high paying, revenue generating tourist activities, again exposing tourism to the unstable structural economics that contribute to a sharp life-cycle.

3.2 A “synergetic” model of tourism development: the cultural cluster

Therefore, a sustainable tourism development strategy requires that the attention of planners is extended to other sectors. The relation of tourism with the rest of the economy is the issue, and the *orgware*, the organising capacity (Van der Berg et al., 1997) of the institutions leading the change, becomes the critical element of success. To make tourism become a leverage for urban development requires a sound understanding of these relations and of their evolution in time. Policies aiming at the harmonisation of tourism growth with the general development of the local economy imply that a “synergetic”, systemic development model of tourism is adopted, with the following characteristics:

- it focuses on the entire chain of value of cultural tourism;
- consistently with the spatial analysis of tourism development, it balances the tendency towards dispersion with the creation of a “cultural cluster”;

- it strives to maximise the impact of tourism on the other sectors of the urban economy;
- it is instrumental to the development of high added value sectors;
- it aims at optimising quality rather than maximise *quantities*;
- its approach is *integral* and of *long-period*.

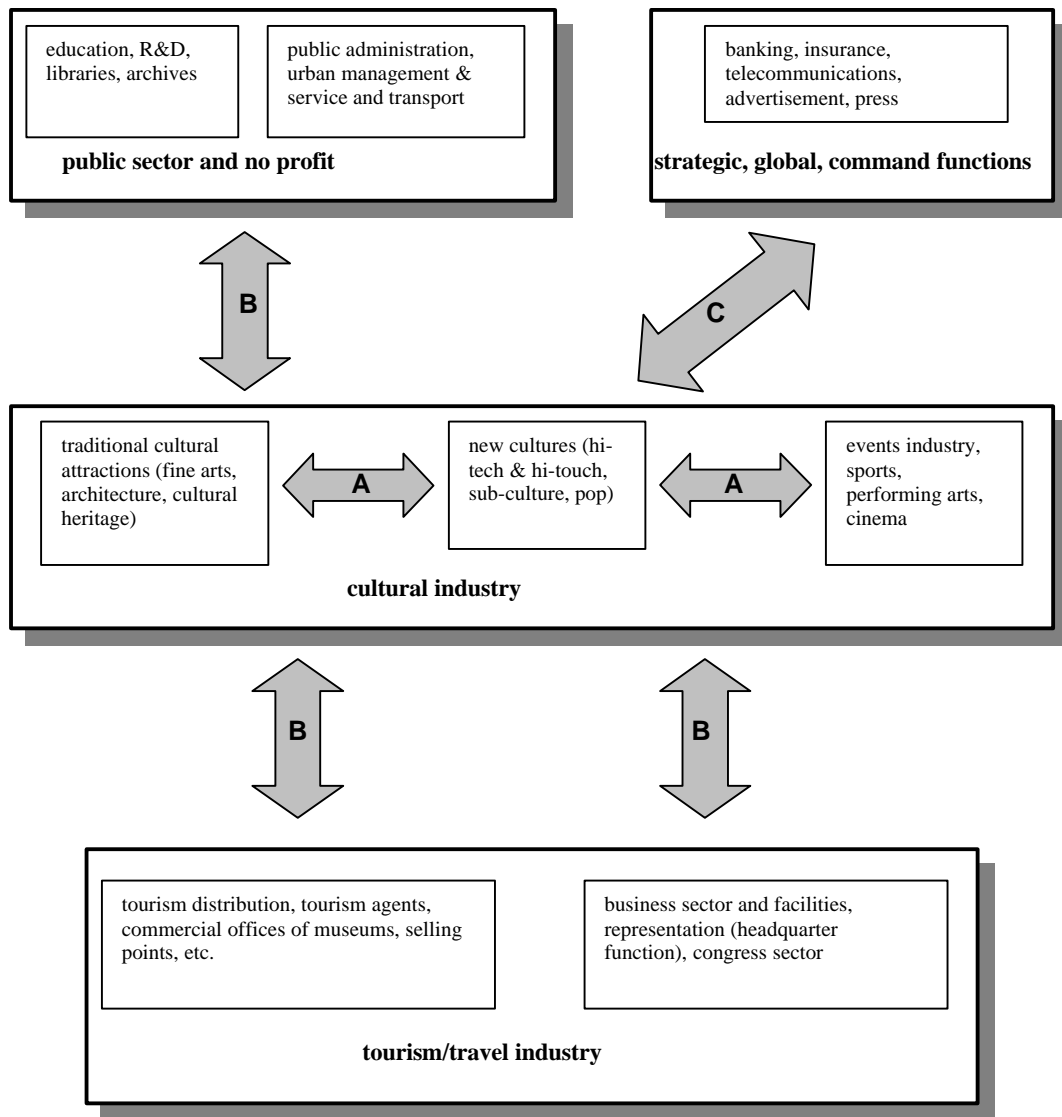


Fig. 2 – The cultural cluster in heritage cities

Fig. 2 describes various potential linkages within the cultural industry and between it and the rest of the environment. The first set of relations (A in the horizontal block arrows) to be reshaped in the cultural cluster are the intra-industrial linkages among the actors in the cultural sector, defined as *strategic alliances*. Co-operation and process co-ordination can be established between the different fields of cultural production:

1. the *loci* of cultural consumption, comprehending individual monuments and sites, as well as other concentrations of artworks and heritage, and the urban landscape itself («a set of buildings and public spaces of different periods and schools» (Richards, 1996));
2. the cultural producers, such as visual and performing artists, grassroots movements, pop music artists, etc.;
3. the “new cultures” and “creative industries” of hi-tech and hi-touch, such as design, fashion, software developers, etc., characterised by a strong flexibility and a symbiotic relationship with the city's growth sectors;
4. the events industry, as a whole set of mass-mediatic and logistic organisers: from venue managers, to international consultants, congress and fairs organisers, and the sports associations.

The combinations and linkages between these fields are a variety (Vera Rebollo and Dávila Linares, 1995). For example, new technologies are applied for the creation of services or products that are supplied together with the traditional visit to the cultural attractions to greatly improve the cultural content (CD-ROMs, access to remote archives, audio-visual and multimedia supports etc.). The system of traditional attractions can supply attractive locations for congress and meetings; the same venues can host and deliver to large audiences the sub-cultural production, achieving the diversification of the target of cultural tourism. Hi-touch industries such as design can support pooled markets highly attractive for business tourism and grand events, such as fashion and music events; design and software can be utilised for developing new and highly specialised niche segments. Cinema festivals can present the output of local schools or organise special sections about local culture and landscapes. The proximity of these activities is fundamental, for the open circulation of the human skills from one sector to the other and the reciprocal evolutionary “contamination” it implies (observed in fast growing cultural district of global metropolises, like the West End in London, the Village in N.Y., Kreuzberg and other neighbourhoods in Berlin, etc.).

The second (**B**) are the vertical linkages identifying supplier-producer-consumer co-operation at any level of the chain of value of local cultural production for what regards product development from the basic inputs (education, research), the administration and the services to the distribution (in and outside the traditional tourist channels) of the assembled cultural product. The relationships between producers and suppliers are characterised by collaboration, high quality orientation, just-in-time supply arrangements and flexible product development (Shapiro et al., 1992). The formation of partnerships and multi-purpose inter-industrial linkages are at the heart of this strategy. Strategic product (dis)integration allows the cultural cluster to adapt to the ever-changing nature of the tourist market.

The third direction of clustering (**C**) regards the formation of diagonal partnerships between the cultural industry and other strategic sectors seeking to diversify their products to adapt them to the local profitable conditions (Poon, 1993). Banks, insurance companies,

advertisement producers and press may develop common products with local producers or employ the services they provide to differentiate their products locally. Typical examples are banking and other multinational corporations that co-operate with local small producers of software to sell commercial tourist services to an international demand, national or international press that informs and advertises upon a local fashionable scene, multinational catering companies that enter the traditional restaurant market, etc. Of course this partnership or informal collaboration can be seen from the other way round as a successful effort of the local producers to reach a global audience through an international projection.

Once identified the potentially fruitful relations between agents of the local economy, we turn to the policies that may favour the formation of clusters. The following have to be considered necessary “first steps” (Crosby, 1996) on the way of developing sustainable cultural tourism in heritage cities.

Promote the concentration of cultural producers

Dispersion is not the main problem when we are talking about heritage cities (whose population can be as low as 68.000 as in the case of Venice). However, while fast-growing regions increasingly attract capital, services and infrastructure, it seems that historical centres are often not capable of keeping pace, sometimes losing ground as best locations for S&M companies in the service sector. A strategy should be implemented to grant producer services – especially if interesting for the cultural specialisation of the city of art – the opportunity to find favourable locations in the city centre, offering financial incentives and enhancing the structural conditions (infrastructure, easily accessible lots, flexible land use regulations, etc.). The regeneration of former industrial areas at the fringes or urban cores as cultural quarters or meeting centres is a reoccurring element of contemporary urban planning (Wynne, 1992, p. 3).

Attack rent-seeking behaviours

Innovation is stimulated in a competitive environment. In the heritage city, monopolistic rents are generated by the proximity to the primary product and by the limited and immobile nature of the central land supply. It is therefore desirable to attack monopolistic practices by favouring a “virtual” access to the central tourist product (e.g. through the organisation of electronic malls and kiosks), promoting the diffusion of the primary product to peripheral and depressed areas (e.g. a policy of decentralisation of the museum supply, organisation of provincial itineraries), and controlling for the quality of the product offered by central activities, in such a way that location advantages are not translated into increases of the price/quality ratio.

Promote co-operation

This is the main issue, and at the same time the most difficult to deal with. Governments can do little to promote co-operation if the local environment is poorly co-operative or if there exists a strong asymmetry between suppliers and producers on one side and producers and

consumers on the other. It is also difficult to incentive and reward the delivery of innovative services against banal and low added-value products. Governmental tasks can be hardly more than organisational: an effort should be done to convince all actors involved of the existence of win-win strategies in fostering a high-quality tourism development based on culture.

Promote knowledge creation and circulation

University research should be directly linked with the pattern of urban production and provide a continuous input in terms of best practices and innovative management models in the field of cultural interpretation and management. R&D in the same fields should be publicly supported to sustain urban growth; organic links should be organised between policies on culture and policies on training, education, research and development (Bianchini, 1993). The municipality should set standards with the appointment of a “locality certification” to original local production; public offices and services should be designed to meet the requirements of the industry. A public policy for patent protection in the development of new cultural products and the delivery of innovative services, though limiting the extent of competition, can increase the stimuli for innovation and foster the realisation of advanced organisational forms between producers. Knowledge circulation is favoured by information diffusion and by a flexible labour regulation with incentives to firms and workers.

Promote the local ownership of cultural production and consumption facilities

Vertical and diagonal integration in the cultural industries means that many other forms of cultural provision are owned by large companies (e.g. financial and banking companies). For instance, small record companies, that often act as R&D centres in the music industry, spotting and cultivating new trends and styles, are eventually affiliated to the major multinationals. The resulting problem is that «cultural production and consumption are increasingly externally owned and controlled, thus failing to achieve the regeneration objective for a locality» (Williams, 1997, p. 141). Then much emphasis will need to be spent to considering ways in which locally owned indigenous enterprises can be supported and developed; at the same time denser inter-industrial linkages will result, with increasing employment multipliers (indirect *and* induced).

Develop organising capacity

The policy changes suggested above are far from automatic. The fragmentation within the tourism industry, and the strength of consolidated interests, make it very difficult for policy makers to start a new policy cycle and implement strategy. The issue of policy changes in dynamic and turbulent systems has been treated by various authors (Nelson, 1989; Kooiman, 1993; Crosby, 1996). Van den Berg and Braun (1999) suggest that urban management is by no means exclusive matter of institutional powers. *Governance*, rather than as an act of power by a formal authority, should be intended as the result of a series of actions and reactions of various

nature and origin. Informal stakeholders have an influence that is not inferior to that of formal authorities. The achievement of strategic goals requires that they are involved in the decision-making process. The organising capacity of the policy leader is the issue, and it is by no means something that can be given for granted.

4. ICT as a tool for sustainable tourism development. The experience of Venice

4.1 A tool for the development of cluster relations: the applications of ICT in the tourist industry

Information and communication technologies (ICT) are nowadays acknowledged as highly effective tools for the management of tourism. The information-intensive nature of tourism products, the refinement of the tourists' preferences, the high level of fragmentation in the industry and the subsequent need for co-ordination between and within chains of value (Poon, 1993; Vera Rebollo, 1995; Buhalis, 1997), the increasingly competitive market and the need for swift adaptation and response, are the main reasons for a symbiotic relation between the new communication technology and tourism (Connell and Reynolds, 1999). It is not surprising, then, that the tourism and travel industry has been at the forefront of innovation in ICT applications.

Moreover, ICT infrastructure for the cultural industry appears promising as a vehicle to stimulate positive side-effects to tourism development and to improve the co-ordination of the involved actors and institutions (Shapiro et al., 1992). Wynne (1992) recommends that ICT are used as a means to encourage artistic and commercial "crossover" contamination between industries which are different in nature but not in the creative attitude.

It is crucial to this aim that the ICT apparatus is diffused to the tourist sector as a whole (Buhalis, 1997). Organising a network of cultural producers and linking it to the commercial tourist structure by means of a soft advanced-booking system (exploiting for instance fibre-optics technology) is a programme that might achieve a number of objectives, among which:

- to enable a visitor management strategy based on decentralisation, peak smoothing and on-line interactive marketing;
- to allow a stricter control of local regulators over the tourist resources and facilitate market exploration and strategic action;
- to increase the quality of cultural products, by integrating the information content of the visits;

- to erode proximity rents through a “virtual access” to the “cultural-tourist mall”, improving in this way the competitive environment;
- to incentive co-operation and co-ordination between agents at different stages of the chain of value of cultural tourism.

To sum up, ICT achieve a double goal: that of overcoming the physical and organisational bottlenecks that impede open competition, transparency and co-ordination within the cultural-tourist industry; and that of enabling a selective marketing of the destinations achieving at the same time a number of “regulatory” objectives with respect to the logistics and timing of the visits. As an important side-objective, which is particularly relevant in the case study discussed further on, the development of ICT services may be seen as strategic for the diversification of the local economy, both as a sector in itself and as a support to other “growth sectors” (banking and financial services, media, logistics, etc.).

A tourist strategy based on ICT infrastructure is closely linked to the issue and diffusion of a smart card, offering to advance-bookers a series of services and goods that are not available to “spontaneous” visitors and day trippers. The cards are sent, at no charge, to staying tourists when they send in the booking for their accommodation. The remaining cards could be sold to non-bookers at a fixed price based on the estimated costs generated by their visits (with rebates for special categories like elderly people, students, disabled and inhabitants of the region), or auctioned via the Internet. The number of cards issued will be equal to the tolerance threshold, to be periodically determined according to the seasonal capacity and the calendar of events. In this way, motivated cultural tourists get a better deal because they can more easily discover what is on offer, and then arrange their itineraries expediently benefiting from free parking, access to limited-number events, reduced time in queues, reductions in transport fares, etc. Meanwhile, the city is better off because it attracts relatively high-spending and organised tourists.

Incentives for advance-bookers would represent a «juridically feasible and socially acceptable formula for having the visit to a heritage city paid for» (Di Monte and Scaramuzzi, 1997), which, combined with telecom facilities, would yield an intelligent way to selectively market the city and spatially/seasonally smooth the peaks. On the other hand, the only drawback might be that opening the local market there are greater chances that non-local operators may enter (e.g. tour operators, real estate agents), facilitated by the possibility of remote operations. But that might not be a negative fact after all, if the activated “diagonal linkages” also work in the other direction and allow local producers to easily approach outside markets.

4.2 Tourism and sustainable development in Venice: a synthetic overview

Venice is a well-known international attraction, possibly the most famous tourist city in the world; yet few people could imagine that its historical centre in the heart of the lagoon is a “problem area”, whereas the mainland is well integrated in a booming regional economy. A vast body of literature concerning the spatial-economic traits of tourism development in Venice (Prud'homme, 1986; Towse, 1990; Van der Borg, 1991; Costa, 1993; Batten, 1995; Van der Borg and Russo, 1998) suggests that the city's viability as a high-quality tourist destination and – more importantly – as a residence and business location is under threat.

It has been estimated that Venice could absorb a total number of about 22,500 visitors, but only a maximum of 10,700 of these should be excursionists. These limits were surpassed in the year 1987 for 156 days out of 365 (Canestrelli and Costa, 1991). The number of yearly violations has been increasing unrelentingly since then. The growth of tourist pressure – now reaching 150 yearly visitors for each resident – is mainly pushed by the excursionists' flow, a segment that has a low expenditure pattern and imposes a sensible amount of costs to the city. At the same time, these visits are concentrated in time and space; day-trippers are less sensitive to quality, and less reachable by information campaigns and controls. With their inelastic demand, they sustain a process of reorientation towards a standardised and low-budget supply (Van der Borg and Russo, 1998), which results in a dramatic simplification of the economic base of the city. This information seems to contradict the simplistic assumption that mere concentration of tourist-cultural facilities results in a more viable tourism development.

Such an inefficient pattern in the visits bears a direct relation with the performance of the cultural tourism industry. As a result of the combined effect of congestion and lack of information, some cultural resources are under-utilised while some other are over-utilised. On the whole, far less visitors are able to enjoy the cultural heritage than the city could afford (ICARE, 1997).

Academic circles, opinion leaders and – increasingly – decision-makers recognise that the envisaged declining drift in tourism can be contrasted attacking some critical points: 1) the expansion of the “tourist region”, favouring overnight stays; 2) the mode of tourist use of – and access to – the city, which needs to be rationalised; 3) the process of quality decline of tourism products, nurturing instead a high quality, co-ordinated and flexible cultural sector. As the exposition in Section 3 suggests, this can be done either adopting a demand-side approach, a supply-side approach, or a systemic or “synergetic” approach which explicitly considers the environmental and organisational variables along with the tourist market itself. In the past, tourism policy in Venice has insisted on the first only of these options, merely considering demand-side management tools of the “hard” type, with noticeably poor results.

In recent times, there has been an effort to better co-ordinate the various elements of the Venetian cultural system, on more than one level. On the marketing side, a number of projects for the promotion and commercialisation of the cultural assets as an integral system have been

launched (common ticketing, co-ordination of events, web-sites, creation of marketing structures, etc.). Pro-active marketing is a novelty for a city which used to consider its international fame sufficient to attract a steadily-growing flow in the mass-tourism market. On the infrastructure side, there is an effort to link the existing resources through advanced communication technologies with the provision of remote-archive and information facilities. Internal accessibility will be enhanced with the rationalisation of water transport, the diversification of access points to the island and the creation of alternative itineraries. On the product side, there is today more attention to the quality and variety of cultural products. Prestigious projects (museums, concert-halls, meeting venues) have been launched and modern architecture will be added to the complex fabric of the city, providing a precious infrastructure for product diversification.

A significant first step in the rationalisation of the cultural system has been taken by the Municipality, which has formed a public-private partnership for the electronic booking and ticketing of four museums, the Cathedral and the Tower in St. Mark. Even if limited in scope, this project breaks a path that can be easily extended to superior levels of flow regulation, such as transport, terminals, the hotel and restaurant sector. In particular, two “technological” projects, still in their experimental stage, represent natural extensions and refinements of this approach, going in the direction of the self-reinforcing dynamics of a “cultural cluster”. These projects might turn out to be the key to trigger off a virtuous process for sustainable tourism.

4.3 ICT and tourism management in Venice: towards the cultural cluster

The ALATA project for the management of tourist flows

ALATA (High-Adriatic Partnership for a Sustainable Tourism) was originally set up as a partnership between several cities and provinces of north-eastern Italy for the management of the flows accruing to this area in occasion of the religious celebrations for the year 2000. The project is motivated by the concurrent circumstances of the danger that an excessive number of non-organised pilgrims would cause intolerable congestion in tourist destinations on their way to Rome, and of the formidable opportunities for urban tourism in non-traditional destinations provided by the Jubilee event.

Venice, one of the key points of entry to Italy on air and road, was expecting an estimated additional flow of 3 million visits motivated by attendance to the event; hence the opportunity to divert this flow to other peripheral but well-equipped destinations with some cultural or religious attractiveness. In synthesis, the project consists in the realisation of a telecom infrastructure and a software for the collection, management, certification and redistribution of information on visitors' flows on the High Adriatic territory, as an input to just-in-time provision of facilities for welcoming, assisting, accommodating pilgrims and tourists and facing possible

emergencies. The system connects the existing transport, hotel, catering structure providing dedicated facilities and information on accommodation and restaurants, booking of shows and events, booking of museums and thematic itineraries, access routes and transportation means (both urban and out-of-town), inflow situation and roads, parking lots availability, traffic emergencies, sanitary emergencies, location, characteristics and rooms available in sanitary structures, individual tourists' problems and emergencies. ALATA is organised through a network of active informative points and self-services in the territory, with one co-ordination centre (the Venice municipality) and several Control Centres (province capital cities). The project has been funded by a special national law, but will be self-sustained to cover the operating costs through the contribution of participating cities.

The stated aims of ALATA are (1) to promote tourism on the territory, especially non-organised tourism; (2) to provide to tourists and operators in this field a series of technological infrastructures ICT to match offer and demand as well as avoid congestion; (3) to carry out the integration of local information with those resulting from other projects; (4) to obtain an immediate return of investment, using it to consolidate renowned national products and to promote their success abroad.

It is now early to assess whether these goals will be achieved. However, the ALATA partnership – originally motivated by an emergency situation in the year 2000 (which, however, is attracting a far inferior number of tourists than expected) – is going to produce its most significant breakthroughs in the “normal state”, since the year after the event.

The CALYPSO project: a smart card for the use of urban services

A second infrastructure project more closely focusing on the “cluster” characteristics of the cultural-tourist system is CALYPSO. This project – funded by the European Commission (DG XIII) – consists in the realisation of a smart card for the provision of a number of services in a co-ordinated and user-friendly way, integrating payments and banking services, urban transport, student services, any kind of bookings and information to city users. Similar projects have been realised in a number of business and tourist destinations, such as Singapore, Hong Kong, Salzburg. In Italy, smart cards are already used for individual transport applications (e.g. the TISM system integrating motorway tolling, public transport and parking payments in the region of Prato, near Florence). The card works simultaneously as a “pass” (utilising “contact-less” technology) to access a number of facilities and functions, and as a secure electronic purse.

CALYPSO is being experimented in four European cities (including Paris, Konstanz and Lisbon). In Venice, partners in the project are the main public and private operators in the field of transport (though SWICTH, a system of traffic and logistics management in the Venice province also being developed with EU funds), banking, municipal services, universities, museums and a consortium that manages the religious heritage. The original project foresees the issue of two types of card, one for local users and one for tourists, which can be “charged” with

services and electronic money in the moment in which the visitors book their visit and receive the card. The tourist card focuses on the promotion of specific types of cultural consumption and their integration with other aspect of the service economy. This architecture opens up wide avenues as regards multiservice uses in the tourist chain, such as in car parks, motorway tolls, electrical vehicles, taxis etc. It can also be used in associated commerce (public telephones, newspapers, vending machines, cafeterias etc.). Finally it could be used in other urban commerce and services such as cultural and sports services, wherever a bank support is required.

The two projects exposed attack the two dimensions of sustainable tourism development analysed in Section 2, namely the spatial and the industrial level. Basically, ALATA may help to spread tourism in a more efficient and rational way on the territory, realising a soft demand regulation and associating it with high quality services. CALYPSO instead favours an “integral” approach to the management of cultural tourism, unifying the services to visitors and infrastructure, lowering “information barriers” which foster quality decline, and granting access to the electronic mall to non-standardised cultural production and events, side-stepping the bottleneck represented by an intermediary sector which is not prone to invest in “novelty”.

The points of integration and reciprocal self-reinforcement between the two project are immediate. If ALATA works as a “regional” infrastructure for the delivery of CALYPSO services, the cultural cluster of Venice can extend to the whole tourist region, realising an innovative “multi-polar cluster” which exploits the tourist vocation of a wider area of reference, further improving the efficiency in the organisation of tourism. In particular, it could be arranged that CALYPSO cards are delivered according to the repartition of flows managed by the ALATA system; if a traveller books his stay in Venice in advance, or complied with the packages proposed by ALATA, he is granted the use of a smart card, receiving additional benefits.

4.3 Final remarks

This article considers two dimensions of the relationship between cultural tourism and urban sustainability: the spatial impact of tourism development and the industrial organisation of cultural tourism. A tourist sector that expands unguided throughout a region ends up in curtailing the welfare of the inner city residents and the quality of the central attractions. Moreover, if a local tourist industry does not establish bi-directional, flexible and strategic linkages with the cultural industry, it is not likely to be competitive in the tourist marketplace of tomorrow, giving way to the declining trend foreseen by evolutionary models of the destinations, like Butler's life-cycle scheme. A close observation of the recurrent characteristics of the cultural-tourist industry found in European historical cities provides a framework for action. This should be directed at stimulating flexible co-operation and strategic alliances

between and within chains of value of tourist products, and could be achieved, for instance, favouring physical and functional proximity and knowledge exchange between the actors involved in the industry. It is hoped that a flexible and innovative cultural tourist industry generates in this way spin-offs for the rest of the economy, the only possible brake to tourism dependency and stagnation in particular situations. Strategic action of this kind, which could be inscribed a “synergetic” management model of tourism, is likely to yield more successful results than policies that deal exclusively with the demand or the supply of tourist goods.

Venice is a very good case of unsustainable tourism. What’s under threat in Venice – 250 years ago one of the most powerful and populated cities in Europe – is culture in the broadest sense. Though the primary issue is heritage preservation, both citizens and visitors presumably want the city to remain a living entity, and not transformed into an empty stage, where the sterile representation of an act of consumption – tourism – is performed. A way out from this *empasse* stands in the recognition that Venice’s cultural endowment is so vast that it can satisfy the demands of a public with quite different preferences. However, greater efforts need to be made to promote and sell this richness.

At the moment within the Venice city administration the idea of “soft controls” exploiting the versatility of ICT seems to be gaining support. Pilot projects are underway for the creation of a network infrastructure connecting cultural institutions. Information systems will be given a test run during the Jubilee 2000 celebrations, when Italy expects an enormous inflow of tourists. The ALATA partnership of North-eastern Italian cities will use an information system designed to manage and distribute visitor flows. CALYPSO represents a fundamental infrastructure to a cluster economy where co-operation and competition go hand in hand. Much more needs to be done for the functional integration of these systems. Whatever path is chosen, it is now recognised that if the culture of Venice is to remain a living entity the city needs to be refashioned into a place that exists for more than tourism.

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NOTES

¹ Even new cultural producers, whose activity is in principle footloose, tend to agglomerate in inner cities and create “cultural neighbourhoods” (Wynne, 1992). Statistical analyses confirm that culture-related activities are concentrated in urban areas, and that this concentration (contrary to other information-intensive industries) is increasing in time (Heilbrun, 1992).

² Russo (2000) utilises an extension of the life-cycle scheme, the “vicious circle of tourism development”, to illustrate how the diverging path of prices/quality ratios at different locations in heritage tourist regions ultimately causes a reinforcement of the spreading forces and a persistent disequilibrating pressure in the financial position of the central destination, with possible catastrophic impacts on its capacity to attract visitors in the long term.

³ At this point, it is necessary to define sustainability. This is an increasingly difficult task, both for the proliferation of “official” definitions that are used interchangeably, and for the fuzziness of the concept itself (Garrod and Fyall, 2000). It is then better to establish a working definition of “tourism sustainability”. In this analysis, we conceive sustainability of tourism development as a pattern of development of the local tourism market that favours an harmonious (inclusive and spatially efficient) and self-supporting growth of the local economy at large, not depleting the opportunities of cultural consumption of the future generations and respectful of the identity of the local community. We adhere to the line of reasoning of Hunter (1997), who argues that sustainability of tourism is a necessary (but not a sufficient) condition for sustainable development.

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