Impact of Cultural Tourism upon the Diversity of Built Heritage

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**Tourist Impact Studies**

Tourism impact affects tangible and intangible heritage in various ways, and change markedly with the level of tourism development. Such impacts can be tracked quite easily by monitoring changes to individual buildings. However, surveys providing reliable data about impacts and risks generated by large visitor numbers are lacking and most conclusions are based on general tourism development statistics. A crucial problem is that long-term measurements recording structural deterioration or damage are not available at present and, although some impacts are well-known, they cannot be traced directly to tourism. Environmental monitoring hence remains the most reliable source of information that can be used to estimate risks and explain some damages and impacts.

**Impacts and risks in relation to individual historic objects / buildings**

Environmental aspects are often underestimated in present tourism strategies and detailed long-term monitoring plans should be adopted as a systematic measure in most these marketing operations.

Some of the most important causes of damage to historic monuments are indeed caused by moisture and temperature changes. The impact of evening concerts at Brezice Castle in Slovenia showed the impact of water condensation on plaster frescoes, which caused their deterioration and damage. There are few known examples of serious failures directly caused by tourism flows. It is indeed difficult to separate indoor climate changes specifically caused by visitors from the effects of outdoor condition changes. Still subtle temperature and moisture changes can have very serious effects on certain materials and structures. Drdácký (1992) cites the example of St Vitus Cathedral in Prague, where a fracture in the stonework led to the collapse of stone parts. These cracks are likely to have been caused by volume changes influenced by visitor numbers.

*Deposits on surfaces* create problems too. More visitors cause more dust and repeated cleaning can further damage surfaces (Lloyd et al, 2004).
Dust deposits and cleaning are obviously influenced by tourism activity, especially since there is a general public expectation that historic buildings should be kept dust free.

**Air pollution** is mainly due to carbon dioxide emissions inside buildings. N. Thiéry (1991) presents examples of destroyed mural paintings in Turkish churches due to an increased concentration of carbon acid caused by visitor respiration. The effect is a result of combined air pollution and increased moisture.

**Light radiation effects** are very harmful for colours and direct sunlight should be especially avoided in most cases. Light exposure should be admitted as a limiting factor for visitor attendance management just as moisture supply. Light effects were studied by several researchers and the results were reviewed by Camuffo (1998). Warming associated with light is one of the worst effect of radiations which is, again, indirectly caused by mass tourism. In all situations a detailed monitoring plan has to be set up. Measurement methodologies have been proposed in several EC projects. They resulted in the formulation of air pollution guidelines for museums.

**Mechanical wear of historic structures** includes the accidental abrasion of fragile surfaces (Lloyd, 2002) as well as the erosion of carpets and hard floor surfaces by visitors. Many historic buildings/objects suffer from an everyday increase of load or even overload. The damage may be unintentional but it can create serious problems, e.g. tourists touching the statue of Juliette in Verona. The problem has been very serious at some sites and, in some cases, visitors numbers had to be severely limited (e.g. Royal Chapel at Karlštejn Castle) or the sites even closed.

**Vibrations and dynamic effects** are seen most commonly in museums and historic houses due to visitor circulation. Historic premises used by tour groups or for performances might suffer an additional source of vibrations and modifications designed to ensure accessibility can cause further damage to the building structures. Deterioration due to vibrations is quite common, particularly on poorly supported floors. Thickett (2002) cites a major building project at the British Museum, The Great Court, which instigated an extensive programme of vibration measurement, allowing an estimation of damage levels for different types of buildings and situations.

Cultural heritage objects can also be targets of vandalism: damage to interiors, ‘*souvenirism*’, as well graffiti for religious motives. Terrorism may become a threat because terrorists know the significance of destroying symbolic monuments. Monuments are frequently damaged also by visitors *climbing on them* to take photographs, thus damaging stone sculptures etc. *Theft*, especially in poor countries and/or
locations with a lack of control, remains a problem.

Considerable damage can be caused by the ignorance and negligence of tourists. Typical problems are associated with soiling by leftover food, cigarettes and chewing gum. Noise caused by visitors can also be a form of pollution, especially in those sites like cathedrals and monasteries whose meaning is somehow related to silence. Conflicts may also occur when tourism facilities such as toilets or shops are provided at cultural heritage sites, raising the question of how development and cultural sensitivity are balanced, e.g. at Stonehenge.

Accommodating large tourist numbers generates great pressures for demolitions and new constructions in historic centres, or transformation and modernization of historic buildings. Increased traffic may cause congestion problems and parking facilities can have a strong visual impact.

Existing environmental measures (monitoring and carrying capacity)

Measures to reduce the impacts of tourism can be done in different ways. Visitor numbers can be reduced, and in an extreme case the cultural heritage object/building can be ‘de-marketed’, for example by not including in promotional material and therefore reduce awareness of the attraction. This was done at Craigievar Castle in Scotland, when it was discovered that the volume of visitors was damaging valuable plaster ceilings. Even when a de-marketing strategy is not adopted, the number of daily visitors can be limited, and guided tours are a useful means of doing this because they enable supervision and control of tourist movements.

Young & Cassar (2004) point out that patterns of tourism are changing and that tourists often come at regular intervals in tight timescales. Furthermore, the visitors expect a certain degree of comfort at attractions, and all these factors put pressure on environmental control systems, and even the building itself, and this is exacerbated by the way contemporary tourism is organised. However, there are means to deal with this, e.g. buffer spaces to receive coach parties, although these measures also present further problems, e.g. they may disturb the ‘story-line’ of a building. There must be an attempt to evaluate how heritage is coping with these stresses and to deal with a number of issues, particularly the effects of large numbers of tourists at source. Some steps have been made towards this, for example EU cooperation has been engaged to develop environmental programmes, for example energy efficient heating systems.
Impacts and risk in relation to sites and urban areas

Visitors and residents normally have different expectations towards historic cities, as these are seen as “living places” by local communities and as a form of “cultural resource” by visitors. Yet historic towns must retain their identity and authenticity in order to keep their attractiveness.

Historic towns face a number of impacts and risks related to tourism industry. In the worst cases these towns are just seen as a form of ‘entertainment’ for tourists and their appearance is geared towards looking attractive for them. Another specific impact relates to infrastructures: accommodation is required, although this is seasonal, leading to vacancies, and parking makes demands too. Perhaps the worst impact is the effects on local business: shops are forced out by tourist enterprises. In many cases there is a lack of response to tourist pressure. Van der Borg (1997) cites the example of the enormous pressures faced by art cities and their population, with no policies to deal with this phenomenon.

The most important risk associated with tourism in historic cities is hence the lost of tradition and continuity. When private profit becomes the only goal, with no regard to the public interest, the usual life and the authenticity of the town is at risk. The examples of Lijiang in China and Telc in the Czech Republic show the problems of commercialisation due to tourism and environmental change. European historic cities will be increasingly faced with these problems in the future.

As well as the impacts to historic towns, mass tourism causes progressive damage to landscape, villages and features of historic city centres and archaeological sites. The natural environment changes too, and new can be completely inappropriate visually and functionally. Other negative impacts include pollution from tourist traffic, the deterioration of cultural heritage and the ‘prettification’ of urban spaces, one of the most visible impacts of tourist development.

Planning for sustainable Tourism

It is possible to manage and lead a historical town to permanent liveability only with a complete knowledge of the town’s intrinsic development potential for tourism, which creates a necessary condition for a sound and well prepared strategy. In European countries without attractive coastline or alpine opportunities, cultural heritage assets play a decisive role for stimulating inner tourism, which can lead to manipulations of the effective significance of heritage. Such a false “cultural diversity” should be avoided. Still creative approach for heritage interpretation should be supported and there are interesting approaches to valorise the mystery inherent to cultural heritage.
Initiatives for a better management of tourism flows in historic towns have been taken by non-governmental organisations. In Italy the Catholic church is facing the issue of balancing the needs of visitors against worshippers. Conferences addressed various problems which were addressed by different initiatives. Surveys carried out showed how tourism had been instrumental in encouraging a more intense effort to apply an efficient restoration and conservation policy, although on the other hand increases in trafficking were recorded. The need to intensify the pastoral dimension and potential of the cultural heritage of the church in relation to tourism was felt unanimously.

At another level citizen participation is important and activities supporting the needs of residents should be encouraged. In Telc for example the municipality supports a ‘distributed hotel’ – private room accommodation on the square. The project helps to preserve life in the centre yet offers tourists a service.

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