

# Time scales and time phenomena in landscape research: examples from the field of tourism geography

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**Abstract:** Every landscape research operates within two scales: a spatial one and a temporal one. The paper focuses on the diversity of time scales that are used in landscape research. The problem is especially important for tourism research. The internal diversity of the tourism phenomenon leads to necessity of combining various time scales even in the single research. Basing on the literature review and field observations several time ranges suitable for landscape research in tourism have been listed. The paper describes various time phenomena and identifies their features that should be considered in tourism research and planning.

**Key words:** landscape, tourism, time scales , time phenomena

## Introduction

The landscape, which is popular research object of various disciplines, is internally diverse and can be interpreted in many different ways. It should be underlined, that landscape is not only the object of research, but, first of all, the human space, that is used by people as well in their daily, as holiday life. The goal of this paper is to discuss a problem of time scales interpretation within the field of tourism geography.

Landscape diversity can be identified by two ranges – spacial and time ones and three dimensions – physical, visual and mental (fig.1) (Kowalczyk, Kulczyk 2010). Taking into account their durability landscape changes can be divided in permanent and ephemeral ones. Permanent changes lead to creation of new landscape and are irreversible. Their intensity and duration vary. They can be evolutionary (gradual) or chaotic (abrupt) (Hansen, di Castri 1992). Ephemeral changes mean a return of a landscape to its previous state. They can have regular (cyclical) or irregular character. J. G Granö (1997) considers cyclical changes of colors and lighting caused by year seasons very important. He refers also fast and non-cyclical changes of landscape quality calling them mobile ones, because they mean the mobility of organisms (e.g. animals) or phenomena e.g. mist).

There is lack of sharp borders in this classification, because time scale can be interpreted in various ways; as absolute or conditional, when observed changes are compared between them. Permanence of landscape changes is often scale dependent; permanent changes can consist of series of ephemeral phenomena (e.g. year seasonality).

Another important feature that describes landscape changes is their complexity. The term “landscape change” itself is a kind of generalization. The total landscape change takes a very long time (close to geological scale, as postglacial landscape changes in Europe) or concerns just a small part of space (for example flood of river valley after dam construction). Every landscape is a scene of simultaneous, durable and ephemeral changes and every landscape possess marks of its historical evolution. Majority of landscape changes concern just some

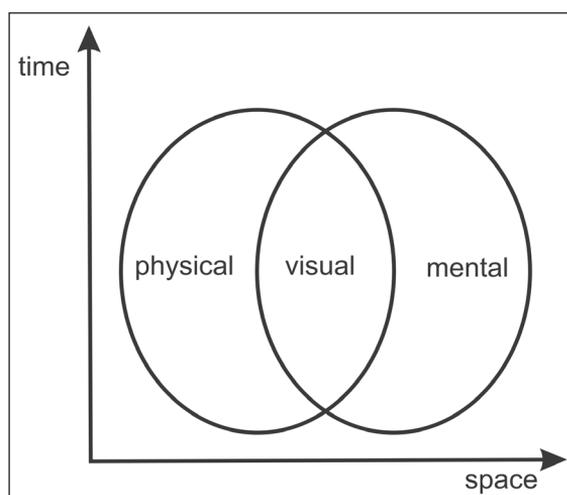


Fig. 1. Landscape ranges and dimensions (own elaboration)

landscape elements. Due to different dynamic that is followed by different study methods, the division into natural and cultural landscape is often implemented.

According to K. Wojciechowski (2010) landscape changes are scale dependent. That means different meaning of the same phenomena if they were considered on different levels of hierarchical landscape patterns and results in necessity of use of various methods, that would be adequate to the chosen research scale. As examples of time scale relativity the author mentioned above refers to geological or seasonal scale for natural aspects and historical period or human life scale for cultural aspects.

Similarly to spatial scale, time scale of research always depends on a goal and a scope of realized work. In case of tourism research its internal

diversity should be underlined. That makes a well thought-out scale choice very important.

Time scale should always follow a subject of research. Tourism geography research on landscape can focus on:

- landscape itself and its values for tourism
- landscape changes caused by tourism
- landscape perception by tourists.

Each of the scopes mentioned above deserves operating within different time scale.

## Landscape history as a value for tourism

The important feature of tourist attraction is its uniqueness (MacCannel 1976, Urry 2007), often manifested by its age. The time scale is relative: the most popular all over the world are the oldest (sometimes within the narrow category) and sometimes the youngest attractions. They attract people, however the age and supposed uniqueness doesn't have to correspond with the objective value of the attraction (Hsu, Wolfe, Kang 2004).

It's difficult to create attraction uniquely on the basis of time factor. This should be followed by visual character of the attraction. Often visitors are not able to recognize the older object or even to distinguish an original from a well-made copy. This is the case of sudanese architecture, which hasn't change for ages or the Lascaux cave, where Lascaux II is presented to tourist instead of endangered original.

The problem of age remain even more complicated, if the whole landscape, not just its elements, should be taken into consideration. M. Pietrzak (1998) distinguishes absolute and relative age of the landscape. The first one corresponds to establishment of the lithogenic basis of the area, and the second means "adjustment" of geocomponents and foundation of landscape structure. Popular marketing slogans, as "prehistoric landscape" in case of Stonehenge vicinity or "the eldest landscapes of the Earth" for Venezuelan region of the Gran Sabana bases usually just on the landscape features that are the most important from the touristic point of view (in the mentioned examples that are megaliths and tepui formations respectively).

From the landscape management point of view, the concept of "landscape biography" (Cuijpers, Bekius 2004) seemed to be very useful in tourism. According to this concept, every landscape change continuously, but it keeps some material and nonmaterial elements that represent its past. Landscape biography should be preserved not only visually, but also mentally as "genius loci". Since every landscape has its history, the possibilities of implementing landscape biography concept in the field of tourism seemed to be unlimited. The more diversified landscape history, the more elements demand preservation or reconstruction (Kulczyk 2008). Yet, applying of landscape biography concept in tourism require extensive knowledge and aesthetic sensitivity.

Otherwise kitschy caricature can be easily created (Przybyś 2006, Myga-Piątek 2010).

The easy answer to the “how old is this landscape?” question doesn’t exist. A landscape, that is penetrated by a tourist is always contemporary. However, its genesis and history are important values, that serve not just as amusement, but also bear significant educational importance.

Another time related feature of tourist attractions is their durability. Both stability (“the eldest landscapes”) and landscape dynamics (“see, before they gone”) can be attractive. Landscape changes can limit presence of whole landscape types or just their elements that are visually, mentally or utility important to the visitors. Such landscapes are often referred as “disappearing”. The term is broad and covers both well endangered but still existing landscapes, and attempts of physical or mental reconstruction of those that already disappeared (Kulczyk 2010). It has to be mentioned that recognizing a landscape as “disappearing” is mainly media construction. The real facts are often of the second importance. The explosion of tourism in polar regions that has taken a place over last ten years, is clearly connected to the global climate change propaganda (Giot 2008).

## **Landscape changes caused by tourism**

Tourism (especially in its mass form) is relatively young phenomenon, but its strong influence on the landscape is well documented. Changes are observed as well in structure as in landscape functioning. The extent of landscape change generated by tourism depends on:

- Its spatial and temporal range
- Its complexity, taken as the number of dimensions (physical, visual, mental) and components that are influenced.

In case of mass tourism development landscape changes often mean an abrupt change of land use structure due to tourism infrastructure development. However even individual objects change the landscape (Gonda-Soroczyńska 2010), the impact has often mass character and lead to raise of strongly human-influenced “tourist landscapes” (Gkoltsiou, Terkenli (without date), Venema 2008). Another way of tourism development is gradual change of landscape functions. The described model operates within sustainability paradigm, and helps to preserve visual landscape values. Elements stay the same, but postindustrial objects serve as museums, castles are hotels and sheep paths are tourist trails. This way tourism supports landscape revitalization (Hendriks, Knüvener, Rekitke 2008). Moreover, people themselves have started to perceive landscape more as a décor than as life requirement (Buijs, Pedrolí, Luginbühl 2006).

## **Tourism and ephemeral landscape changes**

Tourism doesn’t exist without tourists – the receiver’s perspective seemed to be of crucial importance in the discussed field of research. Although the perception problems are the domain of social and psychological sciences, they cannot be omitted in tourism geography research.

The time of contact clearly correspond the way a tourist observe and perceive a landscape. A. Krzymowska-Kostrowicka (1997) identifies three forms of contact between a tourist and what surrounds him: travel focused on reaching the scope, travel through, and a longer stay. In the first case just one object remains within tourist interests. In the second, all what passed by is interesting, but the observer isn’t able to catch details. Thirdly, the tourist stays within one area enough to have a closer and more complex contact with it.

Duration of landscape change can be longer or shorter than duration of tourist’s stay within changing landscape. In the first case tourist’s awareness of the ongoing process is of crucial importance. It can result in personal experience of an observer (tourist’s age and frequency of his visits to the area are probably the most important factors) but can also be shaped by information supported by tourist guides, press and other media. Individual awareness of landscape change is a feature difficult to identification, of highly individual character. Somatic and psychophysical factors, that are almost impossible to identify within geographical research, are also important for the process of landscape perception.

Independently from the considerations mentioned above it should be stated that every tourist – landscape interaction is characterized by place and time unity. Often a tourist observes the landscape just one time in his life

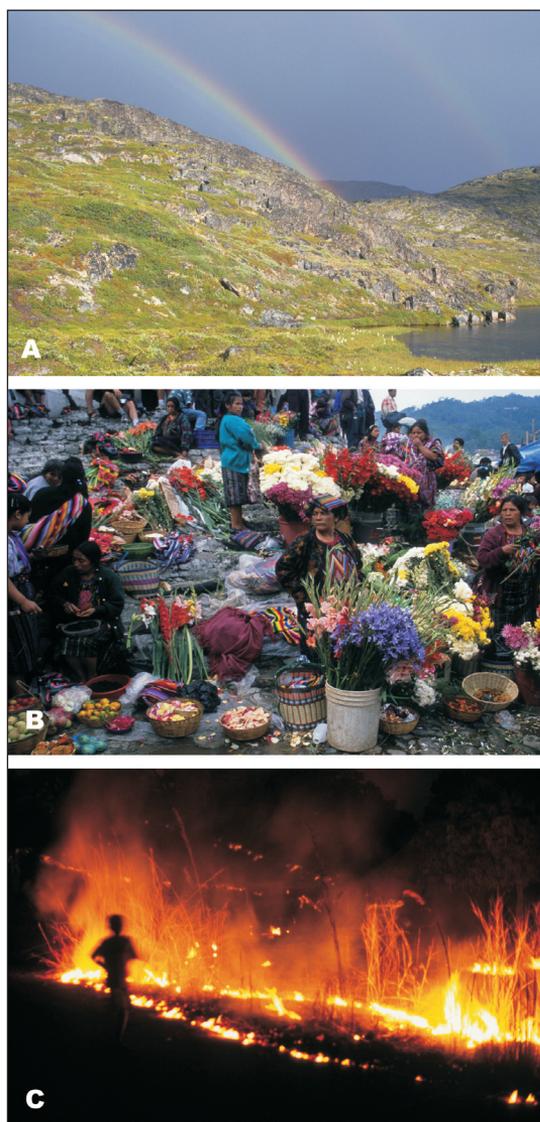


Fig. 2 Different types of landscape ephemeral changes. A. Rainbow - meteorological phenomena have strong impact on visual character of the landscape; Disko Bay, Greenland. B. Market- cultural event that is also a tourist attraction. Chichicastenango, Guatemala. C. Fire – both natural and cultural landscape change, may be visually attractive, but also dangerous. Loropeni, Burkina Faso. Photos by the author.

– and remembers it exactly how it was on that special day. As this can clearly be seen, the ephemeral scale of landscape change is of significant importance in tourism research.

Ephemeral landscape phenomena can be as well natural and cultural, and they can be an advantage or a disadvantage (or even a danger) to tourism (fig. 2). According to P. Brassley (1998) specific nature of ephemeral phenomena consist in the fact that they are important for people, but they are not taken into consideration in the process of landscape assessment and in spatial planning. The same author divides ephemeral phenomena in anticipated and unanticipated. This classification is very important for the field of tourism. Anticipated ephemera can be important tourist values or temporal barriers and they should be taken into account in landscape assessment and tourism development plans. This apply as well to natural as men-induced ephemera.

Ephemeral phenomena can be of regular (seasonal, daily or even hourly) or irregular character. This feature determines its use as tourist attraction. Regular ephemera are more suitable for infrastructure development and for incorporation into tourist attractions system. However, landscape can be endangered by the exceeded number of tourist arriving together in order to observe the phenomenon (and being themselves ephemeral disadvantage). That is the case of year seasonality in European tourism, where holiday seasons overlay on landscape seasonality. Although the problem of seasonality in tourism is well explored from the economic point of view (Baum, Lundtorp 2001), there are only few works that concern landscape dimension of these changes (Terkenli 2005).

Irregular phenomena are less attractive for mass tourism, which deserve detail tour plan. It is difficult to implement them to the tourists attraction system, but thanks to their character they are less endangered by over-commercialization and could be of significant value for forms of tourism that focus on deeper contact with landscape (e.g. ecotourism).

## Conclusions

Landscape research in the field of tourism geography joins two scale dependent elements: a landscape and tourists themselves. The landscape dimension that is explored influences a scale of research. Physical dimension requires broader time scale, as the research focus on landscape history. For mental dimension short – term, ephemeral changes are very important, as they determine landscape perception, and visual dimension

operates between the two scales mentioned above.

Some important aspects that regulate significance of landscape changes for tourism can be listed. These are:

- Simultaneousness of landscape change and tourism phenomena (historical and actual changes);
- Landscape change direction (one way, cyclical, irregular changes);
- Possibility to anticipate in landscape change (anticipated and unanticipated changes);
- Spatial and mental range of a change;
- It's visual character.

In the case of historical changes their mental range (based on age or historical significance) and visual character of artefacts are the most important factors. As for actual changes, their time range and regularity are the crucial features. A time range influences tourists ability to observe a phenomenon and possibility of anticipation makes possible to include it into tourists attractions system.

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