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Transforming Historical Towns: Challenge or Tragedy?

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ABSTRACT

The historical centers of many towns in the world are under constant pressure of new demands caused by the development of post-industrial civilization. The risks of this process, which can either completely re-structure the existing towns or change them into little more than tourist zones will be shown on the example of Prague. The situation of Prague is a typical example of a historical town where the political, social and economic interests are clustered in a way which makes it extremely difficult to achieve rational solutions to the city problems. The possibilities of future progress should be tested on the level of urban planning, legislation and critical theory of culture. Such an analysis should include the social aspects of possible changes, which have immediate consequences especially for low-income groups of society. The sustainable development in this context means to avoid or at least to minimize any irreversible changes in the inherited land- and cityscapes.

1 Introduction

The idea of sustainable development usually applies to new built structures and towns. Much less studied are historical towns, although the majority of population in large parts of the world live in towns and buildings designed before 1900. The historical centres of many towns in the world are, however, under constant pressure of new demands caused by the

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development of post-industrial civilization. The risks of this process, which can either completely re-structure the existing towns or change them into little more than tourist zones will be shown on the example of Prague. The present-day situation of Prague is a typical example of a historical town where the political, social and economic interests are clustered in a way which makes it extremely difficult to achieve rational solutions to the city problems. The possibilities of future progress should be tested on the level of urban planning, legislation, and critical theory of culture. Such an analysis should include the social aspects of possible changes which have immediate consequences especially for low-income groups of society. In this paper, I try to grasp the town as a dynamic system. This means that each change in the system has complex consequences. There are no isolated or purely technical problems.

2 Discussion

East European towns after the fall of the communist regimes show the impact of market economy and of often over-night liberalization. The unique position of Prague which makes up its difference in comparison to other regional centres as Warsaw or Budapest is given by its extremely well-preserved and picturesque historical centre and by the related tourist industry. The city centre is dominated by the iconic image of Prague Castle over the Vltava valley, a hill crowned by St Vitus Cathedral (the image of town under auspices of Gothic cathedral was one of the strongest visual ideas of German Romanticism, expressing the nostalgia and the sense of lack of the former unity of Faith and Reason; the inspiration is still perceptible in the idea of the Stadtkrone, City Crown, first published by Bruno Taut in 1919). There are, in fact, at least three cities of Prague. First, there is a city of tourists. Second, there is a small but booming city of managers of international companies. And third, there is a large city of employees, the city of the "bottom billion." There are no slums, no unemployment. One of the reasons is the above-mentioned sector of services related to international, really globalized tourism. On the other hand, the living standards are basically lower than the living standards in West European countries. The mechanisms of local government are not generally trusted, and people do not identify themselves with the political representation of both the city and individual neighbourhoods.

In my paper, I present four case studies describing architectural monuments of varied

status. The complex problems of recent building preservation and urban design should be demonstrated in these buildings. Two monuments are taken from the area of Prague Castle: the "Gothic" Cathedral of St Vitus and the "Renaissance" Royal Summer Residence. These two cases may be contrasted with two examples of monument-making and monument-destruction from the city dominated by the view of the Castle: the planned but non-realized project for the new National Library on the Letná plain, in an area adjacent to Prague Castle, and the planned demolition of the Žižkov train station on the opposite side of the Vltava river, in the long neglected industrial zone.

Prague Castle is, in fact, rather a small town than a fortress. The area is visited by ca. One million of paying visitors a year plus a non-countable number of non-paying persons. Its main focus, the Cathedral dedicated to the Virgin Mary and to the holy patrons of Bohemia (that is why it is normally called St Vitus Cathedral), was founded in 1344 AD. Apart of its strictly religious function, it was used as a mausoleum of Czech rulers, which gave the building its status of state and national symbols form the very beginning. In its structure, the religious and political interests were intertwined almost by definition (cf. Kalina, 2009).

As all Gothic Cathedrals, Prague Cathedral can be taken as a paradigm of a certain kind of sustainability. It was constructed of natural materials, mainly of local sandstone. Its maintenance supposed the existence of a perpetual workshop, the mason lodge. The continuous maintenance helped – and helps even today – to preserve the tradition of craftsmanship. The building type – the skeleton-like structure built of stones joined together by iron ties – was developed in northern France with a different kind of climate and different source of building materials (all North French Cathedrals were built of limestone). The oceanic climate of Northern France differs from the Central European. Prague is, in fact, one of the easternmost places where this building type was applied. The Cathedral was constructed in the medieval warm period, before the arrival of what is currently called Little Ice Age of 14th to 19th centuries (Mann, 2002; Mann, 2002[2]). It is not, however, very probable that its skeleton structure was influenced by the climate change. Despite of the reports describing individual damages, neither heavy winters nor extreme storms could substantially endanger the stone structure till it was properly maintained (for extreme storms in Bohemian history cf. Brázdil and Kotyza, 2004). In the second half of the 20th century, the surface of the

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Cathedral suffered under acid rains, whereas the last two decades brought higher concentrations of exhaust gases in the air (for the present-day maintenance of the building cf. Chotěbor, 2010). The only part of the building which is constantly damaged by climatic influences is, however, the Last Judgement mosaic over the South entrance, realized in 1371 AD. The application of the mosaic technique was also a result of cultural transfer, in this case from Italy with Mediterranean climate. The harsher condition of Central European climate caused gradual destruction of the work, which must be restored to the original glamour with the help of modern technologies (see Kyzourová, 2010).

Figure 1: St Vitus Cathedral, Prague, a view from the East.

For the overall state of the building, the changes of its social use proved to be more important than the transfer from one climate to another, and even more important than the climate change or air pollution. Since the 19th-century completion campaign and still more after final completion in 1929 AD, the Cathedral served rather as a national symbol than as a church, although the change of function was never official. Actually, the building serves more as a museum for millions of visitors than as a place of worship. The flow of tourists has its positive aspects. The actual maintenance costs can be fully financed from the profits. On the

other hand, the original mission of the building vanished and any sense of community defined by gathering in its walls was practically lost.

There are also quite practical problems caused by tourism. One of them is the condensation of water caused by breathing of visitors and by the water particles brought inside on their shoes. Since 2000 AD the interior climate of the Cathedral has been controlled by fifteen sensors placed inside its structure. The increase of humidity is, however, accompanied by the process of mechanical destruction of the interior. In this way, the booming tourism consumes at least a part of incomes it produces. Moreover, the very fact that the building serves as a museum and not as a place of worship has fatal consequences for its apprehension by those who are not tourists but inhabitants of the city. Recently, the possibilities of its future use are fiercely discussed inside of the Catholic Church.

Another example of a historical monument with a strongly problematic function is the Royal Summer Residence in the north-eastern part of Prague Castle. The building was realized after 1537 AD for the Czech king Ferdinand I from the Habsburg house. The construction included a system of structural iron ties made from high quality steel with unusually high ratio of nickel alloy, produced by foundry in Vrchlabí (Northern Bohemia). It is interesting that the production of the foundry together with mining activities in other parts of Bohemia was a cause of rapid deforestation of north-Bohemian Giant Mountains already in the 16th century (Jebavá, 2004, 17).

Once more, the residence as a whole represents a building type developed in another climate zone. In this case, it is a Mediterranean villa designed and constructed by Italian masters in a region with relatively harsh winters. It is further very probable that the residence was realized just at the end of a warmer period in Bohemia. In the 1520s and in the 1530s AD, the mean air temperatures were by 0, 5 ºC to 1, 0 ºC higher than those in the 20th century, so that the almond trees, melons, and olives could be successfully planted in Central Bohemia (Brázdil and Kotyza, 2000, 107-111; Brázdil and Kotyza, 1999). This situation contrasted with the overall dropping trend of temperatures of the second half of the 16th century. From the late 1560s winters were prevailingly colder than in the period 1901-1960 (the difference may be estimated 1, 3 ºC to 2, 1 ºC, see Brázdil and Kotyza, 2000, 94). The weather

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conditions may even have worsened in the following century, when the Maunder minimum in solar activity probably caused a prolonged period of dropping temperature all over Europe (Eddy, 1976). Thus, it is not surprising that the structure was endangered just by the problems caused by Central European climate, especially by heavy rains and snowfall. All the technical problems of the building were solved by the recent renovation. There are, however, many new questions. It is especially difficult to define how to use the restored building. It was, in fact, never actually used – it served as a large hall for court entertainment. It can serve as a room for temporary exhibitions today, but it cannot be heated over winter because of problems with humidity.

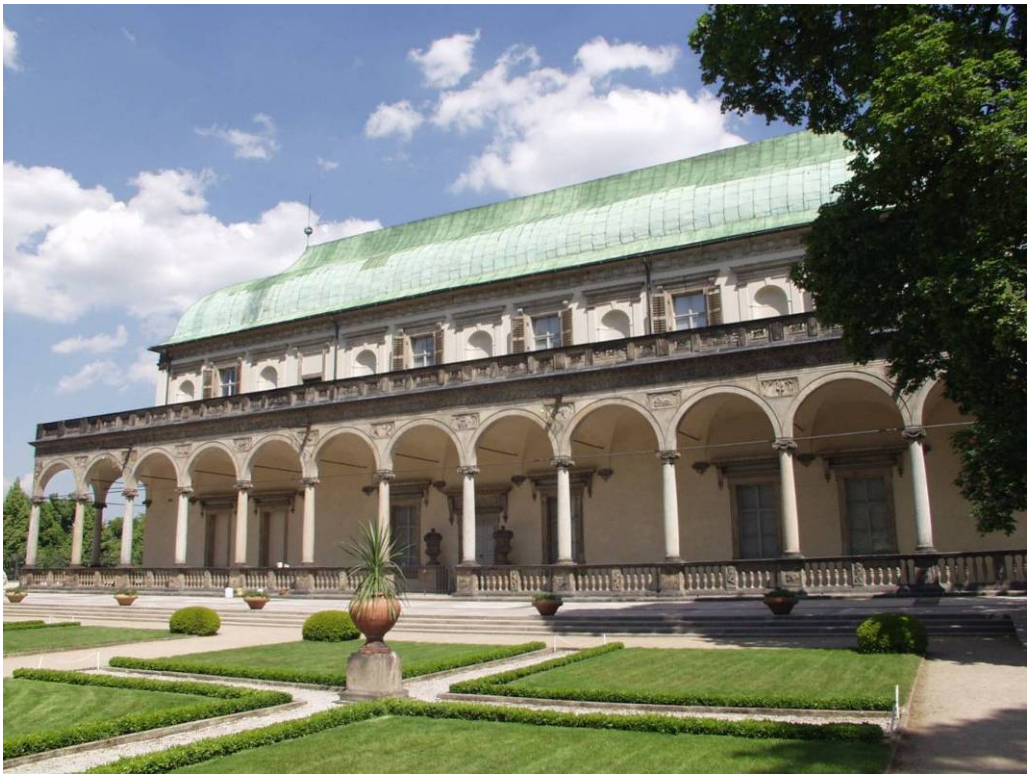

Figure 2: The Royal Summer Residence in Prague, view from the west.

The most imminent danger in the building is, in fact, a quite surprising danger caused by the construction of a tunnelled highway system alongside the perimeter of the historical city. This tunnel shows that the meticulous restoration works on a small stone jewel cannot be isolated from the overall problem of the metropolis. Thus, it is once more evident that the human factor is more important than changes in climate.

The historical city centre is further influenced even by such building actions which are

seemingly not related to its area at all. In 2007 AD, an international competition was organized for the building of the new National Library in Prague, which was supposed to be constructed on the Letná plain above Prague, in the vicinity of Prague Castle; the building could enable a panoramic outlook over the Vltava valley with the historical town centre. The international jury presided by ZahaHadid elected the project by Future Systems, a studio co-headed by Czecho-British architect Jan Kaplicky. The project of eminently anti-traditional "blobitecture" struck on a fierce opposition among the inhabitants of the town. In the end, it was cancelled. At the first view, the design of the new National Library was not related to the above-discussed problems. In fact, its construction would have had an immediate impact on the architectural heritage of Prague, as the present-day National Library of Prague is located in the former Jesuit College, built in the 17-18th centuries AD. It means that if the new building were constructed, the College (the biggest building of the historical centre with the exception of Prague Castle, situated next to the 14th-century Charles Bridge) would be used for another purpose – most probably as another attraction for tourists. This aspect of the new construction was not, however, publicly discussed. There is no doubt that for the sustainable development of the city it is much better to work on re-using of the old buildings than to design the new, especially if the old College has rooms enough to harbour the National Library even in the 21st century.

Another problem of the proposed library was its dominant position over Prague. It was not designed as a simple library – it was designed as a new town icon (I do not use the term in the sense applied by Jencks, 2005, but more traditionally to describe a building which serves as the primary point of self-identification for the inhabitants of a town). As Prague already has the iconic panorama of Prague Castle, I call this kind of manipulation of the city image a pseudo-iconicity. The new buildings should always respect the old. As the historical architecture incorporates our past, it is an ethical duty to preserve its original context.

The last and most actual example of how is the historical architecture used or misused is a former train station at Žižkov, one of the 19th-century industrial suburbs of Prague. With the decline of train transportation in the last decades, the goods station lost its proper function and was finally closed in 2002. After several years, it was decided to demolish the whole structure and to develop the whole area into a mediocre residential quarter for ca. 15 000 persons. The

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idea of demolition was heavily opposed by local initiatives and public, but it found a paradoxically strong support of the local town council. Up to now, the future of the area is not clear. I would like to conclude my paper with several remarks concerning the urban quality of the train station, suggesting some possibilities of its future development.

Figure 3: The project of the new National Library in Prague. The Royal Summer residence and st Vitus Catehdral in the background

Geographically, the station almost exactly counterbalances Prague Castle with St Vitus Cathedral. It may be useful to remark that train stations were sometimes metaphorically described as modern, it means, 19th-century "cathedrals". Both the Cathedral and the railway station are buildings absolutely crucial for our understanding of specific cultures of their period. The Žižkov station was designed in 1930 and realized by 1936. It served as a goods station and was not connected to any passenger station (Beran, 2008). The architecture of the train station reveals its main function, which is the suspension of movement. It was built to a ground plan of a large U, with storage rooms on the long sides and a shorter wing housing administration, turned to the town.

The train station was designed as a skeleton construction of iron-concrete with additional

brick walls. Given this, it cannot be demolished without ecological losses, as the iron-concrete skeleton was not supposed to be re-used. On the other hand, the construction is perfectly preserved and the vast structure can be easily used for varied purposes (e. g., As museum depots, or as a large exhibition space; Prague even today lacks an archeological museum despite of the rich collection of findings from the last century of excavations etc.). I also think that it could preserve its recent function – the building is currently used for stores, and there are practically no free rooms left.

Figure 4: The Žižkov Train Station, Prague, view from the south.

The large building could be not only easily renovated; it could be also easily incorporated into a new development plan. In this way, the master plan of the new quarter could be related to the memory of the place. The construction of the new quarter should not be left to private developers, who are interested in short-term profit. Conceptualizing the future master plan of the area, we may, e. g., Apply the urban theory of Aldo Rossi (see esp. Rossi, 1984). The Žižkov train station is a perfect example of an "urban artifact", a catalysing monument of the place´s past. Its vast structure represents a challenge, not an obstacle, to any future designer.

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Another inspiration for the new Žižkov could be found in the theoretical work of Christopher Alexander (see esp. Alexander, 2002, 175-341). According to Alexander, it is good to get rid of the idea of all-creating and all-controlling architect. The growth has been always slow. Alexander accentuates the importance of notions as unfolding whole and wholeness for architectural and urban design. He differentiates between to design and to make, between living process and non-living process or non-living structure. He describes the structure-destroying transformations in modern (Western) society as the failure of unfolding. He criticizes the architect´s social irresponsibility, the situation when architect is responsible for his plans only. The new buildings should respect the urban texture, and this is certainly valid for Žižkov as well as for other historical districts all over the world. At the same time, people living in the Žižkov area should be allowed to form their own vision for their neighbourhood (Alexander, 2005, 257-311). The decision-making should not be limited either to the town council or to a group of experts, even if their participation is inevitable.

The sustainable development in this context means to avoid or at least to minimize any irreversible changes in the inherited land- and cityscapes. In the highly organized systems like post-industrial towns the aims of private developers cannot guarantee the quality of life to wider groups of population. It is one of the most conspicuous features of current tourist industry that tourists visiting Prague are closed in their imported bubbles. The city, in fact, should and could serve as a large educational laboratory. Not only the historical city centre, but also 19th-century industrial zones and buildings like the Žižkov station should be preserved with minimal intervention for both economic and aesthetic reasons. Each intervention into the city fabric should be broadly discussed and the decisions should be made in favour of a long-time profit. The present-day situation may be characterized by a certain gap between a highly-developed theory of urban planning and purely utilitarian political practice. Surprising is the almost complete lack of cooperative enterprises, as all major projects of residential housing are in the hands of developers who are not interested in the city as a whole, but only in their profits. The development of small cooperative projects could contribute to a higher degree of identification of locals with their neighbourhoods, and could also generate simply better, more innovative architecture.

3 Conclusion

The city should be built in the bottom million, not only for tourists and managers of international companies. It requires a new elaboration of concepts and practice of democracy. Formal democracy is not competent enough to guarantee quality of living. Democracy means the possibility of public control. Democracy limited to capitalist economics and electoral system declines. Transformation of historical cities is a big challenge. There is no need to take it as a tragedy. We do not need mammoth projects, but rather a new sort of responsibility and integrative design, which would include all aspects of the built heritage in the planning process. The process should at the same time integrate all future consequences and risks which will be produced by its realization.

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5 References

Alexander, C. (2002). *The Nature of Order.An Essay on the Art of Building and The Nature of the Universe 2. The Process of Creating Life*, Berkeley, Cal.: The Center for Environmental Studies.

Alexander, C. (2005).*The Nature of Order. An Essay on the Art of Building and The Nature of the Universe 3. The Phenomenon of Life*. Berkeley, Cal.: The Center for Environmental Studies.

Beran, L. (2008). NákladovénádražíŽižkov (Goods Station Žižkov), *ZaStarouPrahu.VěstníkKlubuZastarouPrahu* 38 (3): 25-28.

Brázdil R. and Kotyza O. (1999). *History of Weather and Climate in the Czech Lands III. Daily Weather Records in the Czech Lands in the Sixteenth Century*. Brno: Masaryk University Press 1999.

Brázdil R. and Kotyza O. (2000). *History of Weather and Climate in the Czech Lands IV.Utilisation of Economic Sources for the Study of Climate Fluctuations in the Louny Region in the Fifteenth-Sixteenth Centuries*. Brno: Masaryk University Press 2000.

Brázdil R. and Kotyza O. (2004). *History of Weather and Climate in the Czech Lands VI. Strong Winds*. Brno: Masaryk University Press 2004.

*Corresponding author (P.Kalina). Tel: +420 22435 6355. E-mail address: kalina@fa.cvut.cz.

Chotěbor, P. (2010). Systematickérestaurováníkamennéarchitekturykatedrálysv.Víta (Systematic Restoration of Stone Architecture of Cathedral of St Vitus))*Zprávypamátkovépéče* 70 (5): 308-313. (with an English summary on p. 378).

Eddy, J. A. (1976). The Maunder Minimum. *Science*, New series 192 (4245), 1189-1202.

Jebavá, K. (2004.). *Management horskýchvřesovišť v Krkonoších* (Management of Mountain Moors in Giant Mountains). MA Thesis, ThePurkyně University, Olomouc.

Jencks, C. (2005). *Iconic Building*, New York: Rizzoli 2005.

Kalina, P. (2009). Architecture and Memory.St Vitus Cathedral in Prague and the Problem of the Presence of History.In J.Fajt and A.Langer (Eds.), *Kunst als Herrschaftsinstrument*, Berlin: Deutscher Kunsverlag 2009, 150-156.

Kyzourová, I. (2010). Historieoprav a současnáúdržbamozaiky s PoslednímsoudemnaZlatébráněsv, Víta (History of Repairs and Current Maintenance of the Mosaic with the Last Judgment on the Golden Gate of St Vitus Cathedral),*Zprávypamátkovépéče* 70 (5), 326-330 (with an English summary on p. 379).

Mann, M. E. (2002). Little Ice Age.In M.C. MacCracken and J. S. Perry (Eds.), *Encyclopedia of Global Environmental Change Volume I. The Earth system: physical and chemical dimensions of global environmental change*. Chichester : John Wiley 2002, 504-509.

Mann, M. E. (2002[2]). Medieval Climatic Optimum.In M.C. MacCracken and J. S. Perry (Eds.), *Encyclopedia of Global Environmental Change Volume I. The Earth system: physical and chemical dimensions of global environmental change*. Chichester : John Wiley 2002, 514-516.

Rossi, A. (1984). *The Architecture of the City*. Cambridge, Mass: MIT Press. 1984.

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