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# PLACES AND TECHNOLOGIES 2014

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# CONCEPT OF URBAN VILLAGE: THE APPLICATION OF THE CONCEPT AS A FOUNDATION FOR NEW TYPOLOGY OF URBAN VILLAGES<sup>14</sup>

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## ABSTRACT

*Whole 20<sup>th</sup> century was marked with many new movements (“-isms”) in urbanism and architecture. Some of them, such as modernism and post-modernism, were especially important and influential. But, current situation is a bit different; there is no prevalent movement or concept. Many actual theories and concepts are the “mixes” of previous movements, so they can be described as “hybrid” ones. One of these hybrid concepts is the concept of urban village. The “hybridity” of the concept is visible in its name, which looks confusing at glance. But, the meaning of the concept is clear; it should be understood as a construct of sustainable community based on mixture of advantages from urban and rural/suburban life. The definition and main principles of the concept of urban village have been quite general, which has led to its wide application. Consequently, there are a bulk of new or renewed neighbourhoods and communities named as “urban villages” all over the World today. They often have various or even opponent characteristics. Thus, this gap between theoretical fundamentals and application “in situ” has made the whole idea doubtful and unstable. This research tries to clarify this gap by the way of possible typology of urban villages. This proposition will be checked through theoretical explanation and the analysis of two different cases of urban villages. The research should present the stability of proposed typology hereof. Finally, whole research will accent the complexity of the concept of urban village in global context.*

*Keywords: Hybridity, Sustainable communities, Urban-rural, Application, Typology*

## INTRODUCTION - THE CONCEPT

We have been witnesses of significant review of former practice in urbanism and architecture during last decades. This is especially true about the heritage of modernist movement, which was “inviolable and untouchable” during most of 20<sup>th</sup> century. Modernism as well as other movements in 20<sup>th</sup>-century urbanism and

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architecture (“-isms”) have been carefully considered, interfaced and critically evaluated. This is probably the reason why there is no dominant theoretical concept in urbanism and architecture today. Many actual theories and concepts, which have been developed since 1980s, are “mixes” or “hybrids” of previous movements. In accordance to this we can determine terms such as “hybrid urbanism”, “hybrid architecture” or even “hybrid landscape”<sup>15</sup>.

One of these hybrid concepts is the concept of urban village. The “hybridity” of the concept is even visible in its name, which looks confusing. It is truly an oxymoron, because “the two words contradict each other” (Sucher, 2003, p. 15). But, the hybridity of the concept should be understood as a construct of major advantages of both city and village; as a mixture of “the intensity of a city and the intimacy of a village” (Fleming, 2000). On one hand, urban side should be reflected through intensive public life and socialization. On other hand, rural/suburban side should be noticed through the intimacy of various modes of housing and leisure.

Previous introduction of the concept is the base for the first definition of the URBAN VILLAGE as a sustainable mixed-use neighbourhood development (Landman, 2004). The term neighbourhood isn’t just a physical connection of houses and streets by the concept. It is even more directed to the connection between neighbours; “Neighbourhoods are nothing without neighbours” (Sucher, 2003, p. 17). Similarly, British architect Peter Neal, who is one of main supporters of the concept of urban village, compares the concept with community building (Neal, 2003, pp. 2-24). Finally, urban village can be described as such community which offers “a variety of uses, both housing and non-housing; a choice of tenures, both residential and commercial; a density of development which can help encourage the use of non-housing activities; a strong sense of place, with basic amenities within easy walking distance of all residents; a high level of involvement by local residents in the planning and onward management of the new development” (Landman, 2004, p. 2).

The explanation of the concept of urban village has great level of generalization and universality. This position of the concept has been the basis for its wide application all over the World. Thus, a bulk of new or renewed neighbourhoods and communities, named as “urban villages”, has been built in last three decades. But, the application of such general concept has resulted with various or even opposite characteristics of these villages in the same time. This gap between general explanation of the concept and its very flexible application opened some questions of the validity of the concept (Biddulph, Franklin, Tait, 2002).

Mentioned gap is also the challenge for research. Proposed research should try to clarify this question through possible typology of urban villages. This proposition will be checked through theoretical explanation and the analysis of two different cases of “urban villages”. The cases are situated in geographically different part of the World,

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<sup>15</sup> The definition of hybrid landscape is related to the development of urban areas in Europe during 1980s. This development is described as an “urban sprawl”, where the border between town and villages is becoming more and more invisible. Some critics see this model of spatial development as an anti-urban one (Pichler-Milanović, 2003).

which will hypothetically explain the relation context-typology. The research should present the stability of proposed typology hereof. Finally, whole research will be certainly comprehensive explanation of the concept, with special accent of its complexity in global context.

#### THEORETICAL EXPLANATION OF THE CONCEPT

The concept of urban village was developed in late 1980s in the United Kingdom. The creation of this concept was the reaction to monotony, segregation and strict zoning of modernist urbanism (Tait, Biddulph, Franklin, 2006). This was a period of strong transition from post-war social welfare and equality to liberal market and individualization. In accordance to this, the founders of the concept emphasised the importance of pre-and post-modernist movements, concepts and figures, such as Ebenezer Howard, Jane Jacobs, Leon Krier and Christopher Alexander. Finally, several British architects formed the Urban Villages Group in mid-1980s. The work of the group had got the patronage by the Prince of Wales from 1989 (Huxford, 1998, pp. 202-204).

The main success of the group was the intensive influence to UK legislature in mid-1990s. This concept is successfully linked to the major issue of these years – the development of sustainable communities (Jabareen, 2006, pp. 38-52). Finally, the main elements of the concept of urban village were include into “Planning Policy Guidance 1: General policy and principles” (PPG). This UK legislative document was a priority in town planning field during period 1997-99. Therefore, this document was the most important instrument for the promotion of the concept (Tait, Biddulph, Franklin, 2006). One of articles in the part of mixed-use development (Article 12) is dedicated to urban villages, as “high-quality, mixed-use developments”. This statement was elaborated by desired characteristics of urban villages:

- compactness;
- a mixture of uses and dwelling types, including affordable housing;
- a range of facilities; appropriate infrastructure and services;
- high standards of urban design;
- access to public open space and green spaces; and
- ready access to public transport (UK DOE, 1997, art. 12).

Official explanation of the concept in PPG was quite short and general, so some “patterns” for the application of the concept *in situ* certainly wasn’t clear. However, many other documents from this period (late 1990s) gave more useful instructions for it (as “manuals”). For example, M. Biddulph, B. Franklin and M. Tait organized the list of instructions by analysing the work of Tony Aldous, British architect and strong supporter of the concept:

- 3000 - 5000 people
  - "[I]nclude such adjoining land as is needed for its maximum protection...maximum possible self sufficiency" (pg 24)
  - Focal village square
  - Small enough for everything to be in walking distance
  - Mix of housing tenures, ages and social groups
  - Retail mixed with other uses throughout the scheme
  - Primary school within the scheme
  - Pattern of open spaces should be considered
  - Connected street network
  - Traffic calming
  - Locality will set the prevailing architectural style
  - Architectural focal points, street corners, building lines, visual incidents, enclosure
  - Mix of uses within neighbourhoods, street blocks, streets, and within individual buildings
  - Permeable, pedestrian friendly, cul-de-sacs to be avoided
  - Social mix and consultation
  - Legible, focal points, strong street corners
  - Variety of buildings and spaces that change and adapt over time
  - Bring life to the buildings and the spaces in front of them
- (From Aldous 1992, 1995)

**Figure 7: Urban Village Instructions by T. Aldous (Biddulph, Franklin, Tait, 2002)**

#### OPPOSITION PART: THE CRITICISM OF THE CONCEPT

Although presented instructions haven't been obligatory, they have become one of rare "stable" starting points for the research of the phenomenon of urban village. Consequently, there have also proved noticeable differences between theory and practice in the case of British urban villages. Considering global dimension, bigger differences and variations in the application of the concept have been even more visible.

This issue has made the opposition of the concept at the same time. Professor M. Tait and his collaborators have found the failures in the application of all proposed principles of the concept. The most important failures are (Tait, Biddulph, Franklin, 2006): exaggerated aspiration to aesthetics; main motive is profit instead of the principles in many cases; and many renewal projects in city centres are named as "urban villages". A. Kreiger concludes that the principles of the concept have enabled the legitimation of the low-density neighbourhoods in the UK with elements of "enclaves" (Kreiger, 1998, pp. 73-76).

The most severe critics have come from developed countries, where urban village got the elements of gated communities. One of best examples is the case of urban villages in South Africa. Huge economic and racial segregation and enormous crime rate are still visible here. Thus, security issue has emerged as an important for potential "urban villagers". The consequence is the formation of urban villages with numerous security measures. These measures even cause the blocking of public corridors in some cases. K. Landman notices that this kind of urban development

causes negatively and results into spatial fragmentation, social exclusion and lack of democracy (Landman, 2004b).

Final conclusion of presented critics can be described with the words of M. Tait and his collaborators. They say that the concept of urban village has been successfully applied in numerous cases, including those ones which have shared a little with the basis of the concept (Tait, Biddulph, Franklin, 2006). In the end, they ask themselves if the urban villages exist in reality, because built/renewed examples are extremely different.

### PROPOSED TYPOLOGY

Explained theoretical background of the concept of urban village and its application *in situ* triggers the issue of the stability of the concept. Next explanation will try to fix this gap through the proposition of possible typology of urban villages. It will be organized through three types of them.

“NORMAL” URBAN VILLAGE is the type similar to basic theory of the concept. Previous elaboration is directly related to this type. Basing this standpoint, majority of examples of this type are in the United Kingdom and other countries with “moderate” market economy, such as Ireland, Australia, and Canada.

“OPENED” URBAN VILLAGE is more urban type of urban village, which has some correlated characteristics: higher density, more non-housing functions, elements of centres and centrality, developed public transport. Such villages are usually brownfield and re-use projects. Good examples are Millennium villages in London and similar villages inside the greatest cities in the United Kingdom (Tait, Biddulph, Franklin, 2006). If this explanation is expanded, it will include many renewal projects or “urban recycling” projects (Vaništa Lazarević, 2010, pp. 51-52). Consequently, many well-known renewal projects in old parts of European cities can be considered as urban villages. Thus, this type is more related to the countries of social capitalism (Central Europe, Scandinavia).

“CLOSED” URBAN VILLAGE is probably the most puzzling type of urban village. Examples of this type are the “culprits” for both global application of the concept and its wide criticism. The main characteristic of this type is security issue, which causes many adequate measures, such as gates, external walls, guard, and alarm systems. The gates are the symbol of this kind of development (Nen, 2004, pp. 88-89). This characteristic has derived to its name - gated communities. These villages are also new developments at the edge of urban areas. As it was mentioned, these villages are typical in the countries and regions with liberal-capitalism system and in transitional countries (Russia and CIS).

### THE CASES

The selection of urban villages as cases of research is done by proposed typology:

- Normal urban village: Coed Darcy village, the United Kingdom; and
- Closed urban village: Ivakino-Pokrovskoye village (russ. ИВАКИНО-Покровское), Russia.



**Figures 2, 3: Coed Darcy: Village plan and characteristic view (Source: [www.heritagegate.co.uk/living-at-coed-darcy.html](http://www.heritagegate.co.uk/living-at-coed-darcy.html))**



**Figures 4, 5: Ivakino-Pokrovskoye: Village plan and characteristic view (Source: [www.ivakino.ru](http://www.ivakino.ru))**

The reasons for such selection are:

- Normal village is chosen, because it is “real reflection” of the concept. In contrary, closed village is also chosen, because is considered as a problematic and most criticised type of village;
- Both villages/cases aspire to achieve unique and imposing “style” (pattern) of urban and architectural design with the accent to “neo-traditional” approach. Therefore, both of them look similarly at glance. But, design component has been specified as one of the most ambiguous elements in the application of the concept, so this possible discrepancy is a challenge for analysis;
- Both villages/cases are role-models in wider contexts (country/regional level). British case is awarded as best annual housing project in the UK few years ago and Russian case is promoted as one of the first sustainability-based communities in Russia.

Comparative analysis of two selected cases of urban village is based on the criteria, which are developed from proposed PPG instructions (named as “desired characteristics” in the document). These criteria are further explained by Urban

Village Instructions as indicators (Figure 1). The last criterion (security) is an addition. It is derived from the criticism of the concept.

**Table 3: Comparative analysis of selected urban villages**

Criterion	Indicator > The explanation of criterion (developed from urban village Instructions – figure 1)	Coed Darcy, UK	Ivakino-Pokrovskoye Russia
<b>Compactness</b>	A “filling of community” > A share of the double and row houses as an “urban” types of individual housing	++	+++
	Density of village > A number of housing units per ha	++	+++
<b>A mixture of uses and dwelling types, with affordable housing</b>	Mixed Use > A share of the buildings with more than one function (usually housing + retail)	++	+
	Dwelling Typology > A variety of building types (by shape and area)	+++	+
	An importance of affordable/social housing > A contribution of this kind of housing in village	++	
<b>A range of facilities</b>	Employment facilities > A number of working positions in village	++	+
	Leisure facilities > A presence of spaces arranged for leisure (open and green spaces, recreation centres, cafes, etc.)	+++	++
	Community facilities > A presence of public services in village (education, health care, child care, community centre, etc.)	++	+
<b>Appropriate infrastructure and services</b>	Internal transport infrastructure > A importance of pedestrian- and bicycle-friendly streets	+++	+
	A concentration of local centres > A number of places with the elements of centres (market streets, main squares, market places, etc.)	++	+
<b>High standards of urban design</b>	“Strong” design pattern > A percentage of the buildings with same design pattern	+++	+++
	Design similarity > A presence of identical buildings by urban design elements (same shapes, same facades, etc.)	+	+++
	A design of open spaces > A number of open public places with unique identity (squares, sport grounds, playgrounds, parks, arbored walks, designed back yards, etc.)	+++	++
	Detail design > A number of buildings with focal elements (marked corners and fronts, towers, domes, specially marked fronts, etc.)	+++	+
<b>An access to public open space and green spaces</b>	An access to open public spaces > A distribution of the spaces in the village	++	+
	An access to green spaces > A distribution of the spaces in the village	+++	++
<b>Ready access to public transport</b>	An access to public transport > A number of the lines of public transport in village and its vicinity (> 300 m)	++	+
	A variety of public transport types > A number of accessible types	+	+
<b>Security</b>	“Soft” security measures > An importance of elements of “defensible urbanism” (protective vegetation, an isolation of inner yards, a number of village entrances, etc.)	+++	++
	“Visible” security measures > An importance of elements of these measures (protective walls, gates with guard, strong fence around individual gardens, etc.)	+	+++

## CONCLUSIONS

Comparative analysis shows that selected cases of urban villages are quite similar by many criteria and indicators. Both examples present much attention to compactness, design and open spaces. Similar results are also noticeable in relation

to infrastructure and the accessibility to public transport. Therefore, this is the confirmation of proposed typology of urban villages.

Great difference is visible in the comparison of security criterion and its indicators. This situation has been expected by proposed typology. But, the cases also show great differences in some other indicators. For example, the cases differ significantly by a variety of building types and a presence of affordable/social housing. This isn't clearly said in the typology, but it can be easily connected with some of mentioned critics of the concept. These elements of village are directly related to the "issue of profit", which is also the result of wider (regional) context. Thus, they are also related to the typology. At the end, all observed differences can be described through the types and their presence can't guide to the conclusion that the concept of urban village is unstable by its application.

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#### REFERENCES

- Aldous, Tony, 1992, *Urban Villages: A Concept for Creating Mixed-use Urban Developments on a Sustainable Scale*, London: Urban Villages Group.
- Biddulph, M. J., Franklin B. M. Tait, 2002, "The Urban Village: A Real or Imagined Contribution to Sustainable Development?" In *ESRC*. Accessed December 15, 2011. <http://orca.cf.ac.uk/10523/>.
- Fleming, Randall, 2000. "The Case for Urban Villages." *Periodical of the Institute for Ecological Health*, No. 8, (2000). Accessed December 15, 2011. <http://www.fscr.org/html/2000-01-05.html>.
- Google. 2012. "Privacy Policy." Google Policies & Principles. Last modified July 27. Accessed January 3, 2013. <http://www.google.com/policies/privacy/>.
- Huxford, Robert, 1998, "Urban Villages - An Introduction," In *The Institution of Civil Engineers - Briefing Sheets: Chapter 1*, 202-204. London: Institute of Civil Engineers.
- Ivakino-Pokrovskoye (Ивакино-Покровское), Russia ><http://www.ivakino.ru/><
- Jabareen, Yosef Rafeq, "Sustainable Urban Forms: Their Typologies, Models, and Concepts," *Journal of Planning Education and Research* 26, (2006): 38-52.
- Kreiger, Alex, "Whose urbanism?." *Architecture Magazine*, November, (1998): 73-76, Accessed December 20, 2011. <http://www.gsd.harvard.edu/images/content/5/3/539515/fa-pub-krieger-whoseurbanism.pdf>.
- Landman, Karina, 2004, "Sustainable 'Urban Village' Concept: Mandate: Matrix or Myth?," In *CSIR report*. Accessed December 15, 2011. [http://www.csir.co.za/Built\\_environment/Planning\\_support\\_systems/gatedcomsa/docs/Sust-conf-paper-v3.pdf](http://www.csir.co.za/Built_environment/Planning_support_systems/gatedcomsa/docs/Sust-conf-paper-v3.pdf).



Landman, Karina, "Gated communities in South Africa: The challenge for spatial planning and land use management," *The Town Planning Review*, Vol. 75 (2004b): 151-172.

Living at Coed Darcy, United Kingdom ><http://www.heritagegate.co.uk/living-at-coed-darcy.html>.<

Neal, Peter. 2003, "An urban village primer," In *Urban Villages and the Making of Communities*. 2-24. London: Spon Press.

Pichler-Milanović, Nataša, "European Urban Sprawl: Sustainability, Cultures of (Anti)Urbanism and »Hybrid Cityscapes". In *Dela*, 27 (2007): 101-133. Accessed December 15, 2011. [http://www.ff.uni-lj.si/oddelki/geo/publikacije/dela/files/Dela\\_27/06\\_pichler.pdf](http://www.ff.uni-lj.si/oddelki/geo/publikacije/dela/files/Dela_27/06_pichler.pdf).

Resource for Urban Design Information (RUDI), >United Kingdom <http://www.rudi.net/>.<

Sucher, David, 2003, *How to Build an Urban Village*. Seattle: City Comforts Inc.

Tait, M., M. Biddulph, B. Franklin, 2006, "The Urban Village: An Obituary?" RUDI. <http://www.rudi.net> (Accessed November 24, 2011).

Tait, M., Franklin, B. "Constructing an Image, the Urban Village Concept in the UK," *Planning Theory* vol. 1, no. 3 (November 2002), 250-272.

The Prince's Foundation for the Built Environment, United Kingdom, ><http://www.princes-foundation.org/>.<

UK Department of the Environment (DOE), 1997, *Planning Policy Guidance 1: General Policy & Principles*.<http://regulations.completepicture.co.uk/pdf/Planning/Planning%20Policy%20Guidance%201-%20General%20policy%20and%20principles.pdf>.

Urban Group, Russia, <<http://www.urbangroup.ru/>.<

Urban Village Forum, United Kingdom, ><http://www.urban-villages-forum.org.uk/>.<

Vaništa Lazarević, Eva, 2010, "Urbana obnova, regeneracija, brownfield," In *Kreativne strategije za održivi razvoj gradova u Srbiji*, 51-69, Beograd: Arhitektonski fakultet UB.