

## INSTITUTIONAL HOMES: THE EVOLUTION OF OPEN SPACE IN THE CASE OF SOME WORKERS' COLONIES IN HISTORY

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**Abstract.** *This is a critical review of examples of how workers' settlements have been organised throughout history. I examine some examples of workers' settlements from the perspective of spatial organisation, architectural economics and urban design. The hypothesis is that workers' dwellings have not basically changed since the earliest civilisations. The role of workers' dwellings has been constantly on the fringes of spatial organisation. Generally, workers as a class were not considered an integral part of business management. Workers are part of any industrialised process and cannot be overlooked in an architectural analysis of their dwellings. The conclusions of the paper are oriented from praxis to theory. Analogies from the past to the present are presented, with a set of sketches in which the theory of spatial organisation, architectural economics and urban design patterns may be evident.*

**Key words:** *workers' colonies, residential structures, industrial revolution, urban planning, economics, architectural management.*

### 1. INTRODUCTION

The title of the paper refers to open space and workers' colonies in history. This is not an obsolete theme. Experts in the fields of spatial development, urban design and architecture are constantly rethinking the role of domestication of open space [1], and theory ranges from the prehistoric to the present.

Why did people build workers' colonies rather than social settlements or settlements for families with low incomes? The question leads to the same issue: how to organise urban patterns and their related architecture to satisfy social needs, investors' demands and legislation. Among these common issues, we should not neglect the economy, technology, politics and, last but not least, culture. Generally, the issue of workers' accommodation is an integral part of the economy and development of a region. While this is true, architecture (and architects) usually served people with power and resources, of which workers have had little.

Indeed, workers are part of the economic and political system. The problem of workers' accommodation was elegantly solved; architects introduced template plans for houses, settlements and spatial organisation for socially vulnerable groups.

The first written evidence of a systematic approach are the books of Vitruvius, in which the author describes and explains several engineering issues. Architecture depends on fitness and arrangement - in Greek *taksis* and *diathesis*, respectively; it also depends on proportion, uniformity, consistency, and economics, which the Greeks called *oikonomia* [2]. The idea was not altruistic; systematisation served the Roman army and its leaders. Put into practice, it helped them to introduce to other nations the benefits of organised spatial planning and regulation. With these methods, the Roman Empire was able to be more effective in the field of tax collection, improve the health of its citizens and regulate the economy. After the decline of Rome, systematic spatial development stagnated or was forgotten. Much later, artists' manuscripts, especially in the Renaissance, describe architecture and the composition of elements in harmonious order, but the majority of manuscripts are merely a continuation of ideas borrowed from Vitruvius. However, these utopian ideas helped architects to realise (again) that architecture is an art by humans for humans. Naturally, workers do not make an appearance in these manuscripts. The spirit of space and our shared human memory is not always a historic monument site or protected heritage; other places may be regarded as heritage with a small 'h' [3].2. A brief historical overview of workers settlements from Egypt to Slovenia

## 2. A BRIEF HISTORICAL OVERVIEW OF WORKERS' SETTLEMENTS FROM EGYPT TO SLOVENIA

### 2.1. Tell el Amarna

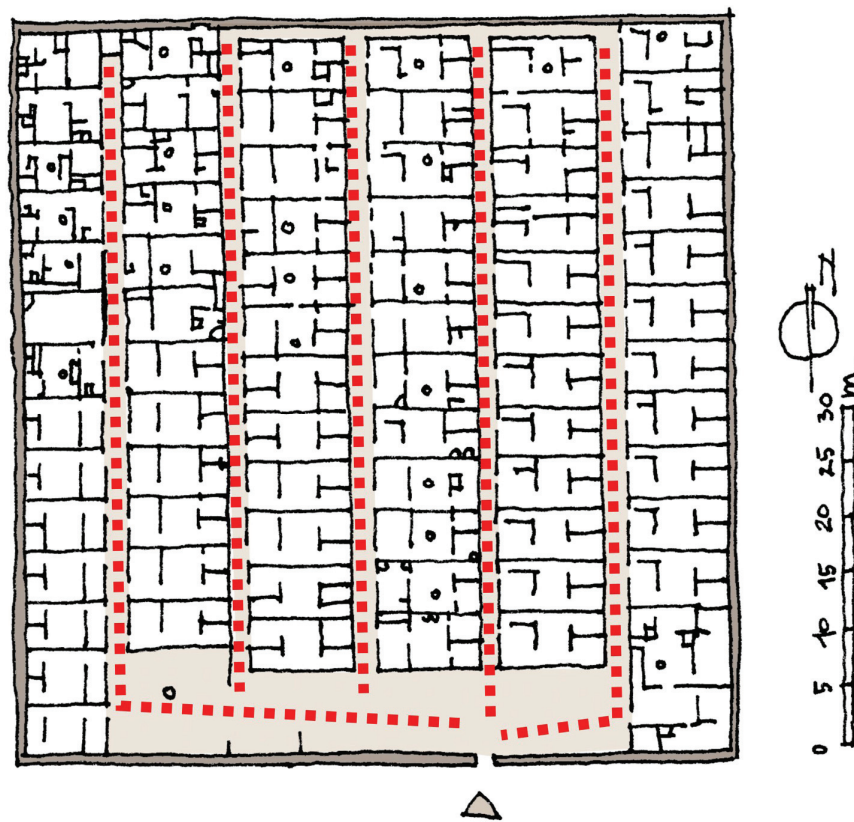
As a beginning: one of the most interesting settlements is at Tell el Amarna in Egypt, which is dated to 1350 BC. The residential structures are attached to each other to form a rectangle. The dwelling structures are simple, yet not the simplest. Two parallel rows of units form the narrow streets. The units are surrounded by a high wall, with only one entrance from the south, and streets intersecting at right angles. [1]

A ground plan is almost square. The square was a well-established form in the architecture of Ancient Egypt. The worker's village at Tell el Amarna is an organised space and can be understood as physical evidence of human resource management. An architectural analysis of the ground plan, points to the following facts: the narrow streets are only 2 m wide, and at the northern wall, they are even narrower; there is only one entrance/exit from the village. The internal 'square' could have served as a semi-public gathering place. The dwelling unit in the southeastern corner is larger and could have served the manager of the village. The first hypothesis is that the architecture was adapted to the climatic conditions. The second hypothesis is that the architecture first served the investor (i.e. the pharaoh) and then the inhabitants.

In part, the first hypothesis could be reasonable: narrow streets would cast shadows over the street and prevent overheating. There is doubt about this idea, since all the streets are oriented north-south, so midday shadows do not fit the idea. On the other hand, each dwelling unit has traces of a hearth. This element might suggest that the residents were free to cook (using fire) and move within the village (no closed areas i.e. double enclosures). The second hypothesis could be partly true: while narrow streets do not aid rapid

movement for the inhabitants (i.e. during a rebellion) and one exit may prevent mass movement rather the reverse, narrowness may help to control people's movement and slow them down.

The only firm evidence remaining at the site is the ground plan, which is a layout or array of dwelling units. The units are template rectangular walls (base line) combined with radial shapes. The use of templates can save time and energy (management, resources, building) and prevents social inequalities. On the basis of these findings, the Tell el Amarna site is working-class architecture. Of course, Vitruvius had written several centuries earlier (1350 years), but ideas in architecture survived many emperors and political systems.



**Fig. 1.** The ground plan of Tell el Amarna. Dotted lines show possible movements of people.

## 2.2. Saline Royale in Arc-et-Senans

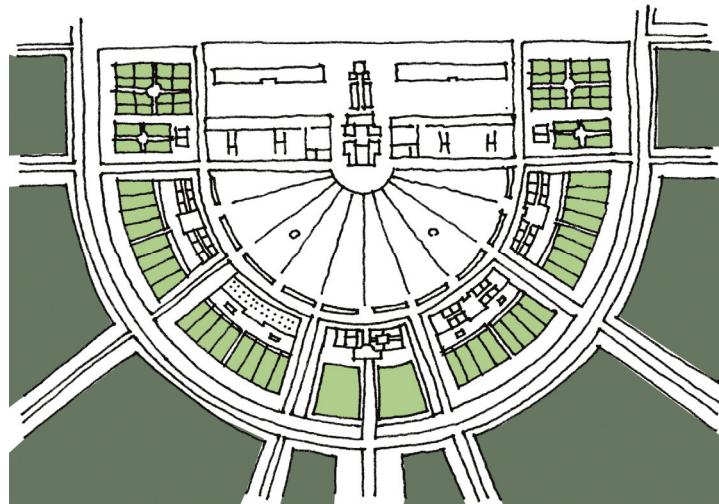
The next example of worker's architecture is in France, at Saline Royale in Arc-et-Senans (arch. Ledoux), which dates to 1775-1779. The historical evolution from ancient Egypt to revolutionary France followed the idea of the empowerment of the working class. While in Egypt, we may assume that the work force was divided into slaves and workers, the first group had few or no rights, while the second conformed to state ideology – it was an honour to serve the pharaoh. The workers were temporarily serving him with their willingness to

help build the infrastructure. In France, however, the ideals of the revolution were slightly different from the practice in Egypt. The architect Claude-Nicolas Ledoux was involved in engineering projects (forestry, canal building and logistics). For Ledoux, architectural language and presence was no longer to bear witness to the social standing of the owner or user, but was to be an expression of the crafts and labour applied in the construction, and of their social relevance [4]. He invented declarative architecture or descriptive architecture i.e. a house for a river guard should be like a section of pipeline, with the actual river running through the house. In practice, such utopian ideas were not useful; among his better ideas was a project for factories and workers houses in Arc-et-Senans.

The plan of the settlement is elliptical; at the centre are industrial halls and the manager's house. Around these structures are open public spaces, and on the boundary, workers' villas, with gardens behind. The gardens were for decorative purposes as understood in the Baroque period, but vegetables for the workers were also grown there. Food self-sufficiency was one of the primary goals.

The plan was half-completed; it demonstrates the idea of hierarchy in architecture and the social interdependency of the owner, manager and labour force. The one-storey workers' villas are set radially around the manager's mansion. There are two types of open space: around the factory and manager's mansion, which may be called a public space; and behind the gardens of the houses, where paths connect the houses to the surrounding landscape. The gardens are private or semi-private, and used by the householders.

Architecture is an inevitable part of the development of civilization. Ledoux's treatise does not follow previous writers; there is no definition of the social status of architecture in the orders of columns. Open space (in urban context) plays a role in his architecture and this pattern was followed thereafter.



**Fig. 2.** Saline Royale in Arc-et-Senans. Ground plan.

## 2.2. Cooperative neighbourhoods in New Lanark

The Scottish industrialist Robert Owen (1771-1858) attempted to upgrade Ledoux's idea in New Lanark. He realised that workers' private lives could affect the work process and profits. It





Symmetry is rare or unplanned. Owen's credo was that workers' settlements and homes are part of human management. He enforced several ideas in the industrial environment i.e. parents were responsible for their children; respect for other religions; no damage allowed to company property. All these norms are now obvious and part of our culture.

Open space was company property; there was no private space, although everyone concerned respected the social use of space and so-called invisible barriers to the use of open space. By unwritten agreement, the regulation of open space was shared between the owner, the manager and workers with their families. For the owner, housing in New Lanark meant a healthy relationship between all involved, social regulation and, finally, higher output (stable production and secure rising profits).

### 3. DISCUSSION: THE NEW ROLE OF HOME

#### 3.1. Workers' colonies in the period of the Austro-Hungarian Empire: the Slovene case

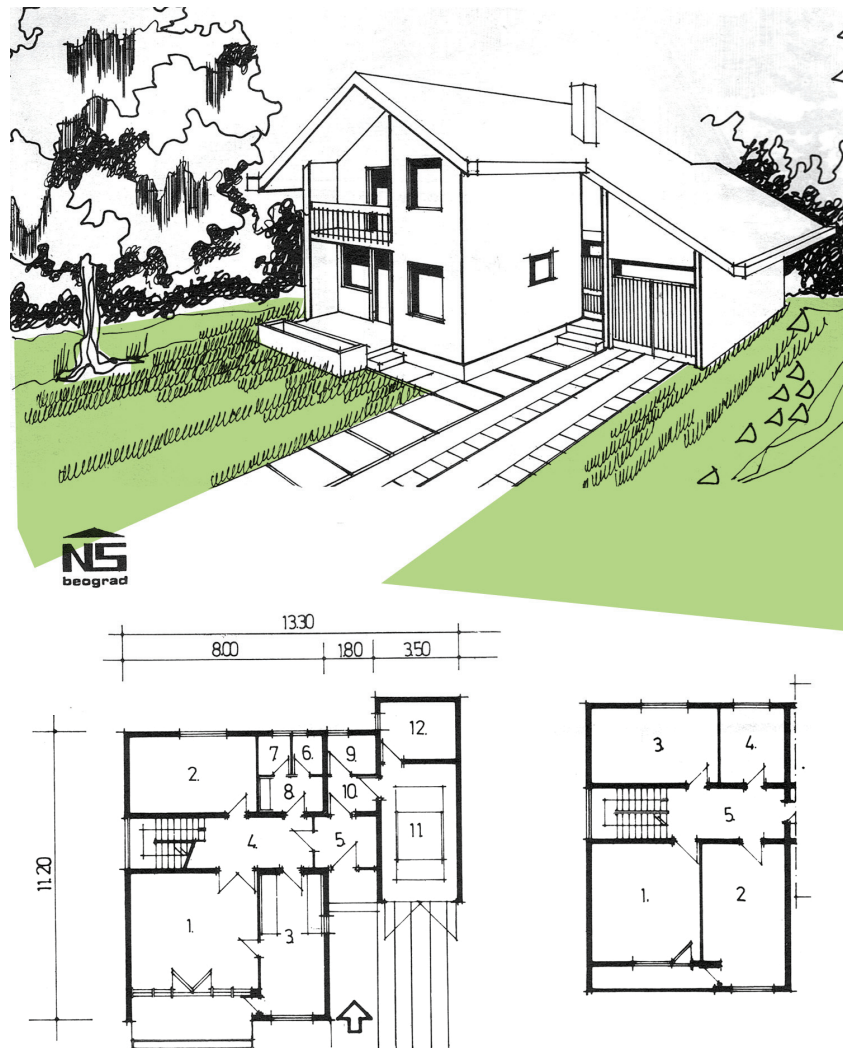
A group of researchers working for the Project Group on Historical Centres (The Alps-Adriatic Working Community) studied workers' colonies and housing for workers and their families. Workers' colonies were created in a period of development which was significant for European nations and space.

The research shows that in Slovenia the idea of workers' settlements did not go beyond the ideas formulated in the history earlier. The social role of worker's colonies was usually inevitably expressed: small detached houses with small vegetable gardens, combined with sheds for small animals and a shed for garden tools. These small layouts were widely understood as the basic unit of a worker's home. These housing areas were "domesticated" and physically separated from industry, but visually and mentally linked to the factories in the vicinity. Imported styles or template plans were evident when there were no Slovene industrialists. The templates originated from the countries where the owner of the industry lived or had business connections.



Fig. 4. Preska, the workers' colony at Tržič.  
(source: ZVKD Kranj)

The idea of a house with a garden - and probably some domestic animals - lived on and was extremely popular during the socialist period in Yugoslavia. The role model of the home was a house in the country. The question of open space was almost forgotten; the so-called cultural landscape was understood as the open space of a home. With the fall of socialism and rise of democracy in the 1990s in Slovenia, the perception of the home remained. Investors built commercial housing which is closed to the public (usually with a fence). There are no vegetable gardens; here we find only a row of houses with small green atriums. The owners are proud to be part of these agglomerations. The functional organisation of space in these settlements is the same as in Tell el Amarna. However, this is a showcase of consumption not a quality.



**Fig. 5.** Template plan of a house. An example case of dismantled identity or the consumption pattern in former Yugoslavia. (source: Naš Stan Beograd 1979)

### 3.2. Identity

Industry and housing for workers constitutes a domestication of space. Using the language of architectural modularity may reduce energy consumed on planning, building and maintenance. When knowledge exceeds needs, construction takes on a different significance - people ask for more. Theoretical construction continues in the form of decoration until this becomes counter-productive and merely makes construction more difficult [5].

A house in a landscape is a sign of the identity of a place, a monument to the memory of human culture. Colonies are part of the image of the heritage, and template plans were even combined with culture to become a bulwark of identity. In Slovenia, the architectural heritage includes at least thirty-five colonies or settlements of workers' housing. Of these, Jesenice, Trbiž, Idrija and Trbovlje are most closely linked to such colonies, and the image of the city or of the place that they present are genuine representations of the typology of workers' housing.



**Fig. 6.** Preska, the workers' colony in Trbiž. (photo: D. Zupančič, 2009).

The findings of research on this type of housing are as follows: they expanded the built area per occupant, improved social services for residents, organised education and enhanced the role of woman in society. This last aspect is evident in Trbiž, where unmarried women's accommodation is close to the manager's villa to prevent them from bothering married workers.



## 4. CONCLUSIONS

The paper has shed some light on the architectural language used in workers' housing. While Tell el Amarna, Saline Royale, cooperative neighbourhoods and colonies in Slovenia are geographically diverse, in terms of theory they are quite similar. They are based on scholarly repetitions of an idea: a home for worker is a home for a family. Uncritical implementation of the idea of workers' housing may lead to monotonous repetitions of patterns, such as the template houses built from the mid 1970s to the 1980s in the former Yugoslavia; they might be described as detached elements of the general idea of workers' housing.

In a few places, what used to be prestigious neighbourhoods are now residential areas for the poor, or slums. Some neighbourhoods remain almost unchanged; elsewhere, rapid reconstruction and changes for the worse have taken place (modernisation, expansion and comprehensive reconstruction of houses). The flats in these neighbourhoods are usually second homes or vacation flats.

Neither the public nor the media show much interest in the future of workers' colonies. The dailies, the tabloids, professional papers, construction and local historians have not been analysing the condition and future of these neighbourhoods in sufficient depth.

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## INSTITUCIONALNI STAN: EVOLUCIJA OTVORENOG PROSTORA NA ISTORIJSKIM PRIMERIMA RADNIČKIH GRADOVA, KUĆA I STANOVA

**Domen Zupančič**

*Ovo je kritičko istraživanje toga kako su industrijalci, firme i gradski planeri organizovali radničke stanove, kuće i urbane komplekse. Članak prezentuje nekoliko istorijskih primera radničkih kuća u dijapazonu ekonomije prostornog planiranja i planiranja industrijske stabilnosti. Premisa diskusije je da ove istorijske radničke prostorne konfiguracije do danas nisu mnogo promenile svoj izgled organizaciju unutar arhitekturnog jezika.*

Ključne reči: *radnička naselja, stambene strukture, industrijska revolucija, urbano planiranje, ekonomija, settlements, residential structures, industrial revolution, urban planning, economy, arhitektonski menadžment*