

# LIFE IN THE RUINS OF OLD BARN (USE OF THE FRAGMENT IN CONTEMPORARY RURAL ARCHITECTURE)

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<sup>1</sup> A number of questions were also raised in the 38th issue of the *Zlatý řez* magazine with the central theme Countryside.

<sup>2</sup> The extensive and regular publication activity of the Industrial Heritage Research Centre of the FA CTU examines issues according to their original use, region or time of establishment.

<sup>3</sup> The *Monitors* database was used with the expert cooperation of the staff of the National Technical Library, Information Support and Corporate Services Department.

<sup>4</sup> In the articles we can notice the search for parallels between traditional rural life and new construction, even when they may be limping a bit. For example, the open studio space of the house in Kojetín "refers to traditional architecture, where family life took place in one common room." (marianne.cz, 22.10.2022)

**ABSTRACT:** The rural lifestyle is dynamically changing. A significant number of country houses remain unoccupied, with only a small percentage of buildings being recognized and protected as cultural monuments. While barns no longer serve their original purpose, they still retain the characteristic essence of the countryside and serve as a reminder of the sustainable lifestyles of previous generations. (Koolhaas, 2020; Council of Europe, 2022)

How does contemporary architecture respond to the conversion of homesteads? This article delves into the integration of new construction within structures that are in a state of severe disrepair. These projects purposefully utilize only a fragment of the former barn, embracing its decay as an integral part of the design. By examining various approaches to ruins, ranging from romantic aestheticization to pragmatic functionality, we can gain insight into the transformation process.

The influence of a globalized supply of materials and inspiration from the internet and social media has had a significant impact on architectural practice, often leading to the erasure of regional nuances. Are the claims about the use of local materials true? And can the restoration of techniques from the past be genuinely sustainable?

**KEYWORDS:** barn; ruins, remains; village; renovation; heritage; architectural conservation; sustainable architecture; vernacular architecture

## FOUNDATIONS

The modern lifestyle places completely different demands on rural architecture (formerly used for agricultural production) [1][2]. Social sciences such as ethnology or social anthropology pay a lot of attention to the current situation in the countryside, addressing the cohesion of the local community or the maintenance of traditions in the environment of cultural houses [3]. However, the Czech literature dealing with rural architecture still focuses on the knowledge and description of historical constructions or craft practices [4][5]. Detailed theoretical background mapping the contemporary architects' input into these buildings is minimal. For example, Jana Tichá devotes a chapter to entries into the historical environment in Czech architecture in her book *Space and Place (Architectural Creation in the Czech Republic 1989-2014)* [6], but the examples presented come only from urban environments.<sup>1</sup> We can look for inspiration in research on industrial heritage ruins and their conversions [7].<sup>2</sup> Tim Edensor's work has also been useful to us, describing, for example, the way factory ruins are perceived when walking through them [8].

The reuse of old village houses, especially their outbuildings, does not only have practical or ecological aspects, but also becomes an opportunity to at least partially preserve historical memory [9]. We are in dynamic times, where the boundaries of what can be considered a monument are constantly shifting [10], but at the same time there is a massive degradation of older houses [11]. And most buildings remain outside the regulation of building heritage protection [12].

The work of Iida Kalakoski and Sigrun Thorgrimsdottir [13] was fundamentally important to us. The authors focus on barn conversions mainly in Scandinavia and deal also with the influence of globalised databases on the work of the architect. They have created a clear classification of five approaches to how designers work with the barn. For the first three, the material essence of the original house is necessary. It is 1. the conversion of the building, 2. the reuse of the material and 3. the relocation of the house to another location (mainly related to lightweight wooden structures). The other two approaches are already material indepen-

dent. We can find 4. reinterpretation of a house that previously stood on the site or 5. imagination, if the new building bears elements of a barn but there was never any outbuilding on the site. As in the case of Kalakoski and Thorgrimsdottir, the authors of the projects we have examined do not consider themselves to be narrowly focused on rural architecture and the portfolio of their work is much broader.

In our research, we used mainly qualitative methods close to ethnology, social anthropology and phenomenology [14]. The basis of the research were interviews with architects, residents and neighbours of individual projects. In line with the literature cited above, we are aware that the personal experience of visiting a place influences, for example, the selection of elements and features that are described below.

In order to get a more comprehensive picture of how the projects and their presentations can influence other potential stakeholders in the countryside, we also carried out a meta-analysis of the available articles or video content about these projects in the Czech media.<sup>3</sup> Apart from the mainstream media and news servers (*iDnes*, *Hospodářské noviny*), articles or mentions also appeared on specialized websites about architecture (*Earch.cz*) or a certain technology (as carpentry - *Dřevostavitel*). However, women's magazines (*Marianne*) also have a strong place in communicating this segment of architecture to the general public.<sup>4</sup>

## STATE INTERVENTION?

The opinion of the monument care institutions is only necessary if the barn is a cultural monument or the building is located in an area with general protection (conservation zone or more strict reservation). It can be stated that official supervision is lower in rural environment than in urban areas. The number of urban areas under monument protection (297) is similar to the number of rural zones and reservations (277). Thus, a large share of the historic cores of towns are part of such an area, while protection of (more numerous) villages is rather exceptional.<sup>5</sup> Looking abroad, we find that, for example, the British organization English Heritage published a manual *The Conversion of Traditional Farm Buildings* [15] in 2012, with a number

of examples. This type of methodology is currently missing among those published by the Czech National Heritage Institute.

When interviewing architects, we found out that they perceive the influence of nature protection in the countryside (protected landscape areas, national parks) more than the requirements of monument protection. The nature reservations have determined requirements for the volume and orientation of buildings, wall proportions, openings, roof pitch, etc. [16] The Krkonoše National Park has also published an inspirational guide for builders, which presents typical features and bad examples. (Moreover, the publication itself questions whether it is even possible to give advice when the new function of the building is often completely different from the requirements of the house in the past.) [17]

Our goal is not to evaluate whether the current demands of nature protectionists (e.g. on roof slopes) are reasonable and professionally based. However, we would like to draw attention to this holistic approach, which understands landscape care also as the protection of the character of the built environment.

## EXAMPLES COMPARED

In order to compare the different approaches to the barn ruins, we have selected six projects from the Czech Republic:

### **Bukovec (projectstudio8)**

The reconstruction of the Bukovec farmstead was created as a joint project of three families (baugruppe principle) on the ground plan of the farmstead in the village conservation area, which is now part of the city of Pilsen. The design preserves the footprint of the barns and stables. The building also sheds an interesting light on the current social situation of the elderly in the countryside. The previous owner sold the house when his father was still living there. The authors adapted the project to this situation.

### **Kojetín (Kamil Mrva architects)**

Kamil Mrva's intervention in Kojetín was carried out in two phases approximately ten years apart. First, the pillars of the barn were used, the space was roofed over and the built-in structure served as an artistic studio. In the second phase, two bedrooms and a bathroom were placed in the extension and the building began to be used for permanent family housing. The second extension also protects a solitary fragment of the stone wall of the original house.

### **Loubí (atelier SAD)**

The barn in Loubí near Lake Mácha was repaired and a wooden core was put inside. Atelier SAD is quite specific, because it also directly offers the services of a construction company.

### **Stará Červená Voda (TŘI.ČTRNÁCT architects)**

The house for the architect's parents in the Rychleby Mountains near the Polish border used the stone parts of the original barn. The timber building was built with self-help and the project also includes another smaller building of a shed. The buildings are located on the site of the demolished house, but have a different orientation.

### **Verneřice (LABOR13)**

The main author and at the same time the user Albert Pražák speaks of the small recreational object in the abandoned landscape of the Central Bohemian Uplands as conceptual. Thanks to the connection with the exterior, the interior space can be relatively small.

The aim is to try out different methods and eventually modify the object. The authors used leftover materials (they adapted the size of the window to the large piece of glass they managed to obtain). The inner surface of the walls is created by plasterboard with no finish (you can see the puttying or green plasterboard in places of increased humidity).

### **Zadní Arnoštov (ORA)**

Atelier ORA fixed the romantic state of the ruin and inserted a new structure with an elevated space into the two-storey house, which was previously used as a granary. The house is used for short-term accommodation.

## SPECIAL AND REPETITIVE QUESTIONS

### **Monument care**

Due to the situation described above, only architect Ondřej Janout entered into discussions with representatives of the conservation authorities during the reconstruction of the yard in Bukovec, which is a rural conservation zone. During the interview, the architect mentioned the difficult path to a permission, the different opinions of the responsible persons, the erudition of some of the representatives of the conservation authorities or, on the contrary, the unprofessional argumentation of other participants. At the same time, he admits that communication during the permitting process was partly easier because he has been working in Pilsen for a long time and the officials already know the methods and results of his work.

The debate was primarily about the percentage of preserved structures and about the creation of a new lapidary entrance next to the original arched gateway. Its construction was important to the creators in order to preserve the space around the original residential building for the former owner. However, it clearly indicated the breaking up of the farmhouse into several smaller units (pic. 1).



Fig. 1.: New entrance next to the original gate in Bukovec. (Source: Pavel Fuchs)

### **Preservation and completion of the existing structure**

Continuous repairs were a normal part of the life of the peasants [18]. Highlighting a raw fragment of a historic structure brings a number of pitfalls, as the structure cannot be maintained using traditional methods. The masonry of barns in most of the Czech territory was protected against degradation by plastering [19]. Today, the goal is often to stop the decay at the right moment and to obtain an attractive background for a new entrance. For example, the walls around the building in Verneřice were repaired with material found in the vicinity (bricks not necessarily from the construction of an otherwise mostly stone barn) and finished with a concrete layer of minimal thickness (pic. 2).

In the first phase of the construction of the studio in Kojetín, Kamil Mrva reinforced the pillars with a concrete wreath and drilled columns with chemical anchors into them. A maximalist concept of preservation

<sup>5</sup> Determining the number of villages is very complicated. For the sake of illustration, however, we base our calculation on the number of towns (605), compared to all municipalities (6254). In addition, a number of municipalities were created by merging several separate units (villages). We also bear in mind that some towns have more conservation areas. In addition, village zones can protect parts of towns that we would probably not classify as rural, but there is enough vernacular architecture - Trávníky in Železný Brod or Betlém in Hlinsko.



Fig. 2.: The ruins of the barn around the object in Verneřice were partially refilled and stabilised by the authors. (Source: Labor13)

and presentation of the historic structure can be found in the second phase of the restoration, when a concrete roof is built over the rest of the wall in the front part of the plot, supported by columns surrounding the protected structure. The wall itself, in addition, has been reinforced with a concrete layer at the crown (pic. 3, pic. 4).



Fig. 3.: Different approaches to the fragment in Kojetín. (Source: Kamil Mrva Architects, photo: Studio TOAST)



Fig. 4.: Kojetín - overall view on the first phase (top) and the second phase of the extension protecting another part of the ruins (bottom). (Source: Kamil Mrva Architects, photo: Studio TOAST)

The architect Ondrej Palenčar also refers to the house in Kojetín when describing the building for his parents in Stará Červená Voda. However, he himself notes that while in Kojetín the old construction was structurally involved, he was driven only by aesthetic reasons, wanting to remind the precise craftsmanship of the original German inhabitants. At the same time, he is convinced that the stone walls will survive the wooden building he has inserted and will be supplemented by another layer by next generations.

In Bukovec, a fragment of the original construction is involved complicatedly. Only one third of the length of the original barn has been preserved. The new residential part of the new house is built on the re-

maining area of the barn. The volume in the original mass serves as a common community room for all the families living in the estate and it is not heated; the insulated part of the house begins behind it. The architects also retained another part of the old wall facing the courtyard, visually integrated into the supporting structure of the new building. In reality, however, the new construction is built independently. The owner, who is also an architect, changed the decision to leave the stone wall exposed. The spectacular exposure of the stones led to degradation of the structure and the traditional plastering reversed this process (pic. 5).



Fig. 5.: Photo from the official presentation (left) compared to the state in 2022. A fragment of the stone wall was plastered using traditional technology. This solution is less spectacular than the presentation of exposed masonry and preserves the authenticity of the original building. (Source: projectstudio8, Pavel Fuchs)

The solution in Bukovec, especially from the main views, does not give the possibility to determine at first sight what is old and what is new and how the structures interact. It is an extraordinary example of how an impressive entity can be created even without clear divisions. The side view from the adjacent property, where the separation is in contrast very clear, may seem problematic and perhaps too intrusive (pic. 6).



Fig. 6.: The fact that only a fraction of the barn was preserved is primarily revealed by the side view from the neighbouring property. (Source: Pavel Fuchs)

Because our sample was devoted to projects that work with ruins, our comments are mostly about the more resilient stone parts. In Verneřice, however, preserved wooden beams were reused and the work with wood in Loubí is also extremely interesting. Here the architects replaced the top strip of planking because they wanted to lighten the interior space. The carved planks are a not very common example of a new ornament in contemporary architecture, which can be

mistaken for an original historical element especially by a non-professional audience (pic. 7).



Fig. 7.: Comparison of the barn in Loubí before and after renovation (left). The planking has been replaced with carved wood. The purpose was to lighten the space, but the solution remotely resembles the ornaments of folk architecture. (Source: atelier SAD)

### Gap between existing and new construction

Due to its tiny dimensions, the building in Verneřice is completely independent of the original construction; the fragments of the barn function as a demarcation between the intimate living space and the surrounding landscape. The division of the site by the new building creates two differently sized courtyards, with the smaller one intended to serve mainly for access, car parking and quick entry into the house. The larger yard serves as a garden and is connected to the house by a fully opened facade.

A number of built-in houses to (re-roofed) barns also function on the principle of independence. The object built into the barn in Loubí uses the archetypal shape of a house with a pitched roof, but the new house cannot exist without the original barn. Inside the modern structure, there are a minimum of corridors, the user enters the bathroom or toilet from outside the house (but inside the barn). The kitchen is located in the exterior gable and the main living space is therefore created in the original barn. This solution creates a very fragmented boundary between interior and exterior (pic 8).

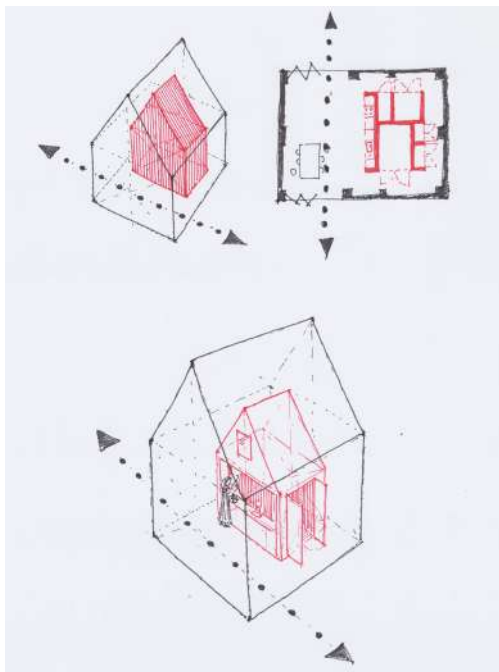


Fig. 8.: The barn in Loubí is open to the surrounding landscape thanks to the slots in the planking. At first glance, the new structure is completely independent, however, it does not have a classic closed interior. In fact, the built-in house forms one functionally connected unit with the barn. The realisation blurs the distinction between the inner "dwelling" and the outer space. (Drawing: Matyáš Gál)

The gap in Stará Červená Voda is about 60 cm wide and is used practically as a nut drying room or tool storage. The owners also do not expel robins and other animals. However, the distance, allowing only

one person to pass through, made the construction of a new house quite complicated. The northern and southern walls had to be built entirely on the ground, including the exterior cladding.

The house in Arnořtov fills the ruin of the building completely, except a minimal (several centimetres) gap between the old and the new wall. The protection net, against birds and rodents, stands out in detail around most of the window and door openings (pic. 9).



Fig. 9.: Detail of window and door openings in Arnořtov. Air gap between old and new wall is covered with a protection net. (Source: Pavel Fuchs)

### Sustainability, energy efficiency and materiality (ethics of authenticity)

In the current mood of seeking the most efficient buildings, often at the cost of very inefficient and costly construction [20], dealing with ruins offers a different view on sustainability. The favourable ecological aspects arise from the use of original material that continues to serve structurally or at least does not have to be costly recycled or landfilled.

A more complicated situation occurs when we use traditional materials that were obtained locally. Today we rely on mining of natural resources in (sacrificed) remote locations. Returning to former resources can help create an attractive building (healthy, connected to ancestors, sustainable). However, such procedure is often no longer possible today, as illustrated by the story of one of the architects: The builders obtained material from the same places as their ancestors, i.e. from the surrounding nature. Small quarries, for example, are now natural monuments, though. More activity would certainly generate legitimate interest from landowners and preservationists of nature.

The reuse of materials was common in the countryside and rather hidden [21]. The current trend is characterised by the highlighting of the inserted structure, by the accentuation of the contrast between the old and the new. In the past, the reuse of the house and the change of function always resulted in a reduction of its



Fig. 10.: The house in Arnořtov, offered for short-term rentals, is equipped with luxury materials and furniture. (Source: ORA)

status [13] (from an inhabited house to barn/granary, which was the fate even for many fortresses in Czech conditions). The use of the barn as the main representative living space is therefore a recent innovation. It offers new residents a generous space resembling a loft-housing (pic. 10) with high structural height and the possibility of inserting elevated spaces / galleries. On the other hand, the reduction of representativeness occurs in the case of an original house, if it has been preserved at all. The former dwelling often suffers from a relatively small living area, low ceilings or tiny window openings.

An interesting turnaround happened in Arnoštov: a two-storey house was turned into a granary during socialism, which meant a change in openings and floor plan. The expensive renovation by Studio ORA gives the impression that new interventions have been inserted into the ruin as found by the architects on the site. However, a close examination of the historical images and the authors' report shows that the architects tried to erase the changes from the socialist era. They returned the remains of the window openings to the gable of the ruin as they would have looked without the intervention of the socialist farmers. This may provoke a feeling in the attentive viewer whether such a ruin is really authentic and truthful? (pic. 11)



Fig. 11.: The ruin in Arnoštov underwent modifications that erased part of the post-war interventions. (Source: mapy.cz, ORA)

Foreign literature has noted the unification of architecture, evidenced by globalised web inspiration portals such as Archdaily or Cabin Porn [22]. Previously, the limited amount of materials and the need to rely on local options led to a very high variety of craft details. Today's globalised (and seemingly) unlimited supply, on the other hand, brings a unification of elements that are used for new inputs into the old structure.

#### Influence on village urbanism

Sustainability can also be seen in a broader perspective as the preservation of historical values or seeking a rational approach, how to preserve the memory and matter created by past generations in a modernised form. Maintaining the qualities of the whole village and the local community is also important. The use of vacant parts of farms may limit the taking of additional land in the village exterior, but this is not simple mathematics. This solution poses further challenges for architects and their partners (neighbours, community, municipality). These come from the extensive size of the farms and the change in lifestyle, represented mainly by a greater desire for intimacy and the use of different tools (mainly cars).

In the past, estates were also occupied by a larger group of people than today's nuclear family, but the demands of the individual inhabitants were different. If the farm creates space for the equivalent of 4 family houses, this means a greater pressure on the surrounding area as well. We have already mentioned the necessity of establishing new accesses when discussing the monument care in Bukovec.

However, the division of the original estate could have been done before the architect's intervention. In Loubí, e.g., a long access road was built in the past decades, bypassing the rest of the farm. The task of

the creators was therefore to deal with the complicated access and adapt the way. However, architects also mention general limitations caused by legal regulations, which they consider unsuitable for rural areas. Ondřej Janout considers construction right on the border of the plot to be a typical village element and promoted it in his other projects in the countryside. However, this procedure is made almost impossible by the current building law, which specifies a minimum distance of 2 metres from the boundary.

#### Rotation of the ground plan

By saving the barn, the owner satisfies a greater desire for intimacy. The part of the old house with the main living room often faced directly the street space [19]. In Stará Červená Voda, a shed was built in place of the old dwelling, moreover with a ninety-degree rotated gable. Due to the sparse pattern of houses in the surrounding area, it is unlikely this solution causes any serious disruption to the character of the village, but layout is certainly not applicable everywhere (pic. 12, pic. 13).



Fig. 12.: The construction of the house is inserted into the furthest part of the original building. (Source: TŘI.ČTRNÁCT architects)

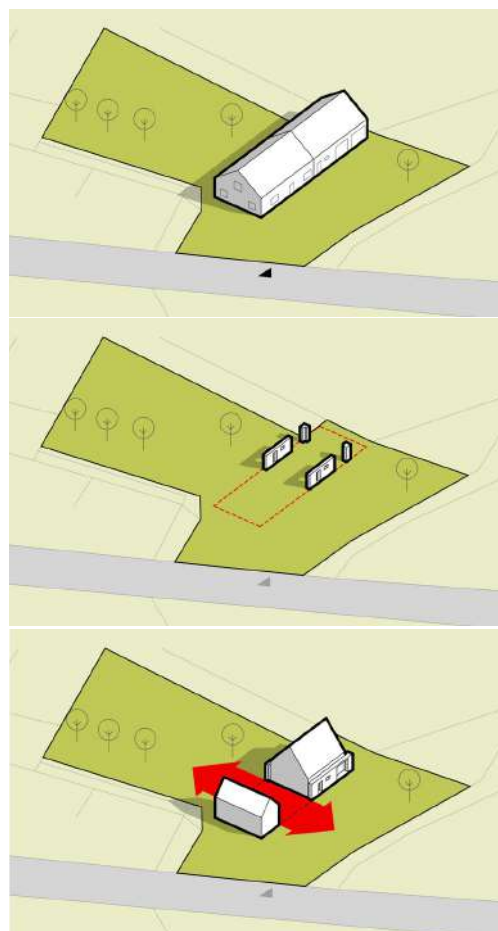


Fig. 13.: The house in Stará Červená Voda stands on the ground plan of the original house. However, the orientation and connections to the public space have completely changed. (Source: TŘI.ČTRNÁCT architects)

Matěj Beránek, for example, mentions the complete privacy in his article about the house in Kojetín and notes that this effect was achieved despite its location in the centre of the village [23]. But does such a design reinforce the street space of the village centre or the community? The house is set well back from the street line and a rather large area is left fallow (pic. 14).

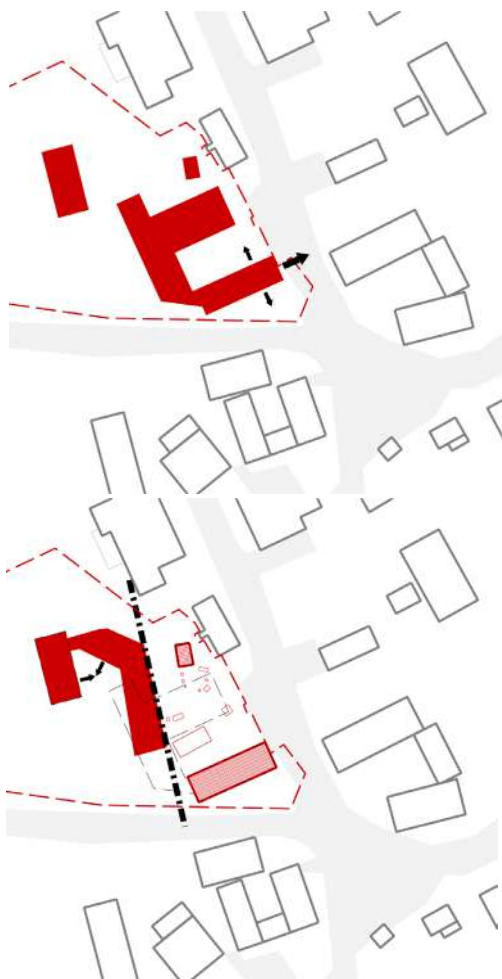


Fig. 14.: The farmhouse in Kojetín was built close to the public space (left). The new house uses the remains of a barn at the back of the property to create an intimate space for its occupants. The front part, facing the village centre, serves more as a warehouse (right). (sketch: Matyáš Gál)

### Criticism of top buildings as a guide for the ordinary owner?

The article presented different approaches to the ruin of a country house. Even highly rated projects may not meet all of the often contradictory requirements. Media discourse, however, prefers only laudatory phrases. These buildings certainly deserve a positive response. But the assessment is often based on an idealised idea of rural life, the influence of the realisations on the whole urbanism of the surrounding houses is practically neglected. A deeper analysis of high quality projects could help shape society-wide opinion and requirements for building interventions in rural areas. The topic of reuse of rural assets is increasingly supported by state organisations and subsidies, but these only address energy consumption and rather tend to degrade quality architecture (e.g. by supporting demolition or insulation of old houses from the Nová zelená úsporám subsidy programme).

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