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# Solidarita Housing Estate in its European Context

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# Solidarita Housing Estate in its European Context

## **Abstract**

Europe just after World War II was a damaged environment. Many of its cities had been devastated and people suffered tremendously across the continent. Millions were dead, millions displaced or sick, and millions more were being forcibly relocated to new territories during waves of expulsions. According to United Nations figures, more than 8.8 million housing units had been destroyed in eighteen European countries during the war; at least another 5.6 million units were uninhabitable. This represented one out of every nine units extant in 1939. By 1947, the Cold War was underway as the United States and the Soviet Union became global adversaries in their attempts to win the loyalties of the region's liberated countries. Stalin rejected the offer of United States Marshall Plan funds to aid in postwar reconstruction and recovery. He convinced the countries that would soon be known as the Eastern Bloc, including Czechoslovakia, to do the same and created Cominform as an alternative alliance to consolidate his power.

## **Disciplines**

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## **Comments**

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## **Solidarita in Its International Context**

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Europe just after World War II was a damaged environment. Many of its cities had been devastated and people suffered tremendously across the continent. Millions were dead, millions displaced or sick, and millions more were being forcibly relocated to new territories during waves of expulsions. According to United Nations figures, more than 8.8 million housing units had been destroyed in eighteen European countries during the war; at least another 5.6 million units were uninhabitable.<sup>1</sup> This represented one out of every nine units extant in 1939.<sup>2</sup> By 1947, the Cold War was underway as the United States and the Soviet Union became global adversaries in their attempts to win the loyalties of the region's liberated countries. Stalin rejected the offer of United States Marshall Plan funds to aid in postwar reconstruction and recovery. He convinced the countries that would soon be known as the Eastern Bloc, including Czechoslovakia, to do the same and created Cominform as an alternative alliance to consolidate his power.

Housing construction and the rebuilding of cities were immediate and urgent concerns on both sides of the Cold War divide. Czechoslovakia, whole again after the separation of the Protectorate and Republic of Slovakia, was in a relatively enviable position at the time. The country had been occupied from the earliest days of the conflict without much fighting inside its borders, overall sustaining significantly less physical damage when compared to regional neighbors such as Poland and Germany. It had also been a democratic, culturally diverse, and technologically advanced country in the interwar period and it retained much

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<sup>1</sup> Jacob L. Crane and Edward T. Paxton, "The World---Wide Housing Problem," *The Town Planning Review* 22, no. 1 (Apr. 1951): 22. Both numbers exclude the Soviet Union, the number of uninhabitable units does not include Germany.

<sup>2</sup> *Ibid.*, 26.

of this capacity through the Nazi occupation. After liberation in May 1945, the country got started right away on postwar planning. By the summer of 1946, a coalition government was democratically elected that included communists, social democrats and other left-leaning political parties. Architects, some of whom had been part of the wartime communist resistance movements, were important contributors to early discussions about the future direction of the country. The profession emerged from the war with a unified voice and positioned itself from the very first days after liberation as critical to the rebuilding efforts and in support of radical economic changes such as the nationalization of many industries.<sup>3</sup>

Like all of Europe, Czechoslovakia was fragile in 1945, not just its physical infrastructure, but also in terms of community life and social practices. Its ethnically mixed interwar population was now more homogeneous with the extermination or emigration of most of the Jewish population and the expulsion of three million people determined to be of German descent. In 1939, seventy percent of the population of Bohemia, Moravia, and Silesia identified as Czech; by 1950, this number had grown to 94 percent.<sup>4</sup> Those who remained needed places to live. Almost 250,000 housing units were destroyed or made uninhabitable during the occupation, including 41,000 in Prague.<sup>5</sup> Additionally, the country had a long-standing housing crisis dating back to the late nineteenth century and by the end of the end of the 1930s, most housing units were far behind modern standards.<sup>6</sup> With the end of the war and occupation, architects were energized to finally have an opportunity to address this housing crisis, which they had been talking about with some urgency since the 1920s, but which had received barely any attention or resources from the government or the public.

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<sup>3</sup> Kimberly Elman Zarecor, *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945--1960*. Pittsburgh: University of Pittsburgh, 2011. Chapter One.

<sup>4</sup> Chad Carl Bryant, "Either German or Czech: Fixing Nationality in Bohemia and Moravia, 1939-1946," *Slavic Review* 61, no. 4 (2002): 683.

<sup>5</sup> On total numbers, see Crane and Paxton, 22. On Prague statistics, see Alexandra Miksánková, *Výstava Prahy 1945--1980. Skripta pro průvodce Prahou*. 2. díl. Prague: Pražská informační služba. p. 3.

<sup>6</sup> Miksánková, 3.

As I discuss in my book, *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945---1960*, the set of circumstances that arose after the war made it possible to realistically imagine and implement a completely new approach to architecture and construction— state---funded collective work executed to regulated standards. This would be particularly influential on housing design. Some of the most politically radical Czech architects had been promoting state---funded design and construction since the mid---1930s. The architects who were members of the building commission of the Central Council of Trade Unions (Ústřední rady odborů, ÚRO) and the architectural committee of the Communist Party met together as early as 1944 to formulate a plan for the nationalization of the building industry and the creation of a socialist design sector when the war ended.<sup>7</sup> On May 12, 1945, just three days after liberation, the reestablished Union of Socialist Architects had its first postwar meeting. The same group who had met in 1944 took up the organization's leadership positions. They brought with them the far---left agenda formulated during the war. Two months later, the Union of Socialist Architects joined forces with other professional groups to found a single organization to represent the profession, the Block of Progressive Architectural Associations (Blok architektonických pokrokových spolků, BAPS). The leaders of the Union of Socialist Architects were among the most powerful members of BAPS. A few years later, these efforts would result in the establishment of Stavoprojekt, founded in September 1948, after the political situation had made it desirable (and necessary) to consolidate all design work into a state---run organization.

This is the broader context into which Solidarita should be situated. It was an architectural experiment that utilized new technologies, innovative urban strategies, and cooperative financing to achieve a result that its creators hoped would become a model for more housing developments. Solidarita was designed and largely built in the almost three years between the end of World War II and the Communist Party takeover in February 1948. As a product of these transitional years, the project carried with it a hopeful optimism about the

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<sup>7</sup> The building commission of the Central Council of Trade Unions was Karel Janů, Jiří Štursa, Jiří Voženílek, and Otakar Nový. Janů, Štursa, and Voženílek were protégés of Karel Teige who formed the architecture collective, Pracovní architektonická skupina (PAS) in the 1930s. The members of the Communist Party's building committee were Václav Hlinský, František Jech, and Josef Kittrich.

future and the potential for a more collective approach to neighborhood life that was reflected in the spirit of the design and its name, Solidarita. Its architects, in particular František Jech and Karel Storch, were committed housing designers and advocates for housing reform, who held important positions in BAPS and had published many of the 1947 polemics in the journal, *Architektura ČSR*, in favor of international standards for housing based on northern European models. Many people believed that post-1945 Czechoslovakia would look more like a European welfare state such as England or Sweden than the Soviet Union. One must not forget that England had a socialist government in these years that was deeply involved with rebuilding and the construction of housing. When it was announced in the summer of 1946, the "Two-Year Plan" followed these examples. The proposal was economic planning and nationalized industry supported by a leftwing democratically elected coalition government, which provided significant government support for citizens' health and well-being. The architectural projects of the Two-Year Plan responded to this new social and economic context. Unfortunately, it would be short-lived.

The construction of housing was at the top of the agenda for BAPS as soon as it was established in 1945 and it remained the dominant building typology that architects engaged with until the 1990s. *Architektura ČSR*, which resumed publication in 1946 after a two-year hiatus, devoted most of its 1947 issues (číslo) to discussions of housing and the Two-Year Plan—what should be the minimum standard for housing units, how best to implement the desire for cheaper and higher quality projects, and information on international models that had already achieved these goals. The housing commission of BAPS, which included the Solidarita architect Karel Storch, had even prepared most of issue number five for the journal editors, including a significant presentation of research into current housing standards in ten countries including all of Scandinavia, the United Kingdom, France, New Zealand, the United States, and the Soviet Union.<sup>8</sup> This research on the international living standard was a new iteration of the 1930s debates within CIAM

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<sup>8</sup> Ferdinand Balcárek and Karel Storch, "Příklady řešení obytných domů v cizině," *Architektura ČSR* 6, no. 5 (1947): 138-149. The members of the commission are not listed, but based on the authors of articles in this issue attributed to the group, they were Ferdinand Balcárek, Jarmila Lisková, Karel Storch, Ivan Šula, Jiří Štursa, Miloslav Tryzna, and Jiří Voženílek.

(Congrès International d'Architecture Moderne, or the International Congress of Modern Architecture) and also reflective of discussions occurring at the same time within the committees of the new United Nations, whose building was under construction that year in New York with the help of Czechoslovak design team member Josef Havlíček.

In 1946 and 1947, Czech and Slovak architects were also rejoicing in their return to international life after the confinement of the war years. Architects traveled and also welcomed visitors from around the world. The international guests were often announced in the news section of issues of *Architektura ČSR*, where visitors listed in 1947 included American, British, Bulgarian, French, Polish, Soviet, and Yugoslav architects. (Fig. 1) During the war, the only foreign architecture journals available had been from Scandinavia.<sup>9</sup> Now the journal featured projects from the United Kingdom, the United States, France, Switzerland, and the Soviet Union, complemented by continuing coverage of Scandinavia, particularly Sweden. Many architects traveled to England in 1946 and 1947 to study, visit professional colleagues, and attend exhibitions and conferences. Jaromír Krejcar was the Czechoslovak representative at the Union of International Architects (UIA) conference in the fall of 1946. He later returned to install an exhibition on Czechoslovak modernism in London and to attend CIAM 6 in Bridgewater as the only Czechoslovak delegate based in Prague (the others were from Brno). Krejcar and Václav Hlinský documented new British projects for *Architektura ČSR* during their trips.<sup>10</sup> (fig. 2) There was also an exhibition of British architecture in Prague in the summer of 1947 that coincided with visits by British architects including Grey Wornum, Colin Penn, and F.R.S. Yorke, author of *The Modern House*. For the architects of Solidarita, these international influences were an important aspect of the design work. Not only were they designing a model cooperative housing estate with the potential to influence future projects in Czechoslovakia, they were also participating in an international conversation about postwar housing in which

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<sup>9</sup> Ivan Šula, "Ze skandinávské cesty," *Architektura ČSR* 6, no. 10 (1947): 308.

<sup>10</sup> Václav Hlinský, "Vystava 'Britain Can Make It,'" *Architektura ČSR* 6, no. 10 (1947): 61---62; Jaromír Krejcar, "Plánování nové výstavby poválečné Anglie," *Architektura ČSR* 6, no. 10 (1947): 55---61. Krejcar immigrated permanently to London in 1948. He died there in 1950.

Czechoslovakia was again at the forefront of modern design as it had been before World War II.

Jech and Storch made a powerful pair.<sup>11</sup> Jech has been credited with the core architectural ideas for Solidarita. Before the war, working with Adolf Benš, Jech had co-authored one of the winning designs in the 1935 Baťa Housing Competition in Zlín with a design for a duplex using experimental "thermoconcrete" cladding.<sup>12</sup> (fig. 3) In the late 1930s, he worked with three other modern architects --- Václav Hliský, Rudolf Jasenský, and Karel Koželka – on early social housing projects.<sup>13</sup> During the war, he was a member of the architectural committee of the Communist Party, and then an executive committee member of the Union of Socialist Architects as it joined with other groups to form BAPS. He first proposed a project like Solidarita in his 1946 book, *Rodinný dům v kooperativní stavbě: ekonomisace simplifikace a industrialisace nízkých staveb*.<sup>14</sup> (fig. 4) He later submitted the winning design, a variation on an original from the book, to the limited (omezené) competition for the Solidarita site. He would go on to promote prefabrication technologies at larger scales in the early 1950s.

Karel Storch had been working with the collective from its beginnings in 1946 and he was an important member of the BAPS housing commission at the time. As a partner to Jech, his critical contribution to Solidarita was his extensive knowledge of Scandinavian design. He was one of four architects who had traveled as official representatives to Sweden, Finland, and Denmark in the summer of 1946, just as the Two-Year Plan was announced. The others were Jiří Gočár, Gustav Paul, and Ivan Šula, who took all of the photographs that appeared

in the travelogues published in *Architektura ČSR*.<sup>15</sup> (fig. 5) Upon his return, Storch became

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<sup>11</sup> A third designer Hanuš Majer was also part the team, he had been the second place winner in the competition.

<sup>12</sup> Alois Kubíček, "Nové zahradní čtvrti ve Zlíně," *Architektura ČSR* 2, no. [10?] (1940): 284.

<sup>13</sup> On their work, see Rostislav Švácha, "Funkcionalistická tvorba architekta Václava Hliského," *Umění* 43, no. 1–2 (1995): 144.

<sup>14</sup> František Jech. *Rodinný dům v kooperativní stavbě: ekonomisace simplifikace a industrialisace nízkých staveb*, Prague: Architektury ČSR, 1946.

<sup>15</sup> Based on the travelogues published in 1947, Gočár, Paul, Storch, and Šula were the delegation to Scandinavia, although a full list as such does not appear. For the purposes

one of the most outspoken advocates for "northern architecture," publishing his first manifesto on the topic, "Bytové stavebnictví v Dánsku a Švédsku" in the first issue of *Architektura ČSR* in 1947 and continuing to write on the topic throughout the year.

Based on units from Scandinavia and other international examples, he argued for the 'differentiated' apartment; a unit that had discrete rooms for various programs, including a small, separate kitchen, a large living room, and two private sleeping spaces for parents and children. This scheme is evident in the Solidarita rowhouses and apartments. His article was illustrated with examples including Sídliště Ryparken and Družstevní domy v Blidah, both in Copenhagen, Denmark, and družstevní obytyné domy Ulvsunda, in Stockholm, Sweden. (fig. 6) Of these cooperative and communal projects in Scandinavia, Storch wrote: "*Charakteristickým znakem družstevních a komunálních akcí je jednotné plánování, jednotná výstavba, do značné míry typizovaná bytová jednotka, péče o mimobytové doplňky sídliště jako jsou dětská hřiště, sady, mateřské školy, ústřední teplárna, prádelny, obchody atd. ...Jednotné řešení obytných sídlišť a čtvrtí je ovšem umožněno dobrou pozemkovou politikou, která zajistila obcím a státu rozhodující podíl na vlastnictví stavebních pozemků a tyto pozemky se pak postupují právem stavby družstvům nebo jiným stavebníkům.*"<sup>16</sup> His statements match closely with the Solidarita project, including the large tract of land secured for the project by the cooperative's politically powerful president, Josef Krosnář; the shared utilities and gardens; and its use of prefabricated materials especially wood panels, which were common in Scandinavia and had not appeared in Jech's designs previously.

Designed in early 1947, Solidarita itself does not appear in the journal, *Architektura ČSR*, until the tenth and final issue of 1947. The timing of its appearance was not unplanned, however, because in the same issue there was a series of articles about Scandinavia including an article by Storch on "northern architecture" and two travel pieces—one by

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here, it is most important that Storch was one of the travelers. See Šula, 308---309; Jiří Gočár, Gustav Paul, and Karel Storch, "Poznatky z cesty do Švédska, Finska, a Dánska," *Architektura ČSR* 6, no. 10 (1947): 298---307.

<sup>16</sup> Karel Storch, "Bytové stavebnictví v Dánsku a Švédsku," *Architektura ČSR* 6, no. 1 (1947): 26.

Gočár, Paul, Storch, and another by Šula based on their official visit (oficiální zájezd) the previous summer.<sup>17</sup> (fig. 7) Storch wrote that while individual projects can be singled out as exceptional, such as the Helsinki Olympic Stadium by Yrjö Lindegren and Toivo Jäntti pictured in the journal, "*právě i ten severský průměr je tak vysoký a projevuje se tak důrazně svou úrovní, že pro to u nás není obdoby.*"<sup>18</sup> The comparison was critical to the argument being made by Storch and others that Czechoslovakia should be looking to architecture in Scandinavia and other northern countries as models for the development of postwar professional practice. This was not only about how buildings looked, but how they were financed and constructed including land use rules and techniques for faster construction using repeated prefabricated parts.

To emphasize that these were models that could be followed in Czechoslovakia, this journal issue was set up with three articles about Scandinavia and then two on projects already under construction with two---year plan funding that were based on these precedents, labeled "2LP" (two---year plan). One was an experimental (pokusná) colony of family houses in Nová Paka. This rural settlement at the foothills of the Krkonoše Mountains included thirteen experimental units in duplexes and single---family houses designed by members of the BAPS housing commission in consultation with building firms experimenting with new materials such as "škvárobetoné tvárnice," "s dřevěnou montovanou konstrukcí", "keramická montovaná stavba," and Karel Storch's design "z betonové montované konstrukce." (fig. 8) Shown as almost completed, these small houses bear a striking resemblance to the Scandinavian examples illustrated a few pages before, including a prefabricated Finnish wooden house that took one hour to build (a clock is shown at the building site to prove the veracity of the claims) and a similar Swedish example made of wooden tilt---up panels.<sup>19</sup> (fig. 9)

The other feature was about Solidarita, whose two---year---plan building site was shown with units in various stages of construction and piles of numbered prefabricated pieces waiting

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<sup>17</sup> Karel Storch, "Severská architektura," *Architektura ČSR* 6, no. 10 (1947): 296---297.

<sup>18</sup> *Ibid.*, 296.

<sup>19</sup> Gočár, Paul, and Storch, 303; Šula, 309.

to be used.<sup>20</sup> (fig. 10) The four---page article was titled "Nové sídliště 'Solidarita' v Praze---Strašnicích" and appeared without an author's name. The text outlined all of the major features of the project and was accompanied by illustrations showing unit plans for the rowhouses and apartment buildings. There were also perspective drawings of the public spaces and a site plan showing the relationship between the thoroughfare along the northern edge of the site and perpendicular rows of housing units and open spaces that constituted a whole new neighborhood. Here was evidence of the implementation of the Two---Year Plan housing program based on international models, already underway in Czechoslovakia. (fig. 11)

The design of Solidarita was certainly related to Jech's previous studies of rowhouses and his book on cooperative strategies for low---rise housing. The zeal for new construction methods that Baťa and others cultivated in the 1930s was another evident aspect of this work. At the same time, the knowledge of Scandinavia that Storch and his colleagues brought back with them, then promoted through the BAPS housing commission, must also be considered as a primary influence on the final design of this project. Solidarita emulated Scandinavian models in three respects – construction technology, financing, and aesthetics. The importance of all three components cannot be understated. Solidarita was not just about building rowhouses with gardens and picturesque pedestrian paths. The construction technology was developed from practices already found in Scandinavia including the use of standardized prefabricated elements including windows, doors, and balconies, as well as engineered materials like prefabricated wood panels and lightweight concrete mixes. Although there were certainly local examples to follow for prefabrication, like Baťa, the placement of an article about Solidarita on the magazine pages just following a long article about Scandinavia showed that there was symbolic importance to associating this project with models coming from Sweden, Denmark, and other northern countries, where the welfare state offered a vision of what Czechoslovakia's future might be.

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<sup>20</sup> "Nové sídliště 'Solidarita' v Praze---Strašnicích," *Architektura ČSR* 6, no. 10 (1947): 310---313; Karel Storch, "Pokusná kolonie rodinných domků v Nové Pace," *Architektura ČSR* 6, no. 10 (1947): 314---320.

In particular, the cooperative finance model that had proven successful in Scandinavia was heavily promoted by Storch and Jech as the economic basis for new housing construction that best matched the social, economic, and political aspirations of his recovering country. As Storch repeats in his texts in *Architektura ČSR* on the topic, cooperatives backed by public investment were a primary reason why the housing sector functioned well in these countries. He wrote:

*Skandinávské družstevní organizace vykonaly ve svých zemích velkou sociálně, kulturně i hospodářsky cennou práci. Že ji mohly vykonat, k tomu přispěla vedle dobré organizace družstev i dobrá organizace technická, vzorná spolupráce s odborníky architektury, techniky, národními hospodáři ve službách družstev i mimo ně a spolupráce s komunální správami, zájem a podpora státu pro tuto činnost.<sup>21</sup>*

The cooperative ownership model moved projects forward by using the financial resources of cities and state government. The private market made it difficult to acquire large parcels of land or to create public space amenities in communities for their residents, but Storch argued that public investors were motivated by people more than money.

There are also some direct borrowings from the Scandinavian examples in the urban design and site strategy for the overall Solidarita site.<sup>22</sup> One of the most striking comparisons is with the Praestehaven Estate in Aarhus, Denmark, illustrated in issue five of *Architektura ČSR*, the issue prepared by the BAPS housing commission. (fig. 12) Here one of the precedents for the iconic long back gardens appeared and the wooden partitions leading outside also anticipated the mix of hard and soft materials at Solidarita. The Praestehaven site plan showed pedestrian paths separating the rows of houses and gardens, although in the Danish case, there are no front green spaces which are so delightful at Solidarita. (fig. 13) Storch described the environment of Danish and Swedish sídliště this way: *Dělení na stavební parcely neexistuje, ploty se nedělají. Průběžné komunikace jdou mimo obytné čtvrt, nerusí její klid a neohrožují její obyvatele, zvláště děti.*

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<sup>21</sup> Gočár, Paul, and Storch, 302.

<sup>22</sup> There are also illustrations of Swiss and British examples that share traits with Solidarita, but the texts by Storch and Jech emphasize the connections to Scandinavia in particular.

*Tím vším je vytvářen krásný a zdravý vnější obytný prostor, zvyšující obytnou hodnotu bytů, rozšiřující dospělým i dětem i ve velkých městech bezprostřední styk s přírodou se všemi důsledky psychickými a zdravotními.*<sup>23</sup> This is remarkably similar to Solidarita with no fences or car traffic among the rows of family homes and gardens. It also described the generous shared green spaces and opportunities for outdoor living that gave the neighborhood its feeling of openness. The emphasis on healthy and beautiful spaces, as well as a connection to nature, also suggest that the Scandinavia models softened the hard edges of some of the modernist rhetoric about efficiency.

Solidarita is unique among early postwar housing projects for its comprehensive approach to the question of what housing models might be best suited for postwar reconstruction in Czechoslovakia. It was not a single building or a housing estate that required a particular kind of site; this template could have been repeated many times in Czechoslovakia. Its density was higher than neighborhoods of single family homes, but still much less crowded than the činžáky of the interwar period or the old workers' districts like Žižkov or Smichov. The interest in Scandinavia and housing models from other countries illustrates that Czech and Slovak architects were still engaged in international conversations about housing design in 1946 and 1947. These architects thought of themselves as part of a global conversation about housing models that strived to offer comfortable, but not luxurious homes in an era of financial constraints and urgent postwar rebuilding. Unfortunately the model would not survive the transition to communism. Even so, it does offer a glimpse of an alternate trajectory for postwar housing that might have found an appropriate balance between the desire of many people to have a private single-family home and the benefits of denser development with shared public spaces, community services, and smarter approaches to land use and infrastructure development.

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<sup>23</sup> Storch, "Bytové stavebnictví v Dánsku a Švédsku," 27.