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SHARING COMMUNITIES: AN ALTERNATIVE POST-PANDEMIC RESIDENTIAL LOGIC

IVETTE ARROYO, LAURA LIUKE AND ERIK JOHANSSON

Abstract

Sweden needs affordable housing solutions to counteract segregation and isolation whilst promoting resilient cities. The COVID-19 pandemic has changed the conditions for being and sharing with others. The aim of the article is to explore residents' practices of inhabiting, sharing and being involved in existing collaborative housing during the pandemic. The article conceptualizes collaborative housing from a systems thinking perspective to shed light on how the purpose, elements and interconnections within this socio-spatial system affect each other. This is done through a qualitative case study with a transdisciplinary approach. The article discusses representations of space, residents' appropriation of common spaces as well as their spatial practices as coping responses to the pandemic in their everyday lives. Residents have appropriated common spaces for socializing whilst keeping physical distance. Their lived experience shows that the availability of common spaces, common practices and being a functioning community have been essential to counteract isolation and increase mutual support. The current pandemic has highlighted the urgency of linking affordable housing to resilient cities and rethinking of collaborative housing as an alternative post-pandemic residential logic. The article argues that collaborative housing creates a space for the emergence of sharing communities based on social ties, social practices of inhabiting, sharing and being involved in everyday life. Future research is needed focusing on living in sharing communities, especially during times of crisis.

Keywords:
collaborative housing, systems thinking, production of space, COVID-19, inhabiting, sharing, being involved, everyday life

Introduction

Globally, market-oriented policies focusing on housing as a commodity have failed to enable adequate and affordable housing for all (UN-Habitat, 2016). Due to what has been characterised as a global housing crisis, low-income groups have difficulties in accessing affordable housing (Hagbert, Gutzon Larsen, Thörn & Wasshede, 2020). In Europe, low-income households spent 41.5% of their disposable income on housing in 2017, whereas households above the national median spent only 17.4% of their salaries on housing (Housing Europe, 2019). Market rents have increased around 13.4% in the period 2007–2017, affecting especially lower income households (Housing Europe, 2019).

In the last decade, the Swedish housing system has become "one of the most liberal market-governed housing markets in the Western world" (Listerborn, Molina & Richard, 2020, p. 122), hindering the low-income people's access to affordable housing (Grundström & Molina, 2016) and leading to increasing housing deprivation. Residential segregation of migrants and unwanted social isolation of older adults and young people have increased in Sweden (Schirmer & Michailakis, 2015; Thelander, 2020), and the aforementioned groups have limited options to enter the Swedish housing market (Listerborn et al., 2020). In the New Urban Agenda, member states commit to promoting housing policies for "the progressive realization of the right to adequate housing for all as a component of the right to an adequate standard of living" (UN General Assembly, 2016, p. 8, provisions 31 and 105). Affordable housing for all is the first target of Sustainable Development Goal (SDG) 11, and one of the thirty-four relevant targets in Sweden (Weitz, Carlsen, Nilsson & Skånberg, 2018).

The global COVID-19 pandemic confronts society and decision-makers with moral decisions about life and death (Klenk & van de Poel, 2021). The pandemic has changed the relationship between housing and work and the conditions for being and sharing with others. New housing development, and renovations, should address the aforementioned challenges whilst incorporating lessons from the pandemic to withstand future crises. An alternative residential logic to ordinary apartment buildings is collaborative housing – *kollektivhus*[1] in Swedish – defined as

> *a multi-family building with normally equipped apartments with kitchen, living room and bedrooms, which also has common premises where the residents can cook and eat together, carry out a hobby or just socialize. Residents decide themselves what and how much they do together... [] ... There are different forms of tenure: rental housing, cooperative tenancy and cooperative tenant ownership.* (Grip, Kärnekull &Sillén, 2015, p. 5)

1 For discussion about definitions and development of the Swedish kollektivhus from a historical perspective, see Vestbro (2010b; 2014), Grip et al. (2015), Blomberg & Kärnekull (2019) among others. For a contemporary account of collaborative housing projects in Sweden, see Westholm (2019).

In Sweden, the concept of collaborative housing has evolved from the shared paid services model of the early 1930s towards the self-work model in the 1980s, to sharing communities[2] since 2005. There are currently around 50 collaborative housing associations in twenty Swedish cities (Kollektivhus Nu, 2021).

In the current pandemic context, people need to collaborate to survive and protect each other. Existing collaborative housing provides an opportunity to learn how the social dimension in these micro-communities is redeveloped in times of crisis. Appropriation and adaptation of housing space for self-care of infected family members, as well as for work, study and school space, have been some individual level coping responses. *How have residents of Swedish collaborative housing coped with the COVID-19 pandemic in their everyday lives? What lessons can be incorporated into future housing development in Sweden?*

The aim of the article is to explore residents' practices of inhabiting, sharing and being involved in collaborative housing during the COVID-19 pandemic. The article discusses representations of space, residents' appropriation of common spaces as well as their spatial practices as everyday coping responses. This is done by applying Lefebvre's theory of the production of space to empirical material collected during the pandemic. The article argues that sharing communities[3] based on social practices of inhabiting, sharing and being involved in everyday life can tackle current societal challenges – housing affordability, unwanted isolation and segregation. Sharing communities are resilient even in times of crisis because they self-organize themselves and renovate social ties among the members.

A snapshot of the housing question in Sweden during 1932–2020

Between 1932 and 1976, Swedish Social Democrats advanced the country's social welfare approach to housing, envisioning the government's role as promoting universal *good housing*, with a population-wide scope instead of selectively targeting low-income or vulnerable sub-groups (Hedman, 2008). Through the ambitious Million Programme, a million new public dwellings were built in the period 1965–1975 to guarantee affordable housing for all in a nation of eight million (Listerborn et al., 2020).

In 1991, the newly elected centre-right government coalition started implementing a new housing policy with two broad goals: privatizing the public part of the housing stock and facilitating home ownership (Hedman, 2008). The conversion of public rental housing to cooperative housing was legalized in the 1990s (Holmqvist & Turner, 2014). Listerborn et al. (2020) highlight that this conversion has reinforced the housing shortage. Changes of tenure forms for the period 1945–2019 are shown in Table 1. Public rental housing increased from 3.1% in 1945 to 24% in 1980, to decrease again to 17% in 2019.

2 In this article, we propose the notion of sharing communities to characterize some projects built in the period 2005–2020, including projects where the housing associations have acted as developers themselves and projects that were initiated by municipal housing companies with both higher and lower level of involvement of future residents.

3 Östlund (2016) proposes the notion of sharing communities as "people living in a community with a joint use of a resource or space". Norwegian architectural firms Indigo Vekst, Helen & Hard and Gaia Trondheim are developing collaborative housing based on the notion gaining by sharing (GbS), addressing both the physical solutions and quality of life and social relations among residents. Architecture of a GbS building inspires sharing through flexible solutions that allow change and the right balance between shared and private uses –e.g., Vindmøllebakken project (Gaining by Sharing, 2018). https://www.nasjonalmuseet.no/en/nordicpavilion-opening2021

Table 1
Tenure Forms (in %) in Sweden for the period 1945 to 2019. Sources: Elaborated by the authors based on Kungliga Socialstyrelsen (1945); SCB (1975); SCB (1984); Turner (2003); Listerborn et al. (2020); Wimark, Andersson & Malmberg (2020); and Housing Europe (2021).

	Tenure formS				
Year	**Cooperative**	**Owner occupier**	**Public rental**	**Private rental**	**Other**
1945	4.3	38.1	3.1	53.6*	0.9
1970	13	34	23**	30**	0
1980	14	41	24***	21***	0
1990	16.7	37.4	21.3	12.3	12.3
2012	21.9	37.8	17.3	13.8	9.2
2019	24	41	17	14	4

* Private rental in 1945 included rental to the open market 35.1%, rental from employer to employees 10.4% and tenant-owned rented to another person 8.1%.

** In 1970, public and private rental together accounted for 44.3% (SCB, 1975).

*** In 1980, public and private rental together accounted for 40.8% (SCB, 1984); data for 1970 and 1980 has been taken from Turner (2003, p. 101).

The past three decades' market liberalization has affected housing affordability in Sweden. The ongoing housing crisis is especially acute for low-income households. The percentage of rental housing has shrunk, it is expensive to build new apartment buildings and housing companies do not find the rental sector profitable (Listerborn et al., 2020). High labour and building material costs and strict construction standards make new housing development expensive (Boverket, 2019). Meanwhile, around 471,000 housing units within the Million Programme need to be renovated (Listerborn et al., 2020), constituting a qualitative demand. In addition, Boverket (2019) has estimated a quantitative demand of 640,000 new housing units. Hence, addressing SDG 11 is crucial considering the combined negative effect the existing qualitative and estimated quantitative demands could have on a population of 10.4 million inhabitants. To sum up, *new forms of adequate affordable housing* are needed for tackling the aforementioned structural challenges and for facing future crises.

Theoretical starting points

Collaborative housing from a systems thinking perspective

Across Europe, there has been a re-emergence of different types of collective self-organized forms of housing approaches with the future residents' active involvement since the 2000s (Czischke, Carriou & Lang,

2020; Hagbert et al., 2020). Studying this new wave of collaborative housing is relevant for understanding contemporary housing policies, and the housing crises of different shapes (Hagbert et al., 2020).

Collaborative housing is an umbrella term used by several scholars and practitioners. It is a wider concept than the Swedish notion of *kollektivhus*. Collaborative housing can imply residents sharing common spaces and collaborating among themselves (Vestbro, 2010a), solidarity among residents (Bresson & Labit, 2020), active involvement in the redevelopment or design process (Fromm, 2012; Czischke & Huisman, 2018) and means to develop social bonds and bridges between refugees and local population (Czischke & Huisman, 2018; Arroyo, Montesino, Johansson & Yahia, 2021). Collaborative housing can be understood as an international movement (Fromm, 2012) and as an interdisciplinary research domain in Europe (Lang, Carriou & Czischke, 2018).

According to Czischke et al. (2020), residents of collaborative housing have a shared purpose and a high degree of social interaction among them. These authors also highlight different degrees of collective self-organization, significant collaboration between future residents and external actors, different types of tenures and residents exerting their individual and collective agency in everyday life. Moreover, collaborative housing has enabled access to affordable adequate housing for vulnerable groups – e.g., older adults over 70 years, young refugees and young adults – whilst addressing current social challenges such as segregation and unwanted isolation (Arroyo et al., 2021). This is the case in SällBo – a housing renovation project providing institutionalized collaborative housing in Helsingborg, Sweden where Arroyo et al. (2021) studied residents' coping responses during the COVID-19 pandemic, demonstrating the importance of understanding how the social and spatial dimensions have enabled social connection in everyday life.

Applying *a systems thinking lens* to the conceptualization of collaborative housing sheds light to residents' coping responses during the COVID-19 pandemic. A system is "a set of elements or parts that is coherently organized and interconnected in a pattern or structure that produces a characteristic set of behaviours, often classified as its 'function' or 'purpose'" (Meadows, 2008, p. 188). Hence, a system consists of elements, interconnections and a purpose, or function. In the case of collaborative housing, each project has a social and a spatial dimension – namely the community and the building. Therefore, collaborative housing can be conceptualized as a socio-spatial system where neighbours have high degree of social connection, share common spaces and responsibilities, collaborate with each other, make collective decisions and have a high influence over their living environment.

The system of collaborative housing is made up of *elements* such as project initiator (e.g., a group of future residents or a municipal housing company), forms of tenure (rental, housing cooperative, cooperative tenancy, etc.), residents, building fabric, apartments, common indoor and outdoor spaces, housing board, self-governance of the house, among other physical and intangible elements[4]. Different *interconnections* hold the elements of a system together. In the context of collaborative housing, relationships of trust and collaboration as well as practices such as mutual support, influence and sharing (e.g., sharing common spaces, activities, things, responsibilities, rules) hold the residents and other elements together.

4 The main author's tacit knowledge on collaborative housing, as a resident of one community for 6 years, has been used for this description of elements and interconnections.

The initiator defines the *purpose* of the housing project. When the initiators are medium or high-income residents aiming to create a community focusing on socializing among neighbours and choose housing cooperative as the tenure, an unintended consequence might be the exclusion of low-income groups due to affordability. When the initiator is a municipal housing company, the purpose can be to tackle housing affordability through rental apartments and promote social integration to counteract segregation of low-income migrants and unwanted isolation of older adults and young people. The latter is the purpose of the collaborative housing SällBo, mentioned earlier (Arroyo et al., 2021). The purpose of the collaborative housing affects the tenure and the sizes of apartments targeting different types of households.

Co-Lab Research has collected accounts from residents of collaborative housing projects during the COVID-19 pandemic between June 2020 and February 2021 (Czischke, 2020). The examples address common challenges, new opportunities and practices carried out by the residents of collaborative housing in the Netherlands (Centraalwonen in Delft), the USA (Capitol Hill Urban Cohousing in Seattle), Italy (four projects in Milan) and Sweden (Slottet in Lund). Common challenges include respecting self-isolation decisions of neighbours afraid of the virus as well as supporting the infected neighbours to prevent spreading of the virus.

The aforementioned projects have continued working fine during the pandemic because of *three inherent characteristics of systems:* self-organization, hierarchy and resilience. *Self-organization* is "the ability of a system to structure itself, to create new structure, to learn, or diversify" (Meadows, 2008, p. 188). With a functioning community in each project, self-organization emerged as a collective response to protect itself from the virus. Measures adopted in these projects are a) limiting outsiders' access to the common spaces, b) closing the common spaces for residents, c) stopping joint cooking and common meals, d) digital communication, e) renegotiating access and use of common spaces for sub-groups of residents, and f) using the common garden for socializing whilst keeping physical distance.

Hierarchy in systems thinking implies "subsystems within systems", where systems are organized to create larger system (Meadows, 2008, p. 187). In Centraalwonen, the building consists of four clusters with distributed common spaces, which allowed the community of 100 residents to split into 13 sub-groups, helping to prevent the spreading of the virus and allowing residents to co-work in some common kitchens. In this project, residents share kitchens, bathrooms and other facilities. These spatial constraints limited the households' possibilities to self-isolate from the rest of the subsystem.

Resilience is "the ability of a system to recover from perturbation; the ability to restore or repair or bounce back after a change due to an outside force" (Meadows, 2008, p. 188). In Centraalwonen, residents formed bigger social units, created new ways of socializing in the common kitchens and upgraded the common outdoor courtyards for having meals there. It is important to underline that spatial qualities characteristic of collaborative housing have enabled community resilience allowing the continued socializing in the common gardens, rooftop gardens (where available), balconies, common kitchens and other common spaces. Residents of these projects have not felt isolated and recognize their collective wisdom as part of their resilience when coping with COVID-19.

The production of space in collaborative housing

Henry Lefebvre examined the role of urban space and everyday life as modes of socialization. For Lefebvre, the concretization of the new society, the new life, can be defined on the level of everyday life; it is not constrained to the economy and ideology (Stanek, 2011). Hence, a truly revolutionary social transformation should have effects on daily life in creative ways (Stanek, 2011, p. 67). In his *theory of the production of space*, Lefebvre formulates "the triad of perceived, conceived and lived space, as well as the 'translation' of this triad into 'spatial terms', resulting in the second triad of spatial practices, representations of space and spaces of representation" (Stanek, 2011, p. 81) (see Figure 1).

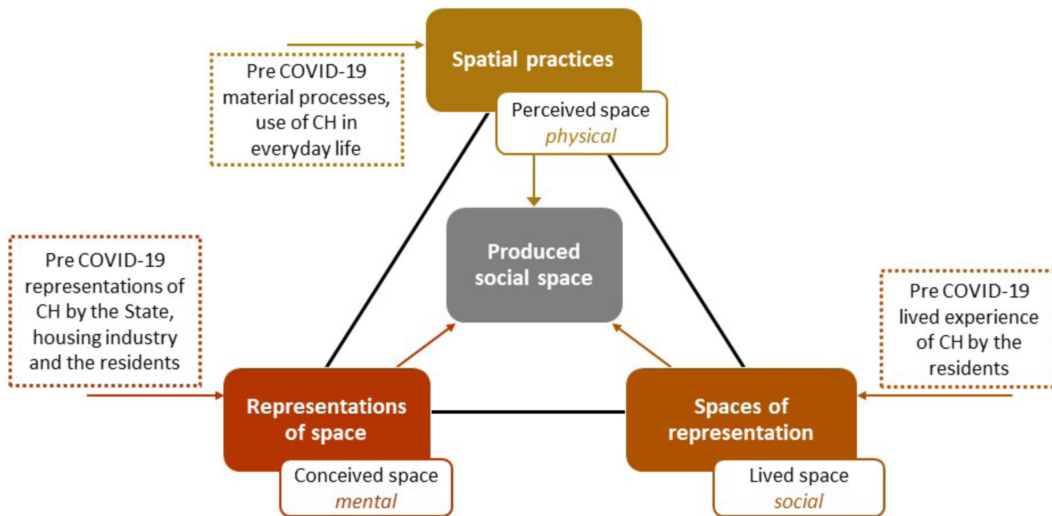

Figure 1
Lefebvre's three-dimensional analysis of the production of space applied to collaborative housing (CH). Elaborated by the main author based on Stanek (2011; 2014), Schmid (2014), and Dodd (2020).

Representations of space (conceived space) is the dominant space in any society, the *mental* space of the planners and architects (Stanek, 2011), expressed through discourses, concepts and plans (Schmid, 2014). "These shared representations are reference points, negative or positive, for the social processes of production of space and for the design practices themselves" (Stanek, 2014, p. 265). *Spatial practices* (perceived space) are "material processes related to the production of space" (Schmid, 2014, p. 37). They are empirically observable practices of material transformation of space in a given socio-economic context, and important regulators of everyday life (Stanek, 2011). Spatial practices refer to *physical* space that is not designed but produced in everyday life, being "the space of social relations and of experiences of daily life" (Dodd, 2020, p. 11). *Spaces of representation* (lived space) are the users' everyday lived space that they appropriate and change (Stanek, 2011), and "thus lived experience" (Schmid, 2014, p. 37). It is *social* space "that is processed and modified over time and through use" (Dodd, 2020, p. 8). Figure 1 is an attempt to capture the open-ended and dialectical character of Lefebvre's double triad of the production of space, illustrating the moments of space in collaborative housing before the COVID-19 pandemic. We argue that the lived experience of residents during the pandemic has aggregated *moments of space* that might affect produced social space in the context of collaborative housing – especially regarding representations of space, as discussed in the coming sections of the article.

For Lefebvre, *to inhabit implies to appropriate space*, which "covers a wide range of practices, whether individual or collective, that modify, reshape, adapt, adjust, or alter space on various scales" (Stanek, 2011, p. 87). We argue that living in collaborative housing implies *social practices of inhabiting, sharing, and being involved* in different ways, such as in organized activities, housework and spontaneous social interaction in everyday life. According to Lefebvre, *to inhabit* implies "to take part

in social life, a community, village or city" (Lefebvre, cited in Uribe, 2016, p. 32). To inhabit relates to both the own dwelling space and being part of a community (Uribe, 2016). In collaborative housing, *sharing* implies "sharing of resources … sharing of meals and common spaces … sharing facilities and tools" (Vestbro, 2012, p. 1, 7).

Currently, the interest in collaborative housing has grown, new groups and associations are looking for new ways of living "based on mutual support, self-governance and active participation" (Blomberg & Kärnekull, 2019, p. 280). Drawing on Arroyo & Åstrand (2019), we use the notion *being involved* instead of participation to emphasise the residents' active involvement in different types of activities, their purposive choices and appropriation of space in everyday life to suit their changing needs over time.

Sharing communities and housing for resilient cities

In Sweden, housing related preventive measures to reduce the spreading of COVID-19 are *staying at home, washing hands frequently and keeping distance from others* (Public Health Agency of Sweden, 2020). These measures assume that people have access to spacious or at least non-overcrowded housing and to water. Hence, the current pandemic has highlighted the urgency of linking affordable housing to resilient cities.

> *A notion of resilient housing can be entirely internalized to a work of architecture and focused on tectonics and structure, whereas housing for resilient cities forces the designer's attention into larger urban realms… [ ]… …[It] is housing that affords residents connections to social systems and resources, which in turn enhances the broader community's capacity for resilience* (Vale, Shamsuddin, Gray & Bertumen, 2014, p. 25, 26).).

Building on the work of Vale et al. (2014), we argue that the existing *collaborative housing* in Sweden seems to follow a similar line of thought as *housing for resilient cities* because it has helped residents to cope with (1) accessing adequate affordable housing within a dysfunctional housing system, (2) counteracting isolation or segregation, and (3) adapting to crisis such as the current COVID-19 pandemic.

Methodology – case study design

The research team adapted an ongoing project to carry out this empirical enquiry to explore residents' coping responses in collaborative housing during the COVID-19 pandemic. The research design is a qualitative case study (Yin, 2014) with a transdisciplinary approach that identifies and explains elements relevant to address a complex issue (Lawrence, 2004). The unit of analysis are residents' coping responses in collaborative housing in Sweden. The researchers could not visit the houses to

conduct face-to-face interviews and participant observations during the pandemic due to the preventive measures in place. Therefore, the qualitative material includes document analysis and insights from empirical material such as online interviews, notes taken during two webinars with residents and feedback from an expert meeting.

Document analysis included a historical review of specialised literature on Swedish collaborative housing and accounts from residents from other countries collected during the pandemic by the Co-Lab Research (Czischke, 2020). Online interviews were "organized in an asynchronous form, …[and]…questions [were sent by e-mail] to the participants and they sent their answers back after some time" (Flick, 2018, p. 243). An advantage of e-mail interviewing was that the inquiry was carried out as a series of e-mail exchanges asking for further information. The e-mail interviews were distributed during October and November 2020 to the 28 associations that the research team was in contact with before the pandemic. The online interview guide included eight open-ended questions related to residents' lived experience during the pandemic such as the use of common spaces, decisions regarding socializing or self-isolation, collaboration and solidarity between neighbours, difficulties and challenges, and adaptation of the common spaces to the new needs and conditions established by the pandemic. Fourteen housing associations answered the email interviews and some interviewees provided pictures taken between May and November 2020. This article includes data from 19 respondents, representing 14 associations in Malmö, Lund, Gothenburg, Linköping, Stockholm, Trosa and Falun, providing a preliminary holistic insight to the different ways the residents have coped during the pandemic. The empirical material also includes notes from two webinars organized by the umbrella organization *Kollektivhus Nu* with residents from the different collaborative housing associations and corona reports published on their website.

For the qualitative analysis, first level thematic coding of the interviews, notes from the webinars and corona reports was carried out using NVivo 12. The interpretation of the empirical material is a first attempt to apply Lefebvre's theory of the production of space and notions, such as inhabiting, sharing and being involved, to collaborative housing. The preliminary findings were collected in a report that was presented in an expert meeting organized by Housing Development & Management on 22 March 2021. Twenty-five experts, consisting of researchers, residents of collaborative housing, practitioners as well as professionals working in the public sector provided transdisciplinary feedback to the report. This article has incorporated the transdisciplinary knowledge from the expert meeting participants as lessons to be incorporated in the development of future sharing communities.

The study has several limitations. First, it does not cover all fifty collaborative housing associations since some associations could not be reached due to the pandemic. Secondly, a thorough mixed-methods evaluation was not feasible due to human and funding limitations. Rogers & Power (2020, p. 180) argue that "housing scholars and journals have an ethical responsibility to intervene in this emergency both as experts as researchers". Moreover, Klenk & van de Poel (2021) urge researchers to facilitate moral learning on the COVID-19 pandemic. Thus, we decided to engage with the present inquiry in hope that it would shed some light on a crucial global housing and health emergency.

Living in collaborative housing before the COVID-19 pandemic

Representations of space in collaborative housing

The history of collaborative housing is linked to a housing system that "has changed from market-led until the 1930s, to being characterized by a strong public policy from the 1940s until the 1990s and then a more market-driven development again" (Caldenby, 2020, p. 54). The main ideas underlying collaborative housing in Sweden in the period 1935–2020 are synthetized in Figure 2, including pictures of emblematic projects for each period.

"Lefebvre described the moments of space as related to each other from within a social practice, governed by an open-ended spatial dialectics" (Stanek, 2014, p. 265). We argue that, in the context of collaborative housing, the relation between spatial practices, spaces of representation and representations of space emerge within the social practices of inhabiting, sharing, and being involved in everyday life.

The ideas from the shared paid services model (see Figure 2 (i)) focused on rationalizing housework through a central kitchen and shared housemaids, so that free gainfully employed women could have time for leisure, engaging in non-profit organizations, socializing and learning (Wisth, 1992). The Swedish press categorized this approach to *kollektivhus* as "Russian ideas" (Wisth, 1992, p.36), therefore people's representations of *kollektivhus* are related to such discourses. The construction of Markelius building, the first modernist collaborative housing in 1935 (see Figure 2 (i)) and six other buildings (Grip et al., 2015) were supported by a private entrepreneur, and in 1954, the Housing Collective Committee argued that such buildings only targeted elite groups and were not benefitting the public (Modin, 2011).

Figure 2
Ideas underlying collaborative housing in Sweden in the period 1935–2020 where, where **(i)** Shared paid services: Markelius building built in 1935 in Stockholm.
PHOTO: HOLGER ELGAARD, 2010;
(ii) Self-work model: Kollektivhuset Regnbågen built in 1989 in Lund.
PHOTO: KOLLEKTIVHUS NU, 2010;
(iii) Second half of life model: Kollektivhuset Färdknäppen completed in 1993 in Stockholm.
PHOTO: THEORY IN PRACTICE, 2019;
and **(iv)** Kollektivhuset Under Samma Tak built in 2019 in Gothenburg.
PHOTO: KERSTIN HARRINGER, 2020.
SOURCE: ELABORATED BY THE MAIN AUTHOR BASED ON MYRDAL (1935); BLOMBERG ET AL. (2011); KOLLEKTIVHUSET FÄRDKNÄPPEN (2019); TROLLÄNGEN BOSTAD AB (2019); FÖRENINGEN UNDER SAMMA TAK (2020).

Figure 2 (ii) shows the main ideas of the self-work model that can be summarized as mutual support, self-governance and active participation (Blomberg & Kärnekull, 2019). The Living in Community group – Bo i Gemenskap (BIG) in Swedish – proposed men and women working together in collaborative housing. By cooking for a larger number of residents more rarely, one could cook with others and save time for other purposes. "However, opposition from patriarchal society was strong" (Grip et al., 2015).

Figure 2 (iii) summarizes the main ideas of the self-work model that focuses on people over 40 years old. The Tenants' Association, the Social Democrats and the left parties were sceptical because the initiators – future residents – were considered a group of highly educated high-income earners who could secure improper benefits (William-Olson 1994). The initiators advertised the project as *kollektivhus*, "which has also been a hard-to-sell term for a time and in a country that insists in considering *kollektivhus* as an invention of the fuzzy 1970s" (William-Olson, 1994, p. 25).

Today, the interest for *living in a community*, *community living* and *living communitie*[5] has increased considerably (Boverket, 2020a; Boverket, 2020b). Under Samma Tak (see Figure 2 (iv)) was built by Trollängen Bostad AB and the Association Under Samma Tak in 2019. Sofielund kollektivhus, developed by the Association Kollektivhus i Malmö (KiM) and MKB Fastighets AB in 2014, is a result of collaboration between public housing company and the future residents (Sveriges Allmännytta, 2020). To sum up, inherited representations of space in collaborative housing are associated with the 1930s Russian communal housing, the 1935 bourgeois families collectivizing housemaids in Sweden, or the fuzzy 1970s communal living. These representations are also associated to

5 These are the authors' translations of the Swedish notions "bo i gemenskap", "bogemenskap", "gemenskapsboende". There is a tendency that some starter groups prefer these new concepts instead of the Swedish notion of "kollektivhus".

medium-income or elite intellectuals and to radical activists. The representations of collaborative housing mentioned above reveal a resistance to this form of housing by social structures with different ideologies with no unifying narrative, but perhaps a common fear that the agency of the individual might be annulated within the collective. The latter can be related to what Bhaskar (2016) has denominated the antinomy between individualism and collectivism. Hence, these shared mental representations of space seem to have been instrumental as negative reference points generating different types of prejudices towards collaborative housing. The impact of representations of collaborative housing in the period 1935–2020 on other practices of housing space production seem to have favoured individualism and market-driven development of apartment buildings leaving collectivism and collaborative housing outside housing policies. On the other hand, there is a risk that contemporary sharing communities become enclaves of middle- and high-income people leaving (unintentionally) low-income households outside new projects due to high down payments needed to enter a project.

Social sustainability and housing affordability

The social practices of inhabiting, sharing and being involved are carried out through common everyday life activities such as coffee breaks and film evenings, house meetings and self-governance of the house, study circles, working in the common garden, and cultural or sport interest groups. Cooking and eating together are the main activities for socializing, contributing to develop a sense of community and saving time (Vestbro, 2012). Other social sustainability aspects are caring about, and helping, each other. "Shared work with common meals" (Blomberg & Kärnekull, 2019, p. 283) such as cleaning common spaces together and self-work groups are also important activities for inhabiting and being involved in everyday life.

The existing collaborative housing associations do not focus on *integration of people from different income groups*. The form of tenure is one prohibiting factor. Cooperative tenancy[6] implies a considerable investment whereas rental housing is more accessible for lower income groups. The difference can be illustrated by comparing two relatively recent projects: Lagnö Bo from 2018 (cooperative tenancy) and Sofielund from 2014 (public rental). The monthly rents for a 3-room apartment of 67 m^2 and 65 m^2 units are fairly similar – €870 (SEK 9,350) and €900 (SEK 9,120) – but the cost to acquire a unit in Lagnö Bo required a down payment of €75,000 (SEK 800,000) in 2018. The rent level in collaborative rental apartments is competitive to non-collaborative, being in some cases more affordable, while providing extensive common spaces that compensate generously for the usual 10% reduction in individual apartment floor area.

6 Cooperative tenancy "means that an association owns or rents a property. The association's members rent their apartments from the association. When you move into the apartment you pay a deposit to the association, an amount of money. The deposit will be returned to you when you move from there. So you cannot sell your apartment, but you return it to the association when you move out (Boverket, 2015).

Inhabiting, sharing and being involved during the COVID-19 pandemic

In the following section, Lefebvre's concept of *use*, namely "a practice of appropriation of space in which the bodily experience goes hand by hand with its interpretation" (Stanek, 2005, p. 22), has been instrumental for analysing residents' own representations of collaborative housing.

Spaces of representation: appropriation of common spaces in everyday life

Recommendations to prevent the spreading of COVID-19 have especially affected older adults aged 70 and older (70+ years) in the risk groups. They have been asked to stay at home and keep distance from others. For many, this preventive measure has led to isolation from family and friends, staying alone at home or in elderly care facilities, where visiting has been prohibited. Conversely, residents of collaborative housing self-organized themselves to cope with the pandemic. These residents are used to discussing everyday life situations and making decisions together. In case of disagreements decisions are made respectfully focusing on the common good. When the pandemic struck in March 2020, residents developed different types of coping responses.

> *We developed a system where those who are active in the society only have access to their apartments and the laundry room, while we (the pensioners) have access to the common kitchen, dining room and living room. We meet there; we share a cup of coffee, cook a meal to each other sometimes. Hence, we are not socially isolated.* (Respondent 02)

In the beginning, most associations cancelled the regular cooking and eating together to prevent the virus from spreading. Some residents in the risk groups decided to avoid any common activities. Some disagreements arose on the severity of the virus and the health risks it implied. For example, when a young adult wanted to bring friends from outside for a party in the common dining room in the beginning of the pandemic. After long online and telephone discussions, collective wisdom and decision-making aiming at protecting the majority prevailed over individual opinions and wishes.

> *We had the dining room closed for a long time but we allow it now, since autumn, to be used with some rules of conduct. These include that residents spray all surfaces carefully after themselves and that the host takes responsibility for the children playing in the play- and TV-room*. (Respondent 14)

Crisis such as COVID-19 imply iterative learning about an unknown hazard, creating new ways of inhabiting, adapting to the new conditions and restoring the functioning of the community. After some months of dealing with the pandemic, the young adult was able to have the party without complaints from neighbours.

Figure 3
Residents of collaborative housing for the second half of life coping with everyday life during the COVID-19 pandemic in Kollektivhuset Färdknäppen, where (a) residents are preparing food in the common kitchen, and (b) residents are eating together with distance from each other in the common dining room.
PHOTOS: KERSTIN KÄRNEKULL, APRIL-SEPTEMBER 2020.

After the initial shock, residents adapted their practices of inhabiting, sharing and being involved in the new everyday life. Some restarted the common cooking and eating together on voluntary basis, giving the residents freedom to decide whether they want to join (see Figure 3 (a) and (b)).

> *We have cancelled the usual cooking, but during the summer and autumn we have organized "spontaneous" cooking with careful hygiene, keeping distance, serving on plates [instead of buffet], etc. at least once a week… [ ]… I socialize with those who are at home; all genders, natives or foreign-born, most are over 55 years old. The common garden and the roof terrace are great assets. Our small exercise group of three persons has been active three times per week in our gym during the whole period.* (Respondent 05)

In a house for the second half of life, cooking together continued 2 days a week with around 15–20 residents. They created new routines for being involved, serving the food and sitting keeping distance from each other. Those residents who chose not to join the common meals could get the food delivered to their apartments. Residents active in working life avoided meeting older adults trying to keep physical distance in case they were infected. The availability of common spaces has enabled residents to appropriate different rooms and spaces and adapt their use both indoors and outdoors.

> *Daily coffee break and movie nights continue with physical distance, but less [people] than usual participate. Quite often, someone is in the common rooms for example reading a newspaper or watching TV, and 1–2 times a week there are some who eat their own food in the dining room, but there are many who avoid the common spaces completely. I have been to a single movie night and to our minimized 10-year anniversary party and cleaned the kitchen a little bit, when no one else was there… [ ]… Despite everything [in relation to the pandemic], it is special for those 70+ years old who dare to use the common spaces and be part of the coffee break at 11 o'clock.* (Respondent 13)

Under pre-pandemic conditions, the use of common spaces implied socializing, cooking and sharing food, or other activities with neighbours and visitors. Thus, "spaces for social connection" can be suggested as residents' shared representation of collaborative housing. People joining activities in the common dining room are expected to participate in the social interaction, they partake of the house's purpose (e.g., socializing); they experience the sense of community, smell the food as well as listen to the noises of the conversations; they observe objects and interpret residents' interactions around them. Hence, people's lived experience entails a bodily experience, "a total being in space" (drawing on Stanek, 2005, p. 22). This bodily experience seems to be meaningful, so that many residents have chosen to continue socializing even during the pandemic. Therefore, residents' shared representation of collaborative housing as "spaces for social connection" seems to have been instrumental for appropriating and adapting their use of the common spaces during the pandemic. By keeping physical distance and avoiding social isolation their lived experienced was adapted to the new conditions.

Spatial practices as coping responses

Figure 4
Residents of collaborative housing appropriating outdoor spaces during the COVID-19 pandemic, **(a)** annual meeting at Sockenstugan.
PHOTO: SOCKESTUGAN, AUGUST 2020;
(b) Course in dam construction in the glazed conservatory of Lagnö Bo.
PHOTO: ANITA BLOM AF EKENSTAM, MAY, 2020.

Some more anxious residents have decided to avoid common activities. Others have adapted their *spatial practices* to continue with usual common activities in a corona-safe way or to develop new types of activities (see Figure 4 (a) and (b)). Residents deciding to stay in their apartments receive practical help from their neighbours, so they are not isolated. The cancellation of many activities within sports or non-profit organizations has affected Swedish people's routines and social interaction. In ordinary apartment buildings, residents are disconnected from neighbours in everyday life, while this is quite different in collaborative housing.

> *It is fortunate that we live collectively. We can always meet someone and do not have to feel isolated.* (Respondent 10)

Physical common space, understood as the space produced through everyday social relations, has been reinvented during the pandemic through new routines and ways of using existing common spaces.

> *Mainly that it becomes two "houses" in the house – those who keep together and those who stay away. During the garden day, it was nice because everyone was there! We have learnt different movement patterns. Redone routines. Rules on how many people are allowed in the kitchen during cooking and dishwashing. Distance in queues. Simplified cooking. Maximum number [of people] in the common spaces is 22, in other words, just under half of us who live here.* (Respondent 07)

Some common dining rooms can become crowded when all the residents eat together. Therefore, residents have rearranged the furniture to limit the number of people whilst continuing their practices of sharing. In other buildings, the existence of a large common dining room has enabled residents furnish sparsely whilst still being able to socialize

with each other. These spatial practices, as coping responses to the pandemic, have also implied changes in the way activities are carried out.

> *We have changed the placement of sitting places in the dining room, made marks on the floor for keeping distance when we queue for food. The food is served in the dishes, not as a buffet as it used to be.* (Respondent 01)

Spatial practices in terms of new routines regarding the use of, and hygiene within, the apartments have also changed to keep others healthy when someone has tested positive. Residents were able to self-isolate themselves at the household level because apartments are complete units; they constitute the smallest subsystem within the collaborative housing system.

> *When an apartment has been set in quarantine, people are extra careful. I live in an apartment with 4 people and when one of us got COVID-19, we were in quarantine and got help to pick up equipment for testing ourselves and leave the samples. Our roommate was incredibly careful regarding staying in her room and always washed her hands and disinfected them before she went out and used our kitchen or bathroom. We actually made it and it felt great.* (Respondent 18)

Many residents developed coping responses such as making outdoor common spaces appropriate to continue sharing different common activities during spring and summer 2020 (see Figure 5 (a) and (b)).

Figure 5
(a) Cleaning the common garden and having coffee break outdoors at Kollektivhus Under Samma Tak.
PHOTO: SIMON BOAHEN, MAY, 2020;
(b) Residents during the COVID-19 pandemic gathering around the fire at Tersen before a walk in small groups for reflecting on the word “hope”.
PHOTO: ULLA IMMLER, NOVEMBER 2020.

Outdoor common gardens and roof terraces have become the most used common spaces.

> *We arranged many outdoor activities, both separately for 70 plus people and together with the younger ones. Midsummer celebration keeping distance – 70 plus people played and watched, children/ parents danced and decorated the maypole before that. Balcony concert (many musicians together – standing on different balconies) with audience [on the ground] below and on other balconies. We do not distinguish between people with different ethnical backgrounds; we are all neighbours, as long as we can understand each other.* (Respondent 19)

The pandemic has unveiled the importance of open outdoor space nearby, enabling the residents to take walks together. Being involved in common cleaning days and coffee breaks outdoors have become coping responses to continue socializing.

> *We walk together a couple of times per week. We arrange Advent coffee and barbecuing outdoors. We have registration lists for film screenings. The walks are usually during daytime, which means that it is mainly women who do not work that participate. However, there are mixed ages at other events where we also have children's activities. When we have common cleaning days, it works to keep the distance. Then there are smaller activities per floor for 6 to 8 people.* (Respondent 16)

Spatial practices are not only limited to the physical space but also include the virtual space, as an alternative corona-safe space of social relations. The digital knowledge gap is a problem affecting some older adults. In some places, residents more familiar with technology have managed to fix access to digital tools in the common living rooms so that older adults can join the meetings. However, the lack of physical meetings can become problematic due to being involved in fewer discussions over important questions and residents' diminished equal possibilities to influence collective decisions.

Residents have developed new ways of sharing, showing solidarity to the most vulnerable or sick. People who have been sick have found ways of socializing among themselves.

> *People have gone shopping for each other, "socialized" a bit through our common Facebook group and shared fate when someone got sick. [We have placed] notes with reminders about distancing, hygiene, etc. Those who have had long-term COVID-disease have hung out, taken long, slow walks [together]. There has been no "common call" about helping [each other] but it has occurred between individuals.*
> (Respondent 04)

Sharing communities have counteracted the isolation and increased the support to residents during the current pandemic. Residents seem to be satisfied of inhabiting, sharing and being involved in their communities. The risk of infection is there, as elsewhere, but without disaggregated data on infection prevalence in different types of housing it is not possible to comment whether the risk is higher or lower. However, ongoing social practices and social connection between neighbours, the residents' capacity to self-organize themselves through democratic processes, and the existence of common spaces, have enabled the residents to become more resilient as the community has renovated their social ties due to facing and coping with a global crisis.

Lessons for future Sharing Communities

This section builds on the previous discussion and includes the transdisciplinary feedback from the expert meeting. There is an underlying understanding that collaborative housing form implies a greater degree of social interaction and collaboration, as well as larger possibilities of influencing one's immediate living environment. Therefore, when aiming for socially and economically integrated and resilient sharing communities a number of issues to consider have been identified. They relate to the purpose, design, organizational and legal frameworks, and affordability, stemming from the need of, and desire for, affordable, safe and secure housing in a sustainable sharing community. The chosen purpose and the initial design decisions have longstanding impacts. The experience of the communities pre- and during COVID-19 illustrate the importance of both flexibility and variety of shared spaces. In changing situations, the possibility to transform spaces for different purposes is necessary, e.g., from children's playroom to music studio as the children grow, or into co-working space for those working from home. Here, a flexible design with moveable walls making the number of rooms and room sizes adjustable could be advantageous. Equally, the location of common spaces is essential; they should be distributed in different parts of the building and be easy to access, but also to pass by when social interaction is not desired. To use and co-exist in the common spaces without the expectation of direct interaction should be possible and desirable. This is a key to enable different degrees of social interaction and involvement in everyday life that suit different residents. These possibilities of transformation and varying ways of space appropriation provide opportunity for a variety of subsystems within the system and are vital for community resilience. To be resilient the community must be able to re-invent and transform itself when its elements change, i.e., when the residents change the use of common spaces can also be changed.

The pandemic has underlined the importance of outdoor spaces, and the need to pay attention to the design of different types of semi-covered spaces – courtyards, terraces, rooftop gardens, urban gardens – in order

to provide flexible use of space. Good design protecting against rain, wind and strong sunshine is needed to increase the use of outdoor spaces. Taking this one step further and responding to the criticism claiming that collaborative housing is disconnected from its surroundings, new ways of sharing indoor and outdoor space could be considered on a neighbourhood or block level among the different housing associations, property owners and municipality. Shared spaces in the neighbourhood could be meeting places and reuse & sharing facilities co-managed by several associations. Shared spaces or facilities are relevant for building social connection and creating collaboration practices between residents of the collaborative housing project and the neighbourhood. Practices of collaboration are important when facing future crises and contribute to building community resilience on the neighbourhood level. This kind of sharing has implications on city planning and property ownership level and strengthens the argument for promoting sharing communities as one of the housing options in neighbourhoods with a mix of housing typologies and forms of tenure. For future sharing communities in this mix, the public rental was identified as the most accessible form of tenure that could be combined with cooperative tenancy for achieving the purpose of higher level of socio-economic integration.

Conclusions

The article has bridged the knowledge gap on the residents' lived experience of collaborative housing in the context of an ongoing global crisis. It has conceptualized collaborative housing from a systems thinking perspective in an attempt to grasp its complexity in a holistic manner and understand better how its purpose, elements and interconnections affect each other. Collaborative housing is a *socio-spatial system* with ongoing practices of collaboration, trust, influence, mutual support and sharing in everyday life, which have been redefined and reinforced during the pandemic. People have developed ways of protecting themselves, their families and their community. Residents have shown their capacity of self-organization, discussing and making quick decisions through democratic processes in times of crisis. Both the community and the existence of common spaces have enabled the residents to become resilient, adapt and cope with the pandemic.

Individual or families' decisions on how to cope with the pandemic at the household level, have been respected. Preventive measures to protect vulnerable neighbours have also been considered in residents' decisions regarding their respective communities. Even when households have decided to self-isolate themselves, physical distance has not affected mutual support.

In this article, Lefebvre's theory of the production of space provides the conceptual framework for discussing not only inherited representations

of collaborative housing but also for analysing how representations of collaborative housing as "spaces for social connection" have influenced residents' lived experience during the pandemic. Residents' *lived experience* shows that the availability of common spaces and being a functioning community have been key elements to counteract isolation and increase mutual support. The availability of common spaces, and in some cases semi-covered outdoor spaces, have enabled the residents to appropriate them and adapt their use to the new conditions of physical distancing.

Spatial practices carried out by residents have been to rearrange furniture or allocate new uses to existing common spaces. Residents have not needed to carry out material transformation of spaces due to the availability of common spaces in their buildings. Considering the current positive lived experience of residents during the pandemic, it might be possible that these resilient moments of space change the inherited dominant negative discourses in the Swedish context.

The article shows that collaborative housing provides a space for the emergence of sharing communities based on social practices of inhabiting, sharing, and being involved in everyday life that are affordable and have the potential to counteract unwanted isolation. Considering several types of tenure in the same building would facilitate the access of mixed-income groups to future projects, including older adults, young people and migrants. The whole process of developing sharing communities – concept design, architectural design, construction and self-governance of the house should allow involving future residents. Municipalities with an overall interest in achieving better housing solutions should promote sharing communities, to make them better connected to the neighbourhood and the city.

Although one might expect collaborative housing to be problematic during a pandemic such as COVID-19, since this housing type promotes social interaction, it was found that residents self-organized themselves, renegotiated practices in produced social space to cope with the crisis. Hence, our study has opened up a new discussion focusing on residents' collective resilience. Future research should focus on unravelling structural constraints and plausible policies to facilitate the development of sharing communities with a focus on social integration.

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