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Social sustainability and supportive living: Exploring motivations of British cohousing groups

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"Cohousing" is a collective housing model, which has the potential to offer socially and environmentally sustainable housing for a community. It is a collaborative housing concept designed to foster meaningful relationships, closer social bonding, and more efficient use of resources. This study aimed to examine the motivations of cohousing groups to create or enter a cohousing community in the UK and identify potential issues to improve future cohousing development. In total, 24 people participated in this study: 18 cohousing group members and 6 project architects. Interviews were conducted in eight cohousing communities in the UK. The results showed that the social aspect was the driving characteristic attracting people to a cohousing project. This study focused on social aspects related to cohousing, but environmental, financial, family, and health aspects were analyzed as well. Potential issues were identified based on the real experiences of group members and the architects, which showed the concerns and obstacles experienced by cohousing group members. The findings of this study could be used as an evidence-based tool to enhance social engagement for the development of future cohousing communities and other collaborative residential facilities.

Keywords: cohousing; motivations; housing decisions; social sustainability; environmental sustainability

Introduction

Traditional forms of housing in the UK no longer address the needs of some sections of the population because of a lack of supply, increased housing prices, and inconsistent construction quality. This is further complicated by the lack of adequate housing options, which has led to people being mis-housed, ill-housed, or unhoused since the 2008 UK housing crisis (BBC, 2019a; McCamant & Durrett, 1994). Recently, there has been a housing debate has emerged highlighting cohousing, a communal living arrangement with both individual family and shared living spaces (Hopwood & Mann, 2018; Livingston, n.d.; UK Cohousing Network, n.d.), and its

collaborative living style. Scholars have identified several cohousing benefits, particularly for people older than 65 years (Brenton, 2013; Durrett, 2009; Glass, 2009; Williams, 2005), and challenges such as urban planning restrictions and financial difficulties (Chiodelli & Baglione, 2014; Riedy et al., 2018). Therefore, it is necessary to investigate a cohouser's motivation for creating or entering cohousing communities in the UK to evaluate and improve the cohousing community living for the future.

The study aims to identify what motivates people to enter a cohousing project and the differences between architects' and group members' opinions toward collaborative living. Interviews were conducted to answer the central question: What is your motivation to create or enter a cohousing community? The study used qualitative research methods (semi-structured interviews and content analysis methods) to explain social phenomena and identify the importance of group motivations, which can help guide better community housing design in the future. As this study focused on social aspects, the authors argue that the housing decision to live in a cohousing community is difficult and complex; the social aspects (emotional needs and common ethical values) are the driving aspects for people joining a cohousing community. This paper is organized as follows: it begins with a review of the literature, followed by a description of the methods and findings of the study. Finally, the significance and potential risks of cohousing are discussed.

Literature review: The possibilities of cohousing

What is cohousing?

The concept of communal living has existed for millennia (Newsham, 2018). For most of human history, people were hunter-gatherers who lived in large camps and depended on one another for

food, child and elder care, and everything else (Strauss, 2016). The form of intentional living based on sharing can be traced back to agricultural times when senior farmers lived in units now called Accessory Dwelling Units (ADUs) or "granny flats" in the United States (Anacker & Niedt, 2019). Furthermore, during the Middle Ages, people in medieval Europe lived with a group of friends and extended family (Gillis, 1997). Currently, the communal living shared with friends and neighbors can be viewed as a return to how humans have made their homes for thousands of years (Strauss, 2016). This is also described by the social psychologist DePaulo (2015): "Today, all across the nation, Americans are living the new happily ever after… The 'new' part is that people with whom they are sharing homes and lives are not just spouses or romantic partners." (p. 66).Several forms of collective living have been developed in the UK. These include housing co-ops, in which the cooperative owns houses but does not necessarily co-live in a community, and communes, in which a group of families jointly owns land and shares their income and other resources but have comparatively little privacy (Ahn, Tusinski, & Treger, 2018; Livingston, n.d.).

Cohousing, the focus of this study, is defined as an arrangement in which many people live together in a community, with self-contained, private homes for each person or family and larger communal areas that are shared by all (Hopwood & Mann, 2018; Livingston, n.d.; UK Cohousing, 2020). Cohousing has grown rapidly in both the United States and Europe in the 2000s (Hagbert, Larsen, Thörn, & Wasshede, 2019). As of early 2020, the website of The Cohousing Association of the America (2020) listed more than 300 cohousing communities, including communities that are either established, under construction, or in the forming stage. In Europe, cohousing has been promoted as a community dwelling, particularly in Denmark, the Netherlands, Germany, and Sweden (Hagbert et al., 2019). Cohousing provides an alternative

housing model based on solidarity, sharing, and tolerance (Chiodelli & Baglione, 2014). It could address today's social housing problems by utilizing a sharing scheme such as by reducing social isolation and supporting elder and childcare, property self-management, and independent daily living.

What shapes a cohousing community?

In general, homes in a cohousing community in the UK are allocated or built on a household basis. Each attached or single-family home has traditional amenities, including a private kitchen (Durrett Architects, 2020; Fabric, n.d.). The typical layout of a cohousing community has homes grouped around a common space designed for daily use to support private living (McCamant & Durrett, 1994). However, while rare, cohousing also exists in a single structured building, which in the UK is usually a large single-family home modified to meet multiple households' needs.

Usually, new-build cohousing is collaboratively designed by group founder members and project architects, specifically for multiple households (Plouffe & Kalache, 2011). However, some cohousing communities can be adapted from existing buildings, including historical ones (e.g., farmhouse, mill building), in which case group members collaborate with architects to renovate or refurbish them or combine the existing building with a new build. In some of the cases selected for this study, old buildings were used as a common house, shared workshop, or storage space, with individual dwellings built around the existing structures. Residents share amenities, facilities, visitor accommodations, and perhaps most importantly, a common house where community members can gather for meetings, social events, and meals (Nelson, 2018; Wang, Hadjri, Morris, & Bennett, 2016). Therefore, the common house is a key feature of a cohousing community, which can include a shared kitchen and dining area, common laundry, guest rooms, and children's play area (Berggren, 2017).

Cohousing challenges the cultural norms of privacy in terms of the community's zoning and residents' participation (Jarvis, 2011). The goal of a cohousing neighborhood is to create a vibrant social environment with enhanced community support and care (Sanguinetti, 2014). Participation in organized activities contributes to community sustainability (Skidmore, Bound, & Lownsbrough, 2006) and encourages neighbors to know each other (Garciano, 2011; Ruiu, 2014). Thus, it allows residents to develop a sense of ownership and foster a sense of group cohesion and belonging among family members, neighbors, the local community, and the wider neighborhood (Brenton, 2008; Yuryev et al., 2010). For example, a neighbor might be able to babysit on short notice and teach children (Smith, 2002), while another could assist older residents with unmanageable tasks such as landscape care and snow shoveling or check on them in case of accident or injury (Glass, 2009).

The UK context of cohousing

In the UK, the demand for cohousing and other community housing is increasing (Jarvis et al., 2016). This has included various forms of collective living, such as co-ops and communes, and the British cohousing model that developed in the late 1990s. With the development of the housing market over the past two decades, there are 27 established cohousing communities in the UK, 54 groups are developing their cohousing projects, and 18 cohousing groups are forming their membership (UK Cohousing Network, n.d.). A growing number of housing practitioners and policymakers have started considering cohousing a realistic model for sustainable and affordable housing development (Garciano, 2011).

The ownership model of cohousing in the UK can be either community owned, with each household buying shares from the community company, or individually owned, with each household owning their properties and sharing the costs of the common spaces. Even though

some communities contain a few rental properties, these can cause problems for community management (e.g., tenants who do not understand the concept of cohousing, financial challenges of rentals). Therefore, most communities choose not to include rental elements. Most communities are age-mixed with single people, couples, and families, but there is increasing interest in common-interest communities such as people aged over 50 years, women only, or vegetarian groups (UK Cohousing Network, n.d.). Limited data show the ratio of permanent and temporary households in British cohousing, revealing that temporary residents in cohousing are extremely rare in the UK. Almost all cohousing residents are long-term residents, even if a few are renting.

Why cohousing?

Sustainable contributions

Sustainable development has been perceived as a combination of three dimensions or "pillars": environmental (ecological), economic, and social (Brundtland et al., 1987; Dresner, 2008). It is important to discuss these contributions to understand their influence on the development of cohousing in the UK.

Ecological contributions. Cohousing communities often perform better in ecological terms than conventional housing because the community spaces and resources are shared (Crabtree, 2006; Jarvis et al., 2016; Meltzer, 2005). In addition, cohousing schemes could create a link between natural settings (e.g., plants and animals) and environmental needs by sharing resources, growing food, employing consensus decision making, providing regular social activities, and utilizing better neighborhood design (Sanguinetti, 2014, 2015; Wang, Pan, & Hadjri, 2018). Further,

cohousing groups could apply advanced environmental technologies and building standards (e.g., Passive House Standard, solar PV, and Biomass) to core building structures to significantly reduce energy and consumption demands by supporting sustainable practices (Jarvis et al., 2016). However, these technologies are not universally adopted because of their relatively high implementation costs.

Economic contributions. Cohousing has the potential to achieve long-term financial sustainability and cost efficiency in many ways such as through sharing cars and commutes; sharing common facilities; or through a robust financial system such as mutual home ownership models, which could make cohousing living more accessible to young people, especially middle-income people (Chatterton, 2013, 2014). In addition, some cohousing groups still provide financial support for low- and moderate-income individuals through a wide range of affordable housing strategies and external and internal subsidies (e.g., community loans, vouchers), thus allowing them to live in a cohousing community (Garciano, 2011).

The UK housing market has faced significant challenges since the 2008 banking crisis, which resulted in negative financial and social impacts: mortgage repossessions, growing social housing waiting lists, massive unemployment in the construction industries, and soaring housing costs led to the collapse of home ownership (Parvin, Saxby, Cerulli, & Schneider, 2011, p. 11; Perry et al., 2019; The UK Collaborative Centre for Housing Evidence [CaCHE], 2019). Approximately 1.2 million rental homes are still needed for younger families who cannot afford to buy homes (BBC, 2019a). The UK government plans to address this issue by building 250,000 homes by 2022, including rental properties (BBC, 2019b). However, the current policy focuses on boosting supply, and thus, does not offer a solution to the housing crisis, and in isolation, could result in a growing number of vacant properties (CaCHE, 2019). The UK government has

a series of other initiatives to address this problem, such as supporting home buyers through the Help to Buy policy, providing affordable homes, building more social housing, leasehold reform, and giving infrastructure grants to local councils (Letwin, 2018; Perry et al., 2019). Moreover, cohousing can be an effective approach in solving the housing crisis by exploring its community financial scheme and shared ownership model, thus addressing the financial concerns of lower-income younger families and the aging population (Housing LIN, 2013, 2019; Jarvis et al., 2016; The Social Market Foundation, 2019).

Contribution of social sustainability. Increasing attention has been paid to social sustainability, yet the interaction between the "environmental" and "social" remains largely uncharted terrain (Lehtonen, 2004). Foley (2004) indicated that "It is becoming more widely recognised that social inequalities are among the causes of environmental degradation" (p. 1), illustrating the relationship between social aspects and environmental issues. Furthermore, Eizenberg and Jabareen (2017) highlighted the impact of community settings on social sustainability outcomes.

Cohousing provides a valuable platform for a social ideology analysis because it uses its design principles and social structure to encourage neighborhood social interaction and promotes a sense of community. Thus, it offers a unique answer to the issue of social sustainability. Further, it can provide safe outdoor spaces for families with children while simultaneously protecting the privacy of individual households (Meltzer, 2005). The psychological sense of community could benefit from interactions with different members by fostering a sense of membership (Hill, 1996). Therefore, social benefits, namely a strong sense of community and mutual support, are one of the primary aims in developing cohousing communities (Garciano, 2011; Sanguinetti, 2014).

Social contacts can be easily developed through daily activities. According to Fromm's (2000) study of US cohousing communities, weekly conversations with neighbors increased from 2 to 11 hours per week (370–400%) in cohousing communities compared with previous residences. All residents felt able to ask neighbors for help with tasks when unwell, compared with only 40% of residents in previous residences (Fromm, 2000, p. 106).

The reduction of social isolation may be another facet of the social sustainability of cohousing. Beyond promoting social interaction, as mentioned, cohousing has other features that may reduce loneliness and thus reduce its health risks such as anxiety, depression, and sleep problems (Caciappo & Patrick, 2008; Hopwood & Mann, 2018), especially for older people (Brenton, 2013). According to the RSA (2019), "Residents share in the experience of living their everyday lives—creating communal spaces for eating, socialising and managing their community. As well as addressing issues such as loneliness and social isolation, this can also help to promote a wider well-being."

Housing decisions

In the book *A theory of human motivation*, Maslow (1943) identified the hierarchy of a human being's needs. His theory regarded "need for shelter" as one of the basic needs at the bottom of his pyramid frame. However, people select housing in a complex process (Clough, Leamy, Miller, & Bright, 2005; Vanderhart, 1998) using decision-making theory: some use a more systematic approach based on extensive research, others make emotional choices based on their understanding of themselves, and some others use various belief and knowledge systems to evaluate the risks and benefits (Klein, 2017).

Three sets of variables influence people's housing decisions: background characteristics, housing and neighborhood satisfaction, and moving plans (Fokkema & Van Wissen, 1997, p.

76). Background characteristics such as age, marital status, number of persons in the household, financial position, need for care, loneliness, social contact/network, size of living space, type of house, state of repair, neighborhood concerns, and safety affect other variables and have a direct and significant impact on quality of life (Bowling et al., 2003). As such, they are fundamental for this study because they introduce the basic information of influential principles when people choose a place to live. In addition, housing decisions differ throughout the decision-maker's lifespan. Therefore, it is worthwhile to study the motivations for choosing cohousing and identify what group members prioritize.

Limitations of cohousing

The literature on cohousing has primarily focused on the benefits thereof. However, potential drawbacks and knowledge barriers remain. Some researchers have identified the limitations of cohousing in the categories described below (Chiodell & Baglione, 2014; Riedy et al., 2018).

Territory-based arrangement

The limitations of territory-based arrangements could be defined as community planning restrictions or environmental design limitations. One barrier to cohousing is the public perception of cohousing and its impact on local amenities. Parking issues, including location and size, are common for cohousing site planning because developers do not fully understand the design philosophy of cohousing. In addition, the special social structure of cohousing groups means that a cohousing community may become a gated community, and therefore, can become isolated from surrounding neighborhoods (Chiodelli & Baglione, 2014).

Internal community management

The primary issue related to internal community management is the unbalanced "private-public life." First, because of the open nature of these communities wherein members are highly involved in each other's lives, some private news and gossip will inevitably become common knowledge, and it is difficult to distinguish private and public matters (Schacher, 2005). Second, people have varying life experiences and preferences and may define comfort and closeness differently. Therefore, it is relatively difficult to evaluate the management of a community using a uniform standard. Finally, cohousing members may face difficulties in making decisions, as "making group decisions may cause less freedom to modify one's living unit" (Fromm, 2000, p. 105) or may delay progress on long-term projects while waiting for all community members to respond.

Financial obstacles

Finance is a key barrier for cohousing members because of the high costs of land in the UK (Brenton, 2013; Riedy et al., 2018). Although cohousing is competitive in pricing with ordinary market-rate housing, some communities are still unaffordable for potential buyers depending on their size and location, group members' income level, and degree of customization. Although many cohousers in the UK prefer new builds because of their better insulation, efficient performance systems, and increased flexibility in the application of advanced technologies and design standards, their initial costs are high compared to repurposed existing buildings.

Although the communal aspect of cohousing communities is typically intended to reduce financial strain, in certain circumstances, sharing between group members may increase their cost of living. For example, some cohousing members may not use all common facilities, but

they cannot avoid paying or sharing the costs because they are part of the community (Garciano, 2011). In addition, selling properties in a cohousing community can be challenging, as "A household can choose to sell their unit, but they must abide by the willingness of the larger community to accept the household that has agreed to purchase" (Hoch, 2019, p. 17). This reduces the accessibility of cohousing properties to non-cohousers and makes it difficult for cohousing residents to find future buyers.

Cohousing for older people

The Guardian (2019) reported that a "lack of homes suitable for older people fuels [the UK] housing crisis." In the UK, the housing options for older people include housing association property, sheltered housing, extra care housing, close care, retirement villages, and home-share schemes (Age UK, n.d.). Cohousing can be a logical housing option combined with standard housing and special companionship. However, the cost for extra care services from care providers and outside help for older people who choose to live in cohousing may be unaffordable (Garciano, 2011) because their financial and social systems are not flexible enough to adopt extra care services from outside communities. For example, there may be no plan or extra room for a care provider's long-term accommodations in the community (Coele, 2014). In addition, the traditional institutional public pensions in the UK might be hard to change, making it difficult for older people to accept a different pension model like cohousing (Brenton, 2013).

Methods

A qualitative approach was adopted to facilitate an understanding of cohousing groups' motivations for creating or entering a cohousing community in the UK and identify potential issues to improve future cohousing development. This research was guided by Maslow's human

needs theory, human decision-making theory, and some social sustainability literature (Dempsey, Brown, & Bramley, 2012; Jarvis, 2015). To collect data, a case study research method was chosen. The selected eight cohousing cases included cohousing projects that were established, under construction, and in the planning stage, as well as both urban and rural, intergenerational, and affordable models. Various types of cohousing were investigated to consider the range of reasons why people choose this type of housing. Cohousing cases were selected considering the following criteria: typical British cohousing cases with rich existing information (e.g., websites, books, journal articles), cohousing type (intergenerational group), group size (more than five households), different development stages, multiple building types (e.g., new build, historical building, or a mix), multiple tenure forms (buying and renting), architect involvement in the design process and willingness to participate in the study (desirable), employment of building technologies and design standards (desirable), and cases with financial schemes (desirable). In addition, case selection was affected by access to data (open to academics) of the community and site location. The selected cases are all located in England, in Sheffield, Lancaster, Leeds, Cambridge, and Bude (Cornwall).

Participants and recruitment

Twenty-four participants took part in this research: 6 project architects and 18 cohousing group members. Group members included nine residents and as many pre-residents (either planning a community or waiting for its construction completion). The group members were all British, comprising 7 males and 11 females. They included community co-founder members, new members, community owners, and tenants. They were aged between 49 and 73 years. The six participating architects (five men, one woman) in this study were all involved at various design stages (from forming membership to completion of the construction) in different cohousing

projects. The participant recruitment process started with the researcher contacting the cohousing communities through project websites with an interview request. Participants who wished to take part in this research were put in touch with the researcher. Project architects were also invited in this manner to participate in this study.

Several considerations are provided below to explain why only group members and architects were chosen. First, the unique "member-led" development process of the cohousing model makes it extremely important to understand cohousing living from the user perspective. Second, this is an architectural research-focused study. This led to an examination of how the community was designed and built. Within the cohousing context, architects are best placed to answer this question. In many cohousing cases in the UK, group members and architects work collaboratively from the beginning of the project. Therefore, these two groups were familiar with the development process, demonstrated commitment to project ideas, and evidenced different perspectives to the cohousing development.

Sample size

The sample size of this study was evaluated using Malterud's information power (IP) model. For Malterud, Siersma, and Guassora (2016), "Information power indicates that the more information of sample holds, the lower the number of participants needed" (p. 1753). They proposed the following considerations related to IP: the study aim, sample specificity, use of established theory, quality of dialogue, and analysis strategy. Based on IP, the sample size was sufficiently large to clarify the aims of the study. Data saturation was achieved in this study, and interviewing more participants would not have contributed to the motivation categories or affected the findings.

In addition, during the data collection period, which ran from 2017 to early 2018, the UK had fewer than 30 fully established and active cohousing communities, with limited access to data. The eight cohousing communities selected for this study covered multiple developmental stages, building types, tenure forms, and membership types. As such, the number of selected communities could support the study's findings.

Ethical process

The interview activity was approved by the University of Sheffield Ethics Committee. The data collection process followed the University's Code of Practice and Ethical Guidelines and used a participant information sheet and consent form. Participant confidentiality was maintained throughout the study. The participants were anonymized and coded during the entire data analysis procedure. Participants were also informed that they could leave the project at any time without penalty.

Procedure

In this research, a set of semi-structured interviews were undertaken to answer the research question. A similar data collection method was also applied in other recent cohousing studies such as those by Kang, Lyon, and Kramp (2012); Pereira, Lies, and Kang (2019); and Ruiu (2016). The length of the interview was approximately 40 minutes per person, and conversations were tape-recorded with interviewees' permission and fully transcribed. The data were examined using the qualitative content analysis method (Robson & McCartan, 2016; Saldaña, 2015). The key categories were subsequently produced by summarizing participants' interview answers using open, selective, and structural coding. Calculating the code frequency was the final step to help identify predominant categories or ideas (Namey, Guest, Thairu, & Johnson, 2008). The

cultural and policy aspects were also examined to support participants' ideas and cohousing philosophies. Data analysis revealed key findings regarding how these groups of people valued the community amenities and social patterns within a cohousing environment, and how different aspects of their motivations related to each other. The data analysis process is shown in Figure 1.

The questions used for the architects' group were adopted to demonstrate how well they understood their group's motivation to create or join a cohousing community and not the motivation of the architects themselves. Participants' answers were divided into nine aspects, following the overall coding process: social, environmental, financial, family, health (physical and mental), site location, policy, personal housing preference, and boosting factors (trigger aspects).

Aspect ranking criteria

After producing the aspects, the qualitative data were quantified to directly show their importance. The results were obtained by calculating how many times a key concept was agreed on and repeated for each aspect (key point frequency) by each participant. The frequency with which participants spoke about their motivations indicates its relative importance. The ranking also considered how many concepts were suggested in each aspect. The final ranking of each aspect produced an overall result that was calculated by the sum of each concept within the aspect being repeated. Figure 2 provides an example.

The numbers in parentheses in Figure 2 indicate how many times the corresponding concepts were mentioned and valued by participants. The sum of these numbers was used to measure the importance of the noted aspect. For example, the importance of "social aspects" was quantified, with "living closely with like-minded people" as its determining concept. When the calculation was completed for each aspect, the ranking of the nine aspects were sorted from high

to low. The aspect with the highest number was the most important aspect for group members' motivation. When the aspect ranking was completed, the two groups were subsequently compared.

Results

The research findings were generated from interviews. Concepts summarized from architects and group members are presented separately (see Tables 1, 2). Several aspects from the hierarchy frame of Maslow's human needs theory guided the study, such as family aspects, sense of security, and respect of/by others, which are discussed in this section. As discussed earlier in the housing decision-making section in the literature review, past research found that the motivation for entering cohousing represents a complex decision-making process. Many aspects simultaneously affect the housing decisions of group members, such as health, marital status, and financial assets. Cohousing group members made housing decisions based on an understanding of themselves, their lifestyle, emotions, and previous life experiences. The results show that social purpose is the dominant aspect motivating people to consider joining a cohousing community. For both groups, participants suggested similar social aspects as indicators to define their motivations, such as "sharing," "community belonging," "like-minded people," "multigenerational living," and "previous living experience." Simultaneously, environmental sustainability and financial aspects were important aspects that can influence a group member's decision.

The results of the two groups were compared. In this research, participants indicated the following top three motivations: social, environmental, and financial aspects. This finding echoes the sustainable contributions (environmental, social, and economic) of cohousing mentioned in the literature review. The answers of architects and group members showed a similar pattern

within selected cohousing communities. This means that the results of the study did not show significant differences in understanding between the two groups; rather, only small differences were identified. The two groups worked closely to co-design their neighborhoods and demonstrated a high level of mutual understanding (Figure 3).

However, small differences indicate that residents perceived health aspects as slightly more important than family aspects. The results also showed that residents gave more consideration to the "individual-group needs balance" than did the architects. Whereas, for environmental sustainability, architects concentrated more on the application of environmental design standards than did residents. Finally, people also considered site location when selecting a cohousing community, indicating their preference for an urban location.

Other aspects were also mentioned in the interviews, including "policy" (e.g., UK housing policy changes, governmental regulations, and political changes like Brexit), "boosting factors," and "personal housing preference." Boosting factors are trigger aspects rather than determining reasons that attracted attention and promoted recognition of and encouragement to live in the cohousing model, such as an inspiring book, convincing research, a TV program introducing the cohousing model, or a cohouser friend recommending this living model to others. These aspects were mentioned by very few participants, indicating that they are not mainstream considerations. However, they differ from the data categories above. Therefore, these aspects were kept and separated from the other six data categories. Participants also noted that these aspects can be very random and flexible (e.g., housing preferences could be entirely different depending on the living experience), making it difficult to predict and control for them as cohousers, despite affecting their housing choices (see Table 3).

Social aspects

As discussed in the housing decision section, social contact and networks can be an important factor in selecting housing. Looking at the characteristics of a social structure in a cohousing community, it was necessary to understand the dominant social aspects in a cohousing group. Within the two groups (both architects and residents), "living closely with like-minded people" became the most important social reason for people who had decided to join a cohousing community (see Figure 4). This result supports the previous literature, provides the link between social purposes with housing decisions, and highlights the importance of like-minded people with similar values. From their perspective, like-minded people could be a group of friends, people of similar ages or backgrounds, or those who share similar values, even though sometimes, a cohousing project meant a substantial amount of organizational work and intense meetings. Group members reported the following during the interview:

> People are trying to do hard things with lots of kindness and gentleness and working together as a team and looking after each other. (Cohousing member RO16, Female)

> It is about social existence, with meaning to it. There was something missing in my life, I needed to create again that kind of social bonding, feeling hopeful and joyful rather than to worry, to be anxious, and depressed about what was happening in the world. For me, it is important to do this alongside people to share values similar values to mine and challenges around change as well. (Cohousing member RO15, Female)

In addition, Figure 4 shows that previous living experience played an important role in guiding group members' choices. Some shared living spaces with others when they were young or shared a house with friends or other families. Some people had lived in a commune or housing

co-operative for years, while others had no experience sharing with others but had visited similar types of social housing and found this kind of living attractive. These experiences had brought them honest and joyful feelings and an ability to trust the people around them, making them aware and appreciative of the implications of cohousing and its social identity. Resident groups also mentioned that this type of living could help them understand that "this is how people and community should be." (Cohousing member RF3, Female). Therefore, members wanted to recreate this social bonding by living with other people.

Furthermore, multigenerational living makes cohousing more diverse and was an attractive element.

> I absolutely love being around kids, so the idea I can live in a place where there are older people I can learn from and younger people I can play with. (Cohousing member RO16, Female)
>
> Some people can go and do the shopping and carry the heavy stuff. The older people can be virtual grandparents, then babysit for the kids. They like the kids a lot. (Cohousing member RK6, Male)

Although both participant groups agreed that social benefits are the most influential aspect that attracts people to cohousing, differences can be found between current residents, pre-residents, and architects. The difference between residents and pre-residents can be summarized as the differences between "expected benefits" and "real benefits" (ex-ante and ex-post the settlement). In other words, pre-residents were "expecting" and "imagining" cohousing community living, but residents were experiencing it. The criteria motivating entrance into a cohousing community changed following settlement. For example, existing residents began to prioritize their personal needs. Pre-residents concentrated more on the idealism or process of contribution to the community and collaborative actions, while residents emphasized the balance between individual

and community needs. Furthermore, some pre-residents expressed excitement and even nervousness regarding the upcoming residential experience in cohousing. They acknowledged that the biggest benefit for this type of living is mutual support. Some existing residents appreciated the support given from the community. However, they placed more value on the equality of expressing opinions in the entire community and the process of group problem-solving.

Even though social aspects were the driving aspect for people joining a cohousing community, there were still some negative comments made by existing residents, primarily about the decision-making process, which could create feelings of frustration, as a resident reported:

> It was difficult to make decisions while other people are waiting and have meetings to wait for people to make up their mind—what they want to do—before we could go ahead with things. I found that is a bit frustrating. (Cohousing member RL11, Female)

In addition, the biggest difference found between group members and architects was about two types of "balance." Group members indicated that the "give and take balance" and "private and public balance" were fundamental social aspects for them (See Figure 4, Resident group). Some group members pointed out that participating in cohousing was not only about contributing to the community and sharing but also about the community allowing them to "protect their privacy" and "take something in return" from the interactions of the community. These details were neglected from the design process by the architects' group.

> I think you have to be slightly "selfish" to survive in a cooperative situation; you have to make sure you are getting enough of what you need and to be able to cooperate with other people. (Cohousing member RL10, Male)

> What we hope will be clear to everyone who joins is that those who participate the most, give the most and will get the most in return. (Cohousing member RK6, Male)

A "sense of belonging" and "sense of security" were addressed by both groups. These details were well represented in cohousing features. Residents' sense of security is connected to trust. Being part of something and feeling secure could also contribute to good mental health, as a resident mentioned: "You will not feel isolated. Here, it is like an extended family" (Cohousing member RO18, Male).

> Cohousing is about looking for a sense of home, looking for people to look after and be looked after by, and having a caring community. (Cohousing member RO16, Female)

Environmental sustainability

Ecological sustainability was a principal motivator for those wanting to join a cohousing community. However, not all group members immediately considered the ecological aspects. Environmental sustainability includes several aspects such as sustainable living, reduced food purchase, joint travel, sustainable technologies, design standards, and construction methods and materials. Environmental concerns are strongly linked with group financial situations as well. In both the residents' and architects' groups, "low environmental impact and sustainable living" was the most significant environmental motivating concept (see Figure 5). The pre-residents' group gave more attention to what kind of ecological principles could be applied in a small house and how they could save more energy to reduce their living costs. However, after moving in, residents concentrated more on the details of daily living and environmental behaviors; for example, some existing residents noted that neighbors' behaviors of carefully sorting household and garden waste encouraged other group members to recycle more. Conversely, architects

thought the concepts of "reducing car use" and the design of on-site parking were more important (Figure 5). This difference demonstrates that pre-residents, existing residents, and architects paid attention to different perspectives of environmental sustainability. Value engineering was mentioned by some members of all groups, as it could significantly help to balance the group's ambition to achieve a greater level of environmental sustainability aligned with financial capabilities before the start of construction.

> I would say they have some environmental motivating factors. They want to live in a more sustainable way. (Cohousing architect AK3, Male)

> For environmental reasons, I wanted to live in a new build that is well insulated and well built, but a new build is the most expensive option in Cambridge. (Cohousing member RK6, Male)

> Now we are using as little energy as possible. (Cohousing member RL11, Female)

Moreover, a car share is available in some communities, and residents are encouraged to reduce car use by sharing cars and rides. Group members also mentioned that cohousing schemes encouraged them to choose public transport rather than driving a car. This option potentially reduced the environmental footprint of the community and relieved traffic pressure. Compared with the extant literature, the findings of this study provide a more detailed view of environmental sustainability and interesting arguments based on participants' responses.

Financial aspects

This study found that some older people chose cohousing because they had lower incomes after they retired, their children had left home, and they wanted to downsize to a smaller property that

was cheaper to maintain. They were still mobile with reasonable health and were seeking retirement properties with "care," so cohousing was an alternative option for them. The young people and families in this study reported facing difficulties in accessing any form of housing without savings or property to sell. However, collaborative design processes (involving group members into the design process to discuss energy saving strategies and well-insulated features to reduce living expenses) and sharing schemes (car shares and meals) are typical of cohousing, providing the potential to greatly reduce living costs. The participants also identified that a robust financial model in cohousing (such as LILAC cohousing development; Chatterton, 2014) could make a significant difference to both younger and older generations. In addition, some cohousing groups who participated in this research allow people to rent before committing to buy, making the cohousing scheme more accessible to wider social groups (see Figure 6).

As highlighted in the literature review, finance is one of the major barriers for people to join a cohousing community. The lengthy process of cohousing development (up to six years) can result in further increased housing prices, making it even harder for pre-residents. One of the pre-residents complained as follows:

> The property price has gone up by maybe 20% in 6 years, so that is 20% more I have to save to be able to buy a place of the same size. If I knew it would take six years, I would probably have bought somewhere else. I probably would also drop out. (Cohousing member RK6, Male)

This example suggests that it may take many years to see the long-term financial benefits of cohousing communities. For example, adopting design standards that aim to assist older residents in the home environment may be expensive upfront but will save a lot of money on retrofitting facilities in the home later when needed.

No significant differences were identified between existing residents and pre-residents regarding financial aspects. Both groups were aiming for affordable and manageable housing. However, people did express different understanding of the cohousing model. One current resident argued as follows:

> Most cohousing communities are for rich people because many of them are developed in rural areas rather than in the cities. Most British cities have cheaper housing than rural areas. (Cohousing member RL11, Female)

Another current resident noted that cohousing communities could be readily affordable if special financial schemes and energy-saving technology were adopted and that architects could save money in the construction process. Meanwhile, a small difference between residents and architects was that the architects gave more thought to the affordable and practical approach of reducing living costs, such as by using environmental technologies and providing better insulation (see Figure 6). Accordingly, reasonable financial models and financial advice need to be addressed to increase both the accessibility and standardization of the cohousing model. Education is also needed from the government level for people to understand and accept the cohousing model as a living option, particularly for young people and vulnerable groups.

Family aspects

A safe and healthy environment for children to grow up in is a driving factor when families consider cohousing, a sentiment shared by the two groups (see Figure 7). The benefits of multigenerational living mean that children could ideally learn from different people in the community and understand the diversity of society. They could find their life role models, learn how to respect people, and understand the importance of taking responsibility. However, this

type of living may cause a reduction in private family time with children. Older people also have the opportunity to contribute to the community by offering support to the younger generations while simultaneously benefiting from being around children.

> Young couples planning to have a family or young couples with young children were looking for somewhere where the kids could benefit from experiencing community interactions with more people and not being isolated. (Cohousing architect AK3, Male)
>
> ... a cohousing project, it is an interesting opportunity in terms of child-care. (Cohousing architect AO5, Male)

Health aspects

Some older residents reported that declining health was an influential aspect that could not be omitted from group motivations. That health-related issues affected housing choices is common among the selected cases and participant groups. The explanations of health aspects provided by architects and group members indicate that older group members struggled to look after large properties (decline of physical capabilities) and felt isolated and lonely (see Figure 8). The residents' groups highlighted that feeling isolated was a massive problem that could cause mental health problems such as depression and anxiety. The unique social settings of a cohousing community offer a useful social platform for people to meet and communicate during daily tasks, and members feel needed and valuable by supporting each other. Cohousing could, therefore, be a sustainable way to reduce isolation and maintain privacy.

Regarding physical health, residents mentioned that they had less energy to cope with a big house or young children. For example, their health conditions did not allow them to climb stairs or do massive cleaning, or they preferred smaller houses with less maintenance or special

housing features to support them aging-in-place. As mentioned in the extant literature, cohousing community living and adding assistive technologies may present financial challenges for older residents. However, cohousing also provides a type of flexibility for residents to express their real needs and manage their houses. Thus, it could be an option to delay or avoid going into a care home facility by living in a supportive community with age-friendly housing features.

> We are getting older. We don't have the energy anymore, and we are hoping to downsize to something affordable with less maintenance. (Cohousing member RO15, Female)

> In the UK, there is such a trend of isolating older people, I am interested in some projects, or a movement in fact, that try to re-integrate older people and also provide the common life for everybody. (Cohousing member RF3, Female)

Location

When choosing a cohousing site location, it is necessary to consider group preferences. The following impact concepts were included in this aspect: i) friends in the community or neighborhood, ii) reduced work miles if there is a need to drive to work, and iii) good city infrastructure. "Preferring to live in the city" was the key answer when interviewing the two groups (see Figure 9). Some cohousing residents expressed that they had previous living experience in different cohousing communities, both in urban and rural areas. They stated that they preferred to live in the city rather than in a suburban or rural area. The benefits of living in a city could be attributed to good local infrastructure and better transport system. However, the disadvantages also remain, including noise, pollution, and traffic jams.

> I was particularly interested in living in a city because most people in the world have to live in cities, and most of us depend on that for many of the things we want for our

> everyday needs. Lives are made, manufactured by people who live in cities. So, it is part of life. I thought this is a good basis for a good group I would like to join. (Cohousing member RL11, Female)

Participant groups were not comparable regarding community location, as not every participant considered this issue. Most participants chose the community located in the city in which they were currently living. They had no intention to move out of the area, and owing to the cohousing development in the UK, there are few alternatives in the same region. Only three participants mentioned that they chose cohousing communities across the country, deciding to go for an affordable community in an urban area where they had friends nearby.

Discussion and implications

This section discusses the potential issues and their implications in a cohousing community. These issues were clearly indicated by the participants during the interviews. They are based on the living and developmental experience of cohousing group members as well as architects' design experiences. These issues revealed group members' concerns and explained what aspects may delay or exclude people from joining a cohousing community. These difficulties were grouped into categories to echo the research findings presented above and include other influencing subcategory aspects such as politics, personal preference, source of support, and social care system. This information can be beneficial for future cohousing groups, potential cohousing members, and researchers because of two reasons: it was gathered based on real experiences and provides a unique perspective to understand the cohousing model; and future cohousing groups can develop strategies in advance to avoid or solve these problems.

Table 4 shows that group members' concerns concentrated on environmental, financial, and social aspects. Certainly, cohousing in general advocates a balance between individualism

and interdependence. The interview results reveal that social aspects were perceived as both benefits and challenges for residents and the public. Therefore, this balance should be highlighted in future cohousing developments. Furthermore, a lack of accessibility for young people and people with middle/low incomes, and the understanding and practice gaps between group members and developers were the important financial issues highlighted in Table 4. In addition, this study found that the cohousing model still needs many kinds of assistance (e.g., assistance with knowledge structure and finance) and standardization from the governmental and organizational levels.

Finally, the political visions of community-led housing (including cohousing) should be emphasized. Housing Minister Alok Sharma's November 2017 speech addressed community-led housing. He highlighted the benefits of building community-led housing and noted its current barriers, such as lack of access to pre-development grants, loans, or mortgages, understanding, and resources at the local policy level. However, the biggest barrier to community-led housing is culture. As he stated, "it's [community-led housing] seen as a heroic endeavour that is only for the most extraordinary and adventurous of individuals" (Sharma, 2017). This means that misunderstanding of this form of habitation is the biggest limitation for most people. Therefore, much work is required from the government to increase the acceptance of community-led housing and reduce the barriers, such as by providing financial support and design guidelines.

Researchers and professionals highlight many positive aspects of cohousing. It has been found, however, that research on the motivation driving British cohousing groups is not adequately established, suggesting the need for more work in this area. Moreover, there is extremely limited access and progress in the UK for all types of community-led housing (e.g., cohousing, housing cooperatives, community land trusts) compared with the US and other

countries in Western Europe (e.g., Denmark and Germany). The reasons include cultural misunderstanding and a lack of access to grants, loans, or mortgages, which highlights the need for governmental guidance and other forms of support to educate the public and promote community-led housing as a beneficial living option.

This primary research showed that cohousing is a special form of social housing that provides an alternative option for housing stock and the crisis in the UK. The research on cohousing aimed to gain more recognition for future co-design collaborations for both architects and group members. Accordingly, cohousing can also be distinguished by developing a single architectural model that focuses on the shared values of community living.

Conclusion

This study found that cohousing groups are motivated by several aspects. Social, environmental, financial, family, health (physical and mental), and site location were all shown to be crucial to the decision to join cohousing communities. Social, environmental sustainability, and financial aspects were identified as the three top priorities for people considering joining a cohousing community.

This research was a primary study to explore what people found attractive about cohousing communities in the UK. It provides information that aims to support architects, developers, organizations, and cohousing groups to understand cohousing living and its philosophies in a better manner. Understanding these motivating aspects could help new groups avoid making mistakes and potentially speed up the developmental process. In addition, this study clarified the consistencies and differences between recruited groups. Primarily, the results of the study did not show significant differences in understanding between architects and group members; only small differences were found. The biggest difference found between architects

and residents regarding social aspects was the degree of concern regarding the give-take and private-public balance. Existing residents and pre-residents paid much more attention to these aspects than did architects. Regarding environmental aspects, pre-residents expressed interest in using ecological principles and design standards, whereas existing residents focused more on daily living and environmental practices such as growing food and recycling. However, architects gave more thought to reducing car use and parking issues. For financial aspects, pre-residents and existing residents paid more attention to the actual initial and living costs, while architects concentrated on how to spend money wisely and affordable approaches to reduce living costs. The recruited groups had similar views on family aspects, health aspects, and the geographical location of the community.

The potential issues identified by this study can be used to inform future cohousing groups, architects, and other groups (e.g., people interested in social housing or shared community living) on how to build, manage, and sustain their communities. Further, these findings could raise awareness regarding environmentally friendly homes and communities. Improving ideologies on ecological sustainability could provide a deeper understanding and stimulate practical implementation within different housing settings and environments in the UK and beyond.

The limitation of the research methodology is that the residents' group is aged between 49 and 73 years, establishing a deficit of information from younger generations. In addition, the qualitative research findings should be interpreted in context, which highlights the need to develop a platform for architects and group members to improve future co-design collaboration. Future research could identify the effects of intergenerational cohousing, evaluating how physical design aspects could affect people's values and behaviors. Furthermore, it is important

to understand older residents' accessibility and mobility needs in cohousing communities. How could the physical design be improved to strengthen the sense of belonging and security? This could be a question for architects and residents in the future.

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Tables

Table 1: Categorized concepts summarized from the interviews with cohousing architects

Ranking	Aspects	Key Concepts and Frequency
1	**Social aspects**	• Living closely with like-minded people (e.g., friends, similar ages) (6) • Sharing (meals, time, and values) (1) • Multigenerational living (2) • Social interactions (2) • Previous (living) experience (3) • A sense of belonging (1) • A sense of security (1) • A housing option (1)
2	**Environmental sustainability**	• Low/less environmental impact (6) • Sharing resources (1) • Reduced car use (2)
3	**Financial aspects**	• Inability to afford a larger house, needing to downsize (2) • Better insulated, reduced living costs (2) • Not necessary to have a car (1)
4	Family aspects	• Child care, a safe and healthy environment for children to grow up in (3)
5	Health (physical & mental)	• Personal physical conditions mean an inability to cope with larger properties (1) • Feeling isolated and lonely (1)
6	Location	• The Community is located in an urban area (1)

-	Boosting factor	• Site for sale (1)
-	Policy	• Special funding available (1)
-	Personal preference	• Testing architectural skills (1) • Wanting to do something different and having fun (2)

Table 2: Categorized concepts summarized from residents

Ranking	Aspects	Key concepts and frequency
1	**Social aspects**	• Previous (living) experience (9) • Multigenerational living (6) • Living closely with like-minded people (10) • Community living is found to be more interesting (1) • Asking for support and supporting others; giving and taking (5) • Cohousing means private spaces with shared facilities (2) • Trusting people (1) • Sharing (meals, time, values) (6) • A sense of belonging (3)
2	**Environmental sustainability**	• Ecologically sustainable living (e.g., growing food) (5) • Ecological principles on which to build (3) • Eco housing: saving energy (3) • New build (3) • Sharing transportation; encouraging the use of public transport (2)
3	**Financial aspects**	• Finding a site for sale at a reasonable price (1) • **Having a low income, this community is affordable for me (4)** • Inability to afford a larger house, needing to downsize (1) • Interested in affordable eco-housing, cohousing was a good choice for me (1) • Dysfunctional housing market in the UK means that mainstream housing is very expensive (2) • Cohousing as an investment project helping young people to join and rent, giving them a housing alternative (1) • Financial benefit (2)
4	Health (physical & mental)	• Personal physical conditions mean an inability to cope with larger properties (2) • Feeling isolated and lonely (5)

		• Delaying or avoiding going into a care home (1)
5	Family aspects	• A family member is the project architect (1) • Getting older, wanting to live closely with children (1) • A family member wanting to try cohousing (1) • Child care, a safe and healthy environment for children to grow up in (3)
6	Location	• The location is good, I like this city (3) • The community is located in an urban area (2)
-	Boosting factor	• Sheffield Cohousing Network (1) • An American book about cohousing (1) • Visited built cohousing communities (2) • Friend's recommendation (1)
-	Policy	• The site has been donated to Sheffield City Council, which has allowed changing its use to residential (1)
-	Personal preference	• I wanted a place that was already up and running. I didn't want to spend too much time looking for property and waiting for it to be developed (1)

Table 3: Policy, personal preference, and boosting factors

Policy	Policy factors may include: i) Government funding ii) Discount for buying a property / having affordable properties on site iii) Released site from city council or local authority iv) Government political support for social housing or community
Boosting Factors	Boosting factors can be interpreted as: i) Extra resources available (e.g., network, websites, books, and newspapers) ii) Site available or land with reasonable price iii) Special experience (e.g., trip, cohousing site visit, previous experience) iv) Friend's recommendation
Personal Preference	i) Prefer to live in a new build community ii) Prefer to live in a community that is already up and running iii) Prefer to live in a city, not in the suburbs

Table 4: Potential issues

Aspects	Potential issues
Social aspects	• Cohousing projects mean huge amounts of organization (e.g., intense meetings) • Under pressure to contribute to the community (contributing too much or too little) • Having difficulties defining social distance (feeling privacy has been challenged) • Sharing cars: nobody takes personal responsibility for the maintenance of the car because no one owns it
Environmental sustainability	• Having to invest more money at the beginning and adhering to environmental standards (e.g., Code for Sustainable Home) • Sustainable standards may not fit all types of housing in the community • Having conflicting opinions with developers on using sustainable design standards or technologies
Family considerations	• If a cohousing community starts from a family group, the family factor may become discouraging to people who want to join

Financial aspects	• Not able to sell previous property to join a cohousing community • The developers want to maximize their profits, and there are no restrictions on recruiting people, putting the cohousing group at a disadvantage. Developers did not appreciate how important the concept of cohousing was to the group. • Young people are having financial difficulties accessing cohousing
Health	• Reliance on neighbors or other group members to provide care for older people or children • People with dementia or other cognitive issues have difficulties joining a cohousing community
Location	• Infrastructure is imperfect • Medical facilities (NHS service point) are imperfect • Security issues • Community located in semi-urban area, which will increase work miles
Other (political)	• Change in political situation (e.g., Brexit) • Dysfunctional housing market in the UK, housing stock is very old
Other (personal)	• Development process is too long, circumstances changed, the property one has decided to buy in the cohousing community is no longer suitable

Other (source of support)	• Lack of structural information for people who want to create or join a cohousing community • Lack of structural information to introduce the limitations and risks of joining a cohousing community • Lack of support from the local government and organizations

Figures

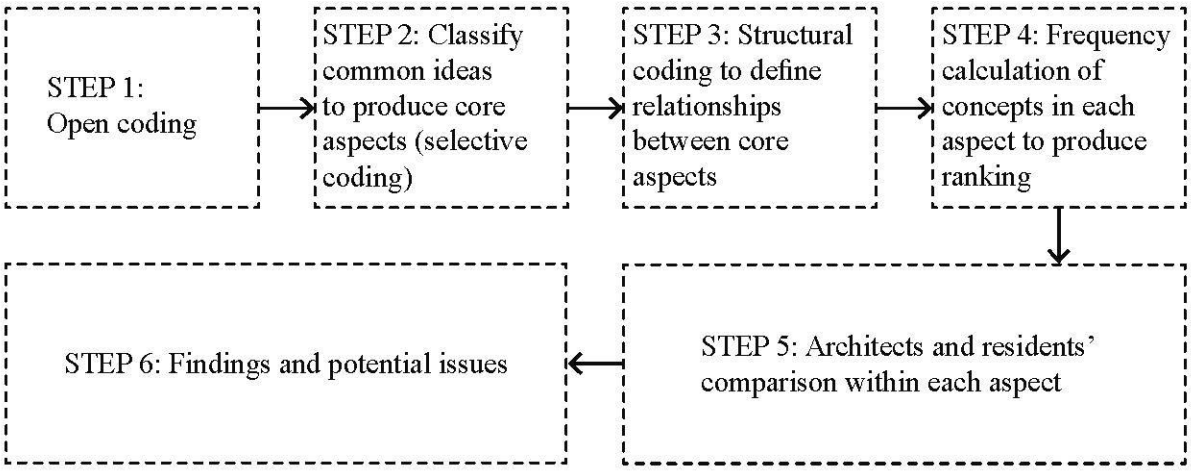

Figure 1. Data analysis process

Ranking	Aspects	Key Concepts and Frequency
1 Total: 8+17=25	**Social aspects**	• Living closely with like-minded people (e.g., friends, similar ages) (6) • Sharing (meals, time, and values) (1) • Multigenerational living (2) • Social interactions (2) • Previous (living) experience (3) • A sense of belonging (1) • A sense of security (1) • A housing option (1)
2 Total: 9+3=12	**Environmental sustainability**	• Low/less environmental impact (6) • Sharing resources (1) • Reduced car use (2)

Figure 2. Ranking example

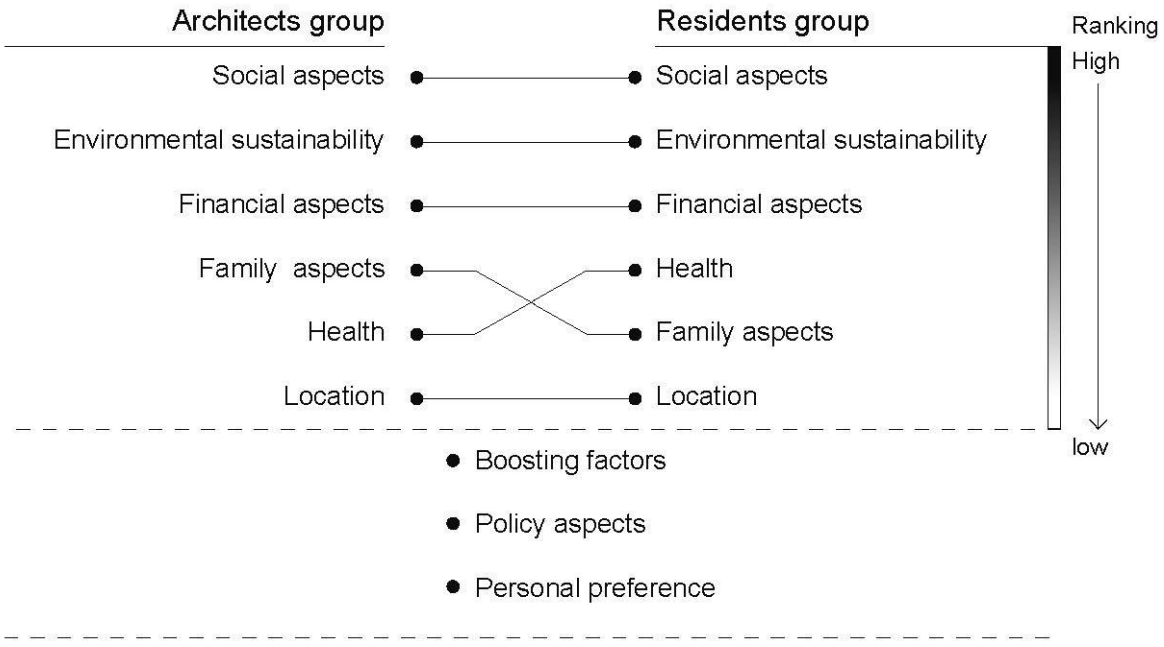

Figure 3. Core aspects identified by research participants

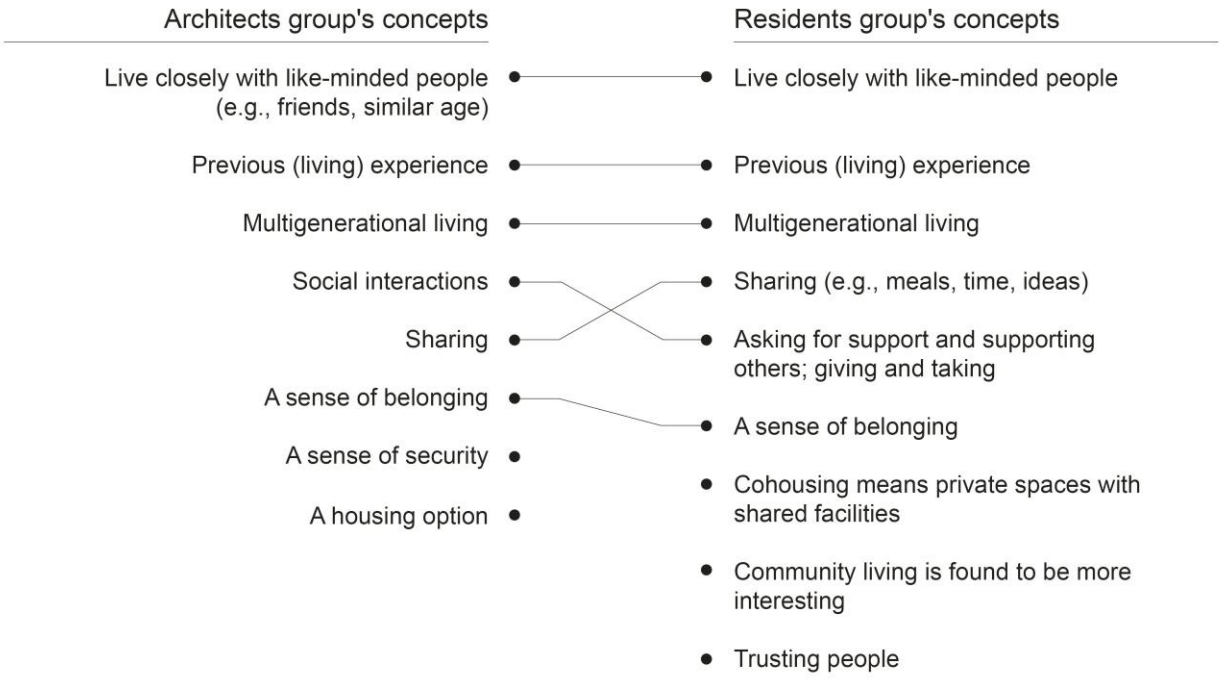

Figure 4. Social aspects

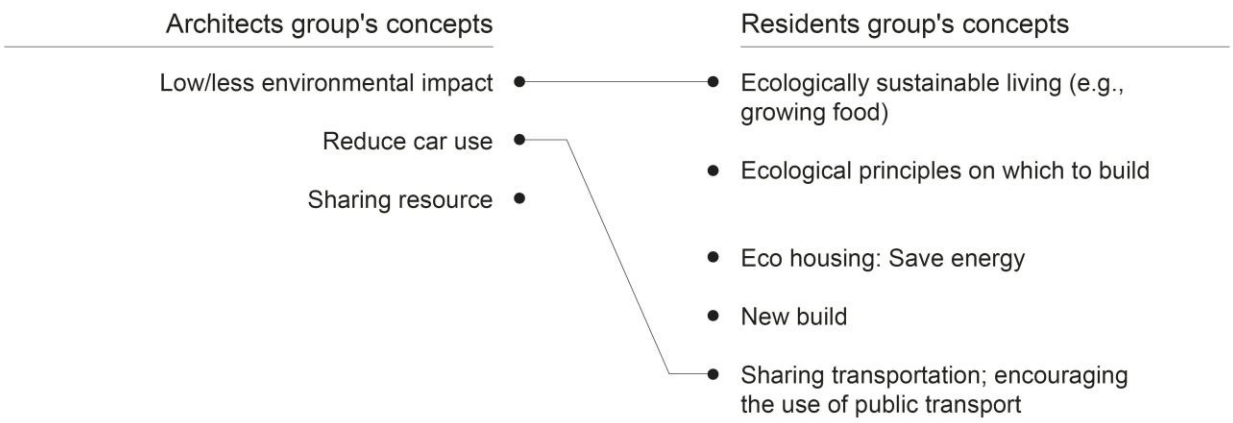

Figure 5. Environmental sustainability

Figure 6. Financial aspects

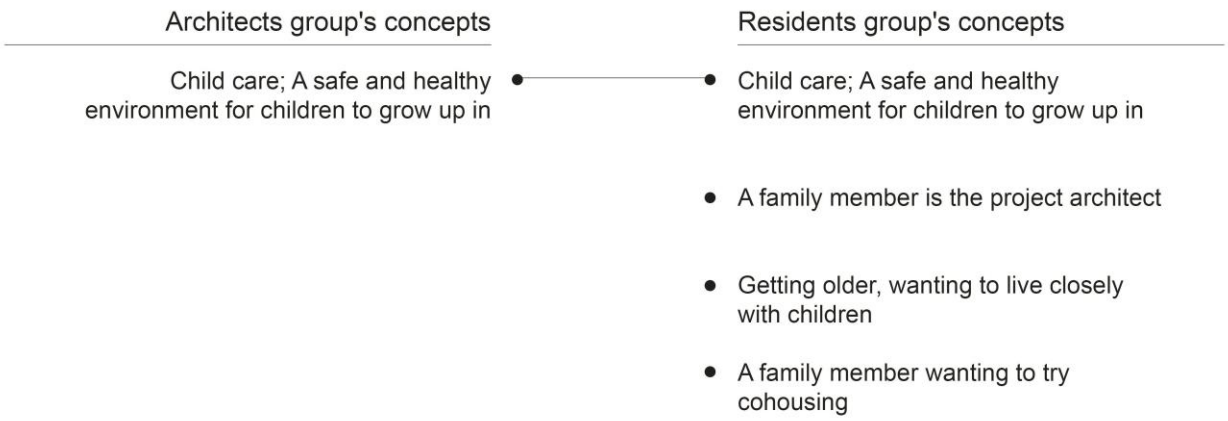

Figure 7. Family aspects

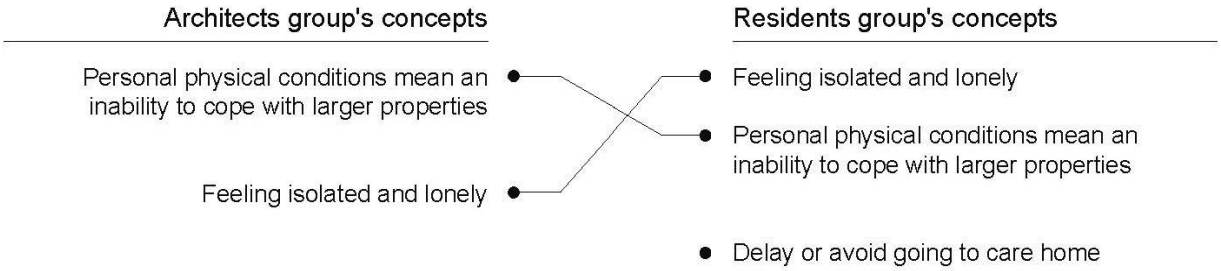

Figure 8. Health aspects (physical and mental)

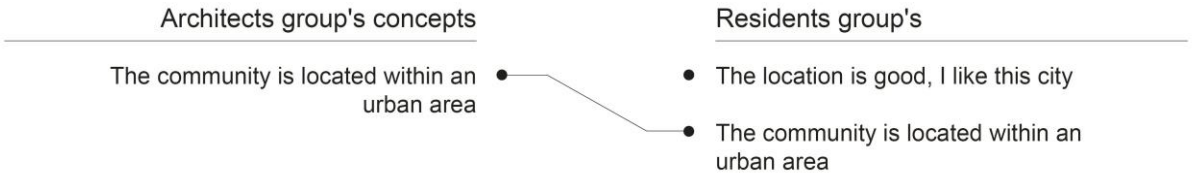

Figure 9. Location

Figure captions