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Best Practices For Urban Coliving Communities

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BEST PRACTICES FOR URBAN COLIVING COMMUNITIES

by

Rachel Osborne

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BEST PRACTICES FOR URBAN COLIVING COMMUNITIES

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Coliving, a new typology of housing design, has recently been gaining in popularity. Coliving is a form of rental housing that seeks to create community among its residents by providing features such as extensive shared spaces and community managers paired with typically small, furnished private spaces. Little architectural or interior design research is available to describe this emerging typology, and no best-practices or guiding principles exist to aid designers in making informed decisions when designing or evaluating coliving spaces.

This thesis uses a mixed-methods approach to understand the composition of existing coliving facilities as well as the motivations and preferences of coliving residents. Case-study evaluations were performed examining the physical and programmatic structure of four coliving communities located in New York and London. These case studies were cross-compared with the results of a questionnaire, which was distributed to coliving residents to determine characteristics and user preferences. Additionally, the results of the worldwide survey “One Shared House 2030” completed as a collaboration between Anton and Irene and Space10, were evaluated to further inform the cross-comparison research.
The objective of this research is to understand what coliving is in terms of its programmatic requirements and the factors that drive it and to develop a set of best-practices. These best-practices form a basis of design for coliving facilities that can be enhanced further with continued research.
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Introduction

Coliving, an emerging housing typology, is not yet universally defined in terms of spatial typologies within the discipline of Interior Design. As a concept, the definition of coliving most widely accepted among providers is “a modern form of housing where residents share living space and a set of interests, values, and/or intentions” (Provan, 2014). This definition takes a goal-oriented approach to describing the typology, which is to create a community of individuals within a residential environment.

Little architectural or interior design research is available to describe this emerging typology, and no best-practices or guiding principles exist to aid designers in making informed decisions when designing or evaluating coliving spaces. Many of the available resources are restricted to articles and news briefs. These generally focus on the social impacts of individuals living in close quarters, of increased interactions due to shared spaces, and minimized private spaces.

This thesis will analyze coliving through a review of historical precedent, qualitative case studies of existing coliving communities and user surveys of coliving residents in order to develop an understanding of what coliving communities are and how they operate. From this understanding a set of best practices can be created to advise architects and designers in the design of future coliving communities.
Literature Review

As established previously, one major goal of coliving is to create a community within the members of a residential environment. What has not yet been established are both the physical conditions of coliving, as well as the profile of the users that inhabit these spaces. This literature review will cover the following:

1. define coliving in terms of architectural spatial arrangement
2. describe the history of coliving and similar forms of housing from the last century
3. describe the ways this typology differs from other housing models that focus on community
4. describe factors driving the emergence of this typology
5. describe the need for further research related to this model.

The best descriptive definition covering multiple facets of coliving can be found at ‘Urban Dictionary’; a crowd-sourced online dictionary that aims to describe newly emerging language trends authored by and for millennials (Damaso & Cotter, 2007). Urban Dictionary defines coliving as “A movement in shared living where people adapt a more flexible leasing structure and practice increased engagement with the household in order to form more meaningful connections with housemates and the general community—regardless of the duration of stay. Co-living can take many forms, from shared apartment buildings to shared houses or individual apartments, and it’s particularly gaining traction in areas with a high cost of living, like SF and NYC.
Because the rentals can be short- or long-term, it’s increasingly common among younger demographics seeking more meaningful, interconnected lifestyles or travelers who want to immerse themselves in a new city or culture” (Urban Dictionary, 2016).

This definition targets some important elements of coliving. First, that coliving is striving to create community. Second, that these communities exist mostly within the traditional ‘rental’ structure of apartments or shared houses. Third, the incidence of these communities is highest in dense urban areas. And lastly, that these communities are generally made up of young people, who may stay for shorter times or be in a transition time in their lives, such as when moving to a new city or travelling for an extended period of time.

**Architectural Spatial Arrangement**

To expand on the physical component of this definition, coliving spaces provide smaller private accommodations supplemented with larger shared amenities. The spaces are typically furnished, and the operator of the community provides services in the form of community management and regular housekeeping.

One of the strategies that coliving facilities use to encourage community is reducing the amount of private space for residents and providing increased space for shared amenities (Cox, 2016) (Kadet, 2017). These shared spaces typically include kitchens, lounge spaces, and working spaces, as well as utility spaces such as laundry. The incidence of these spaces outside of the private room create more opportunities for
spontaneous interaction than if they were provided within the private suites, which in turn enhances familiarity among residents (McAlone, 2016).

Both the private and shared spaces within these communities are typically furnished. Having readily furnished spaces makes it easier for a resident to have a flexible or short stay. It also decreases the cost for young individuals that have not had the opportunity to procure these possessions. Moving into a fully furnished community frees up the resources (time and money) of the resident for other things (O’Brien, 2016). Additionally, these communities offer aesthetically pleasing and often higher quality furnishings than can traditionally be afforded on one’s own; including fully furnished on-trend bedrooms/apartments, and well-appointed community kitchens and living rooms (Widdicombe, 2016) (Miller, 2017) (Velsey, 2017) (Kadet, 2017).

From an operational perspective, coliving facilities require more effort than a standard apartment arrangement. In addition to providing furnishings, operations provide housekeeping services for the public spaces, typically on a weekly basis, but sometimes more frequently (Velsey, 2017) (Sisson, 2016). This acts as a way for management to control predictable roommate arguments that could arise (Widdicombe, 2016). Some communities also provide housekeeping services for the private suites, cleaning bathrooms and refreshing bedding on a weekly basis. Provision of cleaning supplies, such as laundry detergent, is often supplied as well (Widdicombe, 2016) (Kadet, 2017).

The nature of fully furnished and serviced spaces lends an ease of move in/out, much like staying at a hotel. However, providing furnishings in private spaces could result in shorter lease lengths due to residents feeling unable to make the space their own.
“WeLive [a coliving facility in Manhattan] feels like a temporary stop for many, a place to go when you first move to a city and are looking to meet new people. There isn’t much room to personalize an already furnished space” (Huet, 2017). Common, a coliving provider based in Brooklyn, NY, has combatted this issue in new projects by reducing the amount of ‘tchotchkes’ and decoration provided in the private spaces at the request of residents (Widdicombe, 2016).

While most facilities offer more traditional apartment-style monthly and yearly leases, some coliving facilities offer nightly or weekly rates, providing residents a more flexible arrangement. These short-term leases can be attractive to nomadic individuals & off-site/remote workers; allowing the ability to work from virtually anywhere that has a connection to the internet (Sisson, 2016) (McAlone, 2016).

An important consideration for the success of these communities is their ability to create community among a transient population which wouldn’t traditionally foster connection. “It’s unclear to have a development whose brand is a sense of place and community and rootedness when it is targeted to people who will be there temporarily” (Glass, 2017). One way that WeLive has attempted to create community is by offering discounts on rent to a group of ‘WeLive Ambassadors’, who are expected to host events and be a friendly resource for building residents (Huet, 2017).

Coliving facilities staff their properties with highly involved ‘community managers’, individuals responsible for scheduling events and encouraging resident participation (Semuels, 2015). These events are a critical strategy for communities to break down the in-group out-group feelings that often arise when new individuals enter a
community (McAlone, 2016) (Miller, 2017). In addition to this, communities will use a technological interface (either one already existing such as ‘Slack’ or “Whatsapp’, or a privately developed application) that can be accessed on a cell phone, that is used as a way of communicating with and between residents (Mairs, 2016) (Widdicombe, 2016) (Semuels, 2015).

Coliving operators don’t necessarily see continuity and longevity as a necessary ingredient to form community. According to Mr. Merchant of The Collective, these communities are not meant to house individuals for the long term, “This is a transitional product -- it's not somewhere you're going to live for the rest of your life," he says. (Davies, 2015).

History of Coliving

Communal living is not a new concept, but a traditional form of living that has only changed in recent history. According to Kopec, “For centuries, western societies engaged in communal living: Commonly, residences were shared by large extended families and often their hired help as well. With mid-20th century affluence came the splitting up of the extended family: Most individual families were able to afford- and were therefore expected to have- their own homes, and communal living arrangements were limited to school and military dormitory settings or to groups of young people cohabitating to split costs” (Kopec, p.127). As patterns of ‘settling-down’ and adulthood have shifted, this need for accommodation has increased, so much so that it has become
standard for young adults to rent small apartments or larger apartments with roommates to share costs.

As the age at which people marry and have children has increased in recent years, there has become a need for housing for individuals that are between their parent’s home and their own family home. In the last two centuries, the emergence of ‘boarding houses’ arose to accommodate this need. These houses provided room, board, and a set of familiar faces for young adults moving to new cities, looking for work, and starting out their adult lives (Hester, 2016). “Today, the perpetual urban dilemma of how to live well in cramped, expensive neighborhoods is answered mostly by apartments, each effectively its own miniature house, complete with kitchen, bathroom, bedroom, and living room. In the 19th century, the answer was to share. A boardinghouse proprietor provided housekeeping services and three meals a day, usually eaten at a common table.” (Graham, 2013)

Figure 1; Second-floor plan for a conjectural conversion of a large single-family row house into a boarding house. Source: Paul Groth, Living Downtown: The History of Residential Hotels in the United States, 1994, p.93 Figure 4.2
In the early 1900s, due to an increase in population in urban areas “an abundance of rooming houses opened. Some offered boarding as well, with a kitchen and dining hall in the basement or on the ground floor.” (Durning, 2012). Boarding houses typically provided residents with their own private furnished bedroom, shared bath, and a dining room and kitchen with meals provided by the landlady or matron (Groth, 1994). Rooming houses differed in that they were meant to provide accommodation without board
(shared/prepared meals). As such, rooming houses were meant to be inexpensive accommodations and were viewed less desirably (Groth, 1994).

Over time, these houses have mostly disappeared due to more stringent regulations and economic and social class pressures (Durning, 2012). A few still do exist, such as the all-female residence, The Webster, in New York City, where it costs about $1000/month to live. This includes a private room, shared bath, breakfast and dinner, maid service, and common amenity spaces including a roof deck (Stout, 2009).

Considering the similarities in structure and overarching goals of the community, it has been suggested that the boarding house is the original coliving community. “At its essence, co-living offers shared living space and amenities, more housemates than the typical roommate situation, access to a network of properties, and flexible lease options that allow long and short-term residents to live side by side. You could think of coliving spaces as newfangled boarding houses often with purpose, travel, mutual support, and community mixed in.” (Johnson, 2016).

In the United States, the term ‘coliving’ first began appearing in news articles in 2011-2012 and can be traced to the rise of Silicon Valley and the need for housing for tech workers (Widdicombe, 2016). As described by Jessica Reeder for Shareable in 2012, “Contemporary coliving builds on communal living practices, embracing a networked tech, business and science-fueled culture built upon innovation and realizing a better world through collaborative design.” (Reeder, 2012). Somewhat based on intentional communities, private rooms within houses would be rented to tech workers forming a
supportive group of individuals. A 2013 Citylab article described coliving as “Allegedly popular in San Francisco: Investor-backed individuals turning mansions into modern-day communes, in which a couple dozen residents share meals, chores, entrepreneurial ideas, deep discussions, and maybe, one day, babysitters” (Xie, 2013). The article stated that there were “over 20 communal living estates in the Bay Area, with more on the way” (Xie, 2013). These communities were focused on creating collaborative housing that supported a sharing lifestyle that was affordable to its residents, and developers at that time had goals of creating larger, ground-up communities as a way of evolving how our physical residential environment is organized (Xie, 2013). The arrangement of these communities is similar to that of the original boarding house, with private rooms shared baths, kitchens, and living spaces.

![Graph showing trend of 'coliving' term from 2011 to 2017](https://trends.google.com/trends/explore?date=2011-01-01%202017-11-24&geo=US&q=coliving)

*Figure 4: Trends for the term ‘coliving’ in the United States from 2011-2017; Source: Google Trends, Accessed 11/24/2017*

Beginning in 2015, google searches for the term Coliving began to rise. This is likely due in part to the increase in coliving facilities in New York City and companies such as Common beginning to market their locations to groups outside of the tech
industry (Widdicombe, 2016). Most of the locations at that time were providing individual leases in shared houses that promised to be less expensive and more personally fulfilling than a traditional apartment.

For communities larger than that of a single house, smaller groupings are created within the larger community. The company Common, for example, typically creates 4 bedroom, 2 bath apartments where each room is leased individually (Widdicombe, 2016). The apartment contains its own living, cooking, and laundry space, as well as has access to the larger community amenities such as working, lounge, outdoor, and fitness areas.

![Figure 5; Axon of a typical apartment configuration by Common. Source: Common Coliving, https://www.common.com/design/ Accessed 11/24/2017](image)

Notable in the history of coliving is the failure of the company Campus in San Francisco, who closed its 34 houses located in both the San Francisco Bay area and New
York City in August 2015 citing the inability “to make Campus into an economically viable business” (Hester, 2016). This suggests there may be some volatility in the cost of operations of this model, which poses a challenge to current developers. According to Brad Hargreaves of Common, Campus was “a lot more aggressive with their expansion” and current developers and operators are more informed about what will make the model successful (Kasperkevic, 2016).

Larger scale, highly marketed communities such as WeLive in New York, and Old Oak in London (currently the largest coliving facility in the world with 550 beds over 11 floors) opened in 2016 (Eldredge, 2016). These larger communities typically offer micro-apartments or full studio apartments supplemented with an abundance of amenity spaces. In order to make the scale of the community more manageable to residents, they will typically group smaller portions of the community (1-3 floors) together to create a ‘neighborhood’, with its own communal kitchen and lounge spaces.

WeLive Wall Street in New York City opened in April of 2016 with 200 beds available, and the goal of expanding to 600 in that location (Miller, 2016). WeLive currently has 2 locations, New York and Washington D.C., and although “reportedly told investors in 2014 it planned to launch 14 WeLive locations by the end of last year, it currently operates two” (Robinson, 2017) (Huet, 2017). WeLive has announced plans to open its 3rd location in Seattle in 2020, in partnership with a local developer (Soper, 2017) (Huet, 2017). This suggests that while there is excitement over the possibility the model holds, there is still some hesitation among developers to jump into the model.
One way that coliving operators are diffusing this risk is by partnering with developers (Widdicombe, 2016). The provider Ollie acts as an operator of coliving facilities within buildings owned by developers. They offer both a third-party management agreement or a master-lease agreement. Ollie claims that they “ensure our design is readily convertible to a conventional condominium or multifamily plan, preserving a future buyer’s optionality” (Ollie, 2017), and thus reducing risk of investing in a trend. Ollie currently operates 3 locations in New York City and Pittsburgh, with 3 more set to open in 2019 in Los Angeles, Boston, and Jersey City.
Differences from other community driven residential models

It is informative to evaluate the differences between coliving and other community-based residential models (such as cohousing, intentional communities, and communes), as there are a few important differences that distinguish coliving from the others.

The main difference between coliving and traditional communal living models is the longevity of resident stay. In a traditional communal model, the community group is typically formed before, and for the creation of, the community (McCamant & Durrett, 2011). In coliving, the member group is ever evolving, and of a much more temporary nature. The long-term health of the community must be considered more seriously in traditional residential communities, whereas in coliving, individuals can easily depart at the end of their lease, and often earlier, if the group is not a good fit.

According to Philip Dowds of Cornerstone Cohousing, “...I would have to argue that, no matter what the floor plan looks like, if the membership of the group, household participation in shared activities, and the common amenities are not managed ("governed") by the residents themselves, then it can't be cohousing” (Dowds, 2016). This argument was posted as a reaction to an Atlantic article regarding the WeLive Coliving facility in Washington D.C. and shows the rejection of the model by the cohousing community based on management of the community by the operator rather than the residents.
Within traditional communities costs are often shared among the residents as well. This is avoided in coliving by creating the all-in-one pricing model that is paid by the individual to the operator, which eliminates disputes over payments. Arrangements like these in coliving are made to decrease the amount of tension in the group, which contributes to the positive feelings of community (Davies, 2015). In a traditional community these disputes are handled among residents.

![Figure 6: Site plan for Gainesville Cohousing illustrates a traditional cohousing site model. Source: Gainesville Cohousing, http://www.gainesvillecohousing.org/about/ Accessed 11/24/2017](image)

Another difference between the models is scale. Coliving spaces are dense, typically providing small private spaces supplemented by public space, all within a single building (Provan, 2014). In traditional communal living models there is much more physical space. Often families will have individual houses supplemented by shared...
outdoor space and a communal house (McCamant & Durrett, 2011) (Provan, 2014). However, there are some urban developments that have located their communities within a single building, such as the Doyle Street Cohousing in Emeryville, California, and Swan’s Market in Oakland, California (McCamant & Durrett, 2011). While these denser communities are the most similar spatially to coliving, they often contain more amenities within the private spaces, and less public spaces than coliving facilities. As shown in the figure below, each apartment has its own living, sleeping, dining, and bathing spaces, and the common space consists of a transitional space (‘Swan’s Walk’) and the Common House, containing living space and a large kitchen.

Figure 7; Swan’s Market Second Floor Plan. Area in Blue indicates Cohousing community. Source; Pyatok Architecture and Urban Design; http://www.swansway.com/wp-content/uploads/2017/11/Swans-Brochure.pdf
Factors Driving the Trend

Although it has been established that this type of living arrangement is not new, there are a few factors hypothesized to have contributed to its rise. Those most often cited include the incidence of delayed adulthood among the Millennial generation, the desire for community, and the lack of affordably priced housing. Additional cited reasons include the ‘sharing culture’ trend, as well as the reduction in the cost of world travel, which when coupled with the increase of remote work, make the flexibility of this model attractive (Grozdanic, 2016).

Social trends reveal that the millennial generation has entered what is referred to as ‘extended adolescence’ or ‘emerging adulthood’ (Semuels, 2015) (Mairs, 2016) (Widdicombe, 2016). This is characterized by the increase in age of marriage and traditional ‘settling down’, as well as the decrease in home-ownership among this demographic (Fuller, 2015). Many millennials in this phase of life are working in big cities and living in small apartments or sharing with roommates. “This phase of experimentation and transition is generally associated with people in their twenties, but its boundaries are fluid. It has appeared in endless TV incarnations, where it’s mocked and worshipped in equal measure: “The Real World,” “Melrose Place,” “Friends,” and “Girls” (Widdicombe, 2016). This demographic is the main market group for coliving (Katz, 2016).

What marketers of coliving spaces claim is that there is an increase in the desire to live and participate in a community in dense urban spaces; “strong traditional
community ties have been weakened by the rush to big cities; a widespread feeling of loneliness and isolation, means that people are hungry for that social connection” (Cox, 2016). Coliving’s main premise is that it provides a ready-made community to its residents, providing a sense of belonging in the disconnected city (Widdicombe, 2016). One of the main ways that community is encouraged in coliving facilities is through the sharing of space.

The emergence of a trend known as the sharing culture is cited as the reason behind the success of companies such as Uber, where individuals ‘rent’ services rather than buy their own. “Battered by student loan debt and the Great Recession, Millennials place less emphasis on owning and more on sharing, bartering and trading to access coveted goods.” (Mincer, 2015) The furnished spaces that coliving facilities provide allow for a reduction in possessions among residents, increased flexibility, and the ability to relocate at short notice. Many coliving facilities have the goal of providing multiple locations from which their members can choose to relocate between on a regular basis.

Coliving is a participant in what is known as the ‘space as a service’ business model. Space as a service refers to the provision of a managed space as a rentable commodity, where the space is leased furnished with staff responsible for cleaning, organizing events, and general assistance to its users (Mairs, 2016). This is the model also used by the more widely known coworking, as well as the idea behind the vacation rental company Airbnb. “The traditional notions of "private" and "public" space are eroding under the influence of a sharing economy and technological advancement. Space is being recognized as a profitable commodity in itself.” (Grozdanic, 2016)
An often-cited reason for the increase of this typology is the increasing costs of living, specifically in the rental market. According to the 2017 State of the Nation’s Housing report by Harvard University, across the United states rents outpace inflation, and the percentage of cost burden renters is up significantly since 2001 (Joint Center for Housing Studies of Harvard University, 2017). Theoretically, living in smaller shared spaces will decrease the overall cost to the resident due to the reduction in footprint. However, Coliving spaces are not always less expensive than other forms of housing. For example, at WeLive a studio can cost as much or more than other studios in the area. This parallel or increase in cost is usually counteracted by all the services that are provided (furnishings, cleaning services, etc.) as well as less upfront costs such as large deposits that are traditionally required for apartments (Semuels, 2015), and the cost of furnishing an apartment. Additionally, these accommodations are often subjectively higher quality and aesthetically pleasing than apartments of a similar price, meaning that residents do not have to sacrifice location for luxury (Padiak, 2017). The shortage of affordable, easily accessible housing in dense urban markets makes coliving attractive to individuals not interested in or qualified for searching the rental markets, which often require brokers and proof of income of 3x the rent (Cox, 2016) (Widdicombe, 2016) (Katz, 2016) (Kendall, 2017). By reducing the footprint of the individual space, developers have created a more affordable way to provide housing to this demographic (Cox, 2016).

A subsection of coliving facilities cater to individuals that are more nomadic by offering leases by the day, week, or month. These short-term leases provide a way for residents who move cities frequently and prefer short-term leases with fewer possessions,
leaving them more unencumbered (Grozdanic, 2016). The increase in remote work in the current economy, increase in jobs in urban centers, as well as the decrease in the cost of international transportation, has led to an increase in both movement to large cities as well as the nomadic lifestyle (Mohn, 2017). Many coliving facilities cater to the newly relocated individual, taking care of many of the difficulties of moving to a new city so that residents can focus on their work and social lives (Cox, 2016).

‘Digital Nomads’ are individuals that travel all over the world working remotely rather than living in one place. Companies like Roam are catering to this demographic, aiming to provide locations in multiple cities that can act as flexible homes for nomadic individuals. Currently operating in Bali, London, Tokyo, and Miami, Roam intends to open enough locations to begin charging based on membership (Mohn, 2017), rather than its current stay-based model.

Coliving operates on the premise that their model creates a supportive and caring community, and the validity of that premise needs to be tested. Specifically, how the impermanence of the members can affect the ‘sense of community’, and how coliving may be combating this challenge. A community can be evaluated based on what is known as a ‘sense of community,’ which can be defined as the “emotional bond to a place based on feelings of belonging relative to the occupants, environment, or both; form of place attachment” (Kopec, 2006).

As this typology of living becomes more and more wide-spread, an understanding of the physical aspects (spatial configurations, programming) is important for design
professionals to be able to create coliving facilities. This understanding can be achieved with established best practices through evidence-based design.

**Explanation of Methodologies**

The lack of scholarly research about coliving suggests the need for studies to evaluate the model. This thesis takes a two-part approach to analyzing coliving facilities; (1) case study research layered with (2) survey research to inform a set of best-practices for the design of coliving facilities located in dense, urban areas.

Quantitative analysis of four coliving facilities were conducted using a mixed methods approach. This research provides insights into the success of community creation and how the environment can lend or detract from it through the use of environment-design theory. These studies include an inventory of spaces as well as floor plans, diagrams, and photographs, which describe layout, adjacencies, and analysis of the urban context. To further expand these case studies the coliving facilities were evaluated based on criteria from environmental psychology theories and cohousing design principles as described later in this section.

Following the coliving facility spatial analysis, a self-completed questionnaire was distributed to past and current residents of coliving facilities. Upon IRB approval a 20-question survey (appendix D) was distributed both to the management of the case-study coliving communities for distribution as well as on a coliving specific social media
site with a large following. The questionnaire asked both qualitative and quantitative questions of residents to determine resident preferences and opinions about coliving spaces. Despite assurances that the survey was distributed to coliving community residents, the questionnaire had a low response rate which prompted further data seeking by the researcher. The results of this survey are evaluated within the study, but do not provide a complete picture of resident preferences in coliving facility design.

In addition to the case study evaluations and the questionnaire data collection, this thesis looks to utilize data collected from One Shared House 2030 (SPACE10, and Anton and Irene, 2018) performed by Space10 and Anton & Irene to further inform best practices in coliving facilities. This study consists of an ongoing qualitative questionnaire open to any individual with internet access. The questionnaire asks questions related to user preferences for coliving and had a significantly higher response rate than the questionnaire completed as a part of this study. This study analyzes the results of the 2030 questionnaire, then uses them along with the findings from the case studies to develop a set of best practices for coliving facilities.

The intent of this research is to layer the qualitative information and quantitative data gathered using three methods (case study, questionnaire, and One Shared House data) to provide a comprehensive view of study to determine connections, patterns, and user preferences, and to inform the development of best practices for the design of coliving facilities.
Programmatic Case Studies

As previously stated, coliving is a new trend and relatively few locations existed at the time of this study. The cases in this thesis were identified for study based on the following criteria:

1. The facility must be self-defined as a coliving facility;
2. The facility must be located in a dense, urban environment;
3. The facility must agree to provide physical access to the facility for research purposes.

The selected facilities include: WeLive Wall Street in Manhattan, NYC; Common in Brooklyn, NYC; Old Oak in London, U.K.; and Roam, in London, U.K.

Analysis Criteria

Considering the newness of the typology, the research on this model of living is almost non-existent. To understand the impact that design elements have on reinforcing or discouraging community, environmental psychology or environment-design theories, such as the classifications of functional space and theory of territoriality, can be consulted. Also instructive are design guidelines for evaluating cohousing communities, many of which are also applicable to the coliving model. These theories and guidelines provide a framework from which to evaluate the physical attributes of coliving spaces.
Environmental Psychology Theories

As defined by Kopec, environmental psychology studies the human-environment relationship at three levels of analysis as follows (Kopec, 2006):

1. Fundamental psychological processes of perception, cognition, and personality as the filter and structure of each individual’s experience of the environment (Kopec, 2006)
2. Social management of space related to personal space, territoriality, crowding, and privacy (Kopec, 2006); and
3. The effect of the physical setting on complex but common behaviors in everyday life (such as working, learning, and participating in daily activities in the home or community) and our relationship with the natural world (Kopec, 2006).

Spaces can be broken down for evaluation into 3 classifications of functional space (Kopec, 2006):

- Primary spaces are communal or common areas where most of a resident’s communication and social interaction take place (Kopec, 2006)
- Secondary spaces, also communal, are where communication and social interaction migrate to and from (Kopec, 2006)
- Tertiary spaces are private or personal areas where a resident goes to be alone. (Kopec, 2006)
Theory of Territoriality - The theory of territoriality “involves the possession and defense of physical space, as well as the exclusiveness of use, marking, personalization, and identity (as a reflection of the self) of that space by the occupant or user.” (Kopec, 2006). Spaces within coliving facilities can be evaluated based on how they fit within defined territories. Territories can be broken down into three categories (Kopec, 2006):

- Primary territories are spaces that are generally owned by individuals or primary groups and are controlled on a relatively permanent basis. The psychological importance of a primary territory to its occupants is always high. (Kopec, 2006)
- Secondary territories are less important than primary spaces; they are usually not owned by the occupants, and possess only moderate significance to them. Psychological control of these territories is less essential to the current occupants and is likely to change, rotate, or be shared with others (Kopec, 2006).
- Public territories are open to anyone in good standing within the community, and occupants cannot expect to have much control (Kopec, 2006).

Cohousing Design Principles

In addition to the environmental science theories above, coliving spaces will be evaluated based on cohousing design principles illustrated in the book “Creating Cohousing: Building Sustainable Communities”, as well as criteria developed to evaluate these communities, specifically as referenced from Maruja Torres-Antonini’s dissertation Our Common House: Using the Built Environment to Develop Supportive Communities,
and *Designing Neighbourhoods for Social Interaction: The Case of Cohousing* by Jo Williams. Principles that can be used to evaluate coliving facilities include size, density, proximity, surveillance, ratio of private to communal spaces and affordances within each, and non-spatial factors such as formal and informal social factors. While coliving and cohousing are differentiated in many ways, both declare a shared goal of providing housing in a community-minded setting, and these guidelines are a useful tool for evaluation.

**Size**- The overall size of a community can be evaluated in terms of overall square footage and number of residents, as well as the amount of space provided for socialization.
Cohousing analysis has provided a size framework with which to compare coliving facilities to as defined by McCamant & Durrett:

- **Small (8-15 households)** - An advantage of small communities is that they are less complicated and require less hands-on management, however, it is important that residents be highly compatible, which often results in a less diverse community (McCamant & Durrett, 2011). In a small community, disagreements may result in members having to leave the community. Small communities can also cause a feeling of a lack of privacy, which may result in withdrawal from social interaction (Williams, 2005).

- **Medium (16-25 households)** - A good number of people for sharing responsibilities, but small enough that you can know everyone well. Reasonable size for management. This size community is considered the ideal size for cohousing communities. (McCamant & Durrett, 2011).

- **Large (26-35 households)** - Allows for greater diversity and more flexibility. May require subdivision to keep groups small enough to be familiar and encourage social interaction; (Williams, 2005). Large communities are more difficult to manage, and residents may be less likely to engage with the community due to increased anonymity (Williams, 2005).

**Density** - Communities can be evaluated based on their density, or area per resident.

Previous research has suggested that high-density cohousing communities often result in
reduced interactions and resident withdrawal from the community due to a loss of feeling of control and privacy. (Williams, 2005)

**Proximity**- Residents tend to interact more with those they have a close proximity to. This may be due to the incidence of semi-private spaces, or ‘buffer-zones’ adjacent to their private spaces, or shared pathways between activity sites, which increase the opportunities for spontaneous interaction (Williams, 2005). The transition spaces located within a community create an intermediary zone between the public and private spaces, which helps to increase feelings of privacy and security within private spaces (McCamant & Durrett, 2011).

**Opportunities for surveillance**- The ability of a resident to observe what social interactions are happening allows a resident to choose whether or not to interact. Knowing that interaction is happening allows residents to know when participation is possible, which is important in a coliving environment where residents presumably joined to interact with other people. (Williams, 2005)

**Types of communal space provided**- Communal spaces provide a location for interaction, but they need to be centrally located, good-quality, appropriate for their designed use, and flexible. They are most successful when located along shared pathways. Additionally, the ratio of common to private space should be evaluated. It is generally accepted that less private space results in more social activity within communities (Williams, 2005).
Affordances provided within private spaces versus communal spaces - The location of amenities either within the public or private space influences spontaneous social interaction between residents (Williams, 2005). For example, a kitchen provided within a private unit may decrease the amount of time a resident would spend in the common kitchen, where they would have the opportunity to interact with other residents.

Non-spatial factors - This includes personal factors (such as personality traits and interpersonal dynamics), informal social factors (such as time available, relationships), and formal social factors (such as organized events) (Williams, 2005). Formal social factors include things such as frequency and type of events, both planned and spontaneous, inclusion of residents in planning events, and informing residents of events. An example of a personal factor would be a positive attitude toward socializing, which is likely to be present in many coliving residents, as that would be a factor in the self-selection of this type of living arrangement.
Programmatic Case Studies

The initial phase of research was performing the case-study evaluations of four operating coliving facilities. The purpose of these case studies is to understand the physical aspects of coliving facilities including size, layout, adjacencies, etc. and to compare this data with established theories described previously. Each case was evaluated on program, communal and private spaces, as well as circulation and surveillance. The comparison analysis of the case study communities, as well as the cross-comparison with questionnaire/survey data, is located in the conclusion of this thesis.

Case Study 1; Common

Overview

Common has 14 locations across the US in New York City, Washington DC, Chicago, Seattle, and San Francisco. Common’s model is to provide multi-bedroom apartments within a larger community of apartments, leasing each bedroom individually. On average, each apartment has 4 private bedrooms, shared kitchen and living space, 2 shared baths, and utility space. Each community of apartments has shared spaces such as a larger living/social space and kitchen, working space, gym, rooftop, and media lounge. The location outlined in this thesis is the ‘Havemeyer House’, which is a small-medium sized community located in the Williamsburg neighborhood of the Brooklyn borough of New York City.
Program

The Common community contains 12 apartments in a structure of 4 buildings (approximately 20,000 sf) connected at the basement level, totaling 51 private bedrooms with an average of 392 square feet per resident. Each apartment consists of 4-5 individually leased bedrooms with a shared kitchen, living space, utility (laundry) and 2-2.5 baths.
Community amenities include weekly cleaning service, ‘household essentials’ (such as coffee), Wi-Fi, and a community manager. Common offers a community manager responsible for overseeing the community and planning events. Additional events are organized across the communities available to all members of Common to participate in, regardless of which ‘house’ they reside in. The minimum lease term at Common is 6 months, and the lease term allows for some movement between properties.

![Common Havemeyer Lounge Space and Fitness Room](https://www.common.com/blog/2016/05/a-look-inside-havemeyer/)

**Communal Spaces**

The common spaces for this facility consist of a Fitness Center, two living/lounge spaces, workspace, media room, courtyard with bike storage, and rooftop lounge. The location of the public amenity spaces is convenient and equally distant to all members, though they are located in the building basement. Common provides amenities for a variety of activities, and the spaces seem flexible with loose furnishings.
Figure 11: Common Havemeyer Media Lounge (source: https://www.common.com/blog/2016/07/community-member-led-event/)

Kitchens, living spaces, and laundry are all shared in the apartment suites, which are very conveniently located for individual residents. Because these are provided at a 4 or 5 to 1 ratio of resident to amenity, access is higher than in some coliving facilities where there is one larger amenity shared among all residents. Kitchens, living spaces are fully furnished and appointed (dishes, etc.). Baths are shared at a ratio of 2-3 per bath and are located immediately adjacent to the private suites.
Figure 12: Common Havemeyer, Typical Apartment Floor Plan Sketch. Source: by author, adapted from (https://www.common.com/havemeyer/)
Private Spaces

Private zones are adjacent but separate from secondary zones, and very separated from the public zones, which are in the basement and rooftop of the building. The apartments themselves (kitchen, living, baths) act as a secondary, or buffer zone, which are shared with the other 3-4 suite-mates.

Common offers fully furnished bedrooms and living spaces within the apartments. Common provides a private bedroom with closet, furnished with a bed/bedding, nightstand and dresser. Hooks are left in the walls of the private bedrooms for residents to hang their own art, which allows the resident to better customize their space.

Figure 13; Private Bedroom; Source: https://streeteasy.com/blog/common-adds-new-co-living-units-williamsburg/
Circulation and Surveillance

Common allows residents to by-pass the public and secondary zones to enter the private zone by offering an entrance to the private zone that doesn’t bisect the others. Zones are physically separated not only by walls and doors, but on separate floors/areas all together. There is an exception to this in the 5-bedroom apartments, as one apartment is located on the same level as the secondary public ‘suite’ area.
Case Study 2; WeLive Wall Street

Overview

WeLive is a large coliving company started by WeWork, a global coworking company. Current locations in NYC and Washington DC, with plans to expand worldwide including locations in Seattle and the UK. WeLive offers traditional apartments, from studio to 4-bedroom apartments, with each full apartment leased in whole, i.e. WeLive does not lease individual bedrooms, but rather the roommates must come together on their own. The location outlined in this thesis is the ‘Wall Street’ location, located in the Financial District of New York City. This is a busy and dense area on the south end of Manhattan.

Program

WeLive Financial district consists of a lobby, with 6 levels of office space below 21 floors of residential, consisting of around 200 residential units. The building was a retrofit with coliving spaces opening in 2016.

WeLive has a community management team, and events are planned at least on a weekly basis and range from fitness classes, to walking tours, happy hours, or weekend parties in ‘The Mailroom’, which is a club-like space located in the basement of the building. WeLive also has a proprietary mobile application, which allows residents to pay for amenities (like laundry service and food from the kitchen) and connect with other residents.
In addition to the standard lease terms, WeLive offers short term stays from one night to one month, for travellers or people wanting to try out coliving. These stays do not come with access to the app for connecting to other residents or paying for additional amenities in the laundry room or communal kitchens.

Communal Spaces

Figure 15: WeLive Wall Street Building Section; green indicates office space, blue indicates residential space, yellow indicates amenity space.; Source; http://cargocollective.com/assemblystudio/WeLive-on-Wall-Street
The main common spaces for all residents to share are located on the 7th-11th floors, including a large kitchen and dining area, open fitness room, laundry room with games, bar, and a roof deck with BBQs and Hot Tubs. The corridors throughout feature groupings of lounge furniture, artwork, and accessories that encourage socialization. Units and amenities are located on floors together to encourage use and are easy to access via the elevator. The uses for the spaces felt relatively defined, with a lot of built-in components. Many different types of spaces were provided, which would allow a resident to select a space that suits their needs or activities. The scale of the amenity spaces felt appropriate to the number of residents.

Figure 16; WeLive Wall Street; Laundry Room and Fitness Room.
The apartments are grouped into sets of 3 floors—called ‘neighborhoods’—connected by a stairwell, which share a common full-size kitchen and social space, which acts as a secondary social zone. All the hallway spaces were furnished and decorated to encourage socialization and interaction in the hallway buffer zones. Private suites are
located intermixed on floors with amenities both on the main amenity floors and the floors above.

**Private Spaces**

The apartments range from studios to 4-bedroom units. Each unit is furnished with a living space, kitchenette, and at least 1 bath. Studios offer murphy beds, and larger units have alcove beds or full bedrooms. Kitchenettes have cooktop, microwave and/or oven, sink, and refrigerator, and are outfitted with basic cooking supplies and dishes. Towels, linens, shampoo and soap are all provided.

*Figure 19: WeLive Wall Street ‘1 bedroom’ with photos. Source: https://www.spareroom.com/rooms-for-rent/manhattan/financial_district/100117364*
Circulation and Surveillance

Members that reside on the amenity floors are able to observe activities easily by proximity, but also may have trouble avoiding them if participation is not desired. Members not living on amenity floors would have to make a special effort to visit the space to know if an unplanned or unofficial event was taking place. The community also shares announcements of planned activities, which offers opportunity for surveillance, allowing awareness, attendance or avoidance of planned activities by members.
Case Study 3; The Collective Old Oak, London, UK

Overview

Old Oak is an approximately 175,000 sf (large) purpose built coliving facility in the Willesden Junction neighborhood on the north-west side of London. This is an area currently undergoing re-development and is set to be the site of an upcoming planned transport hub. The community is close to a tube station with line to central London and is located on Paddington Arm canal. This area isn’t currently very densely populated but has many projects currently under construction.

Program

Old Oak contains 550 micro-units with large amenity spaces on the ground level and additional amenity spaces on each residential level. There is around 12,000 sf of public amenity space including a gym, coworking space, laundry space, communal kitchens (located on all levels), rooftop terrace and ground level terrace, adjacent to on-site restaurant and bar. Amenity spaces are themed, and include a Spa, ‘Secret Garden’, Cinema Room, Game Room, Library, English pub, French bistro, and tea room. The building also contains a market as well as a leased office space on the ground level. The fitness center and coworking spaces offer paid membership for people that live outside of the community in addition to Old Oak residents. The average square footage is around 313 square feet per resident and the minimum lease term is 4 months (with 4, 6, 9, or 12-month leases available). Old Oak has a team of community and event managers, who are responsible for arranging at least 3 activities per week, geared to different tastes.
Communal Spaces

Most amenity/social zones are on the first floor, lower levels, and mid-level roof deck, and all are easily reached via elevator. These are separated from the suites so that you don’t by-pass suites to get to the amenity spaces. The secondary or buffer zones consist of shared kitchens/lounges on each residential floor as well as the hallways, which are narrow and do not provide much in the way of opportunity for interaction. Amenity spaces include a library, game room, cinema room, ‘secret garden’ (themed lounge space), spa, laundry facilities, and a roof deck. Additionally, there are amenities provided with shared access to the public (on a subscription/pay basis) which include fitness, coworking, and an on-site restaurant with outdoor canal-side patio. Many of the amenities were furnished loosely, encouraging members to use spaces flexibly. The amenities varied in style and energy level, which allows a resident to select space based on their needs.
Figure 22: Old Oak Common restaurant and coworking space

Figure 23: Common kitchen and Laundry amenity space
Private Spaces

The majority of units are studios or ‘twodios’ – each unit containing a bed, TV, desk and chair, wardrobe, bathroom with shower, sink, and toilet, and are around 130 sf. Studios have their own kitchenette, while twodios share the kitchenette and a dining space at the entry to the unit. Twodios have the ability to be split into studios easily in the future by ownership by building a wall, second kitchenette and adding a doorway.
Circulation & Surveillance

Residents can monitor scheduled activities online but would have to go to individual spaces to observe if people were interacting or something unscheduled was taking place. Residents living on the side of the roof deck would be able to observe if any activity was taking place there from their unit windows.
Case Study 4; Roam, London

Overview

Roam is a travel based coliving model, providing community and flexible living and working spaces in Bali, Tokyo, Miami, London, and San Francisco, with more locations planned. Roam’s goal is to create a subscription living service for nomadic individuals, allowing them to book for weeks or months at a time at any of their locations, and moving on to the next when works for the resident. Currently the minimum ‘lease’ at any of their locations is one week, but the recommended minimum stay is one month.

Program

The location outlined in this thesis is in the Chelsea neighborhood London. This location closed in early 2018 and is in the process of being relocated. The building has 34 private suites over 6 levels. Amenities include a coworking space, communal kitchen and living space, laundry facilities, patio, 4 small lounge rooms and kitchenettes on the residential levels. Roam offers a very hands-on community management team that ensures a vibrant and accessible community. The property has multiple community organizers that are highly engaged with the members, planning 2+ events per week.
Communal Spaces

The larger/main community amenities are located centrally on the ground and basement levels. Secondary amenities are located regularly throughout the building. Located on the ground level near the front entrance, the coworking space is the most
central and accessible amenity space, with the common kitchen and living areas are tucked away in the basement. The amenity spaces were furnished with loose furnishings but were too small to really accommodate much flexibility. The coworking space was the most flexible, with writable walls and both lounge and conference seating options. There was one small amenity room (3-4 people max) on each of the upper levels which were furnished to accommodate particular uses in each including a small conference room, media room, and wellness room. The amenity uses were well defined, but the size of the social spaces was lacking. Most challenging was the size and configuration of kitchen, which was long and narrow making it difficult to maneuver around people in the space.

The public zones are located on the ground level and in the basement. While some private suites are directly adjacent to these spaces, most are on the upper floors, separated from the public spaces by floor levels. On each residential floor there is a small storage and kitchenette room as well as a small common amenity space that serve as secondary spaces or buffer zones. In general, socializing only takes place in the basement level amenity space.

**Private Spaces**

The private rooms vary in size, the smallest being around 140 square feet. All private suites have an ensuite bath with shower, sink & toilet, and some have kitchenettes. Each room is furnished at a minimum with a full-size bed and wardrobe. Bed linens, towels, and toiletry products are also supplied, and are refreshed by housekeeping on a weekly basis.
Figure 27: Room London, Floor Plan diagrams. Source: sketched by author from observation
Figure 28; Photos of Private Suite

Figure 29; Private Suite Floor Plan; Source sketched by author from measurements
Circulation and Surveillance

Due to the smaller size of the community and the way the building is laid out, a resident is often able to hear a larger event is taking place from one’s suite or adjacent hallway. Scheduled events allow for some pre-knowledge of activities, because there are few communal spaces a resident can typically expect them to be occupied at most times.
Questionnaire Data Collection

The second phase of research was a self-completed questionnaire distributed to coliving residents. The purpose of the questionnaire was to uncover spatial preferences among coliving users and evaluate the effectiveness of current coliving facilities. As a way to increase the sample size, the residents were not limited to the case study communities but were open to any coliving community. Each participant was asked to identify the community or communities they belonged to. Coliving residents will be asked to complete a short answer and multiple choice and open answer survey lasting approximately 5-10 minutes.

Participants for user surveys were targeted by posting on social media sites dedicated to coliving and were open to all residents living in the communities. Coliving facility management was also asked (via email) to distribute the survey link to residents via email or message board posting, at their discretion.

Questionnaire Development –

The questionnaire asked a total of 20 questions related to the participant and their experience with coliving, utilizing multiple choice, open ended, and Likert scale question types. Questions were asked about the individual (demographics) and the coliving facility they reside at in terms of physical and community accommodations. The participants were asked about their preferences related to coliving and their use of their current coliving facility. Participants were asked open ended questions regarding what they perceive the benefits of coliving to be, and how they think the coliving model can be improved. The questionnaire can be found in appendix D, and the results in appendix E.
Questionnaire Results and Analysis

Though only 2 individuals participated in the questionnaire, their answers provide some insights into the preferences of coliving users. As this sample is not statistically significant, it is not representative of the whole of coliving users. Both individuals that took the survey were male, one in the 25-29 age range and the other in the 35-39 age range. The full data report can be found in the appendices, following is a summary of the results:

- Neither survey participant resided at any of the case study locations. The participants resided at coliving facilities in Bali and San Francisco, and the community sizes were estimated to be between 8-15 and 16-25.
- One participant had a short-mid length stay at their coliving facility (1mo.-6mo.) and the other had a longer-term stay (1+ year).
- The participants varied in the type of private accommodation that they had. One had a private bed and bath, while the other had a shared apartment with multiple bedrooms and shared baths.
- Both participants were satisfied with the size of their accommodation.
- Both participants said that they socialize daily in the common spaces and often attend events put on by management.
- Both survey participants worked from the coliving facility, one working 3-5 and the other 6-8 hours a day.
- Both survey participants said they spend most of their time at the coliving space (100-130 hours).
• The most important factors motivating the participants to stay in the coliving space were sense of community, location, cost, and that the apartment was fully furnished.

• The most important amenities to the participants were the community kitchen, workspace, community manager, and the sense of community.

• The most used amenities were workspace, shared kitchen, lounge space, and laundry. Least used was the gym/fitness, though this could be the result of one of the spaces not providing fitness space.

• Both participants felt a strong sense of community in their coliving space.

• Only one of the two participants answered the open-ended questions regarding their opinions of coliving, which follow:
  
  o In your opinion, what advantages does coliving offer over a traditional apartment? “Persistent exchange of ideas and knowledge sharing. The exposure to events in the city with a bigger community. Solid companionship in a relatively lonely society.”
  
  o If you could make one change to improve the experience of coliving what would it be? “More organization, better management, better systems. Ensure the quality of people is very high.”

Without a larger sample many of these questions don’t provide much insight into the preferences of coliving residents but do give a picture of two ‘typical’ coliving residents, individuals working remotely/‘from home’ who socialize heavily within the community.
**One Shared House 2030**

Due to low response rates from the user questionnaire other research was sought out to provide more statistically significant data regarding coliving users to inform best practices. While no surveys specifically targeting current users of coliving were found, an interactive survey about coliving performed by SPACE10 and Anton and Irene was found that provides data useful for evaluation.

The survey, called One Shared House 2030, is an ongoing quantitative survey open to anyone with internet access across the world. According to its makers, “One Shared House 2030 is a playful research project that aims to get insights on the future of co-living through a collaborative survey” (SPACE10, and Anton and Irene, 2018). As of February 2018, over 7,000 people from 147 countries have taken the survey (Space10, 2018), which remains live as of this study. The researchers stated that “the information we collect is open-source, free for anyone to use, and completely anonymous. Besides educating people about co-living along the way, we ultimately hope that the people who actually design co-living facilities can use this data to help inform their decisions” (SPACE10, 2018).

Both the primary research questionnaire and the One Shared House 2030 survey covered sharing spaces and resources, community size, and touch on the importance of specific elements within the community. The One Shared House 2030 survey was more focused on the ongoing management of communities (how to divide costs, how to select new members, etc.) and the type of person members would want to live with (age,
gender, marital status, personality traits). The thesis questionnaire was more focused on what attracts an individual to a community and what amenities are most important to them. The data related to community composition, community size, and sharing of amenities was most relevant to this research.

Because this data was presented in a multi-media format, following is a summary of the results of this research. Questions and specific results can be found in the appendices of this document. Specific results for all questions are listed in Appendix F; below is a summary of the data most relevant to this analysis of the design of coliving spaces.

![Figure 30: Graphic from One Shared House 2030 results; (SPACE10, and Anton and Irene, 2018).](image-url)
Demographics; According to the survey, the most desired co-residents were couples, followed by single men and women, with the least desirable co-residents being teenagers. However, the data was very close on preferred co-residents, varying only a few percentage points (SPACE10, and Anton and Irene, 2018). The 2030 survey breaks this data down by demographic to determine which residents prefer which type of co-residents, those results are as follows:

- Singles prefer (in order): single women, single men, couples
- Couples prefer (in order): Couples, single women, single men
- Married/couples with children prefer: families, couples, and small children
- Single parents prefer: single women, single moms, and families
- Divorced with no children prefer single women, couples, and single men
- Widowed individuals prefer single women, seniors, and couples

This data suggests that residents prefer to live with people similar to them and their family status. Survey results showed that the majority of people preferred to live in the city, and 72% said they would prefer to live in a community with locations all over the world (SPACE10, and Anton and Irene, 2018). This suggests that survey participants have an interest in flexible/nomadic living, though the survey does not ask this question explicitly.

The 3 biggest ‘pros’ to coliving selected by participants were “more ways to socialize” (37%), “Splitting costs and getting more value” (21%), and “Having a
community outside of work or school” (19%). The biggest cons were “Lack of privacy” (34%), and “Other people’s mess” (21%) (SPACE10, and Anton and Irene, 2018).

When asked who would ideally own the community the majority of participants preferred a community owned equally by residents (SPACE10, and Anton and Irene, 2018). This falls more in-line with the co-housing model than coliving, where the community is typically created by and for specific individuals (McCamant & Durrett, 2011), rather than formed by a development/management group in a rental structure. Additionally, when asked how new house-members should be chosen, the majority thought that the current group should vote to select the member (SPACE10, and Anton and Irene, 2018), this structure is more in-line with cohousing, where the community members are responsible for the management of the community (Dowds, 2016).

When given a choice between paying extra for a service ‘layer’ to help with managing all house-related items or deciding on how to manage everything with the house members, 70% preferred to pay extra to have the service (SPACE10, and Anton and Irene, 2018).

The preferred community size went from smallest to largest, with communities sized between 4-10 as most preferred at 49% and 10-25 persons at 31%. Least ideal was 100+ persons at 3% and 50-100 persons at 4% (SPACE10, and Anton and Irene, 2018). “According to our survey, most people would prefer to be part of the smallest possible community- four to 10 people. The only exception is “couples with children”: they’d prefer to be part of a slightly bigger community of 10–25 people- presumably to share
the workload of looking after the kids. In any case, no one says they’d prefer to live with hundreds of other people” (Space10, 2018).

**Communal Amenities**

The amenities that participants were most okay with sharing were a self-sustaining garden and the internet, followed closely by utilities, common room, workspaces, appliances, kitchen, self-driving car, and cleaning responsibilities (SPACE10, and Anton and Irene, 2018). The items that participants were least comfortable sharing included bedrooms, bathrooms and groceries (SPACE10, and Anton and Irene, 2018). While most people were willing to share a kitchen, this question was worded with a qualifying statement of “if healthy food can be delivered for free, do you still want a private kitchen?” (SPACE10, and Anton and Irene, 2018), which de-legitimates the results somewhat.

Participants preferred set communal and private spaces with clear boundaries over modular spaces that could adapt based on need (SPACE10, and Anton and Irene, 2018). The majority of residents preferred their room be off-limits to others, but a not-insubstantial group said they would allow access on a case-by-case basis (SPACE10, and Anton and Irene, 2018).

When asked about furnishings, most users preferred furnished common spaces and unfurnished private space, by a large margin (SPACE10, and Anton and Irene, 2018). This suggests that a coliving community may have to make a choice between providing flexible living and fully personalized space.
The researchers highlighted some limitations to the study, which provides further insight into the demographic that took the survey, and that is presumably interested in coliving. “The responses are unlikely to reflect the general population. To date, we’ve had over 7,000 responses, from people in almost 150 countries. Though there’s an equal split of men and women, 85 percent of respondents are 18–39 years old. Most respondents are either single or in childless relationships, and live in Northern Europe, North America and Asia.” (SPACE10, and Anton and Irene, 2018).
Conclusion

Overview

As the world becomes increasingly populated and space becomes scarce, architects and designers will be looked upon to develop solutions to house people. Additionally, despite the abundance of ways to connect with others in the 21st century, many report increasing feelings of loneliness and isolation (Cox, 2016). Coliving is attempting to solve multiple problems simultaneously, by providing flexible, affordable communal housing at an increased density within the urban environment as well as more remote locales for individuals looking to abandon city life for some or all their time.

Best Practices for the Design of Coliving Facilities

Taking the case-study reviews along with the results from the One Shared House 2030 research study, guidelines can be suggested for the design of future coliving facilities. Ideal communities would increase density while simultaneously encouraging community, two goals that are often at odds. Recommendations are broken down into community size, location, common space provisions, private space provisions, and configuration (adjacencies and hierarchy).
### Community Size

The 2030 research study shows a strong preference for very small communities (under 10 people), with most respondents not looking to live in a community larger than 25 individuals (SPACE10, and Anton and Irene, 2018). This data suggests that smaller groups are desired by residents, however, none of the case-studied communities were that small. A community of this size (around 10 people) doesn’t fit within any of the analyzed typologies for coliving communities, as it is larger than a house or townhome, but is smaller than an apartment building. A community of this nature potentially could exist in a large house (6-10 bedrooms) or similar.
The smallest case-study community was Roam, at 34 members, and second was Common at 51 members. Additionally, both questionnaire participants lived in communities of less than 25 members to the best of their knowledge, and both felt a very high level of community in their coliving facilities. Smaller facilities may have an easier time encouraging socialization since it is more possible for residents to get to know most or all the other individuals in the community.

The other two case study communities both fit into the 100+ member group, which was least desired (3%) by the 2030 survey participants (SPACE10, and Anton and Irene, 2018). From a development perspective, larger communities likely deliver higher yields and can accommodate more amenities, both in size and type. Larger communities presumably also require additional management and on-going resources.
Community Location

Evidence shows that coliving is most appropriately located in or adjacent to large metropolitan areas. In the 2030 survey participants favored city or urban coliving locations over rural locations (SPACE10, and Anton and Irene, 2018), and all the case studies were located in large, dense cities. One exception to this would be coliving communities based on nomadic workers, such as those in more remote locations such as Bali, which are centered around the idea of working and living with like-minded individuals in a vacation-like setting. This is reflected in the questionnaire results; one participant was located in a large city (San Francisco) and the other in a remote area (Bali).
A communal **lounge** is an important element for coliving spaces, as these are an obvious location to encourage social interaction and host events. Often due to the reduced size of the private spaces, residents will require a larger common lounge to socialize with other residents or to invite friends over for socialization. All case studied communities have common lounges, while the larger communities have multiple lounges that could serve groups of various sizes. Communal lounges often include lounge furniture (sofas, chairs, occasional tables) as well as media equipment such as televisions.

Communal **kitchens** are a critical component for coliving facilities. Social events are often planned around meals, and a communal kitchen serves as a main hub for
encouraging social interaction in a coliving space. As an example, at Roam in London all in-house events scheduled during the course of the case study took place within the kitchen. In all of the case-study communities fully appointed communal kitchens with gathering space were provided, even when cooking provisions were provided within the private spaces. While the 2030 study suggested that users may be less likely to want to share a kitchen than some other resources (SPACE10, and Anton and Irene, 2018), this could be due to a concern over cleanliness or the sharing of food resources, which are dealt with in the case-study models by hiring housekeeping (all case-studies) and designating space for the individual storage of food when no kitchen is provided in the private space (Roam, London).

Typical amenities provided within the communal kitchen include standard cooking appliances such as cooktops, ovens, microwaves, toasters and toaster ovens and the like. Refrigeration facilities are also provided. Sinks, often multiple, along with dishwashers are provided. Coffee and tea appliances were provided in some of the cases. A critical component to be included in the communal kitchen is a common table or other gathering area to enable social interaction.

Coliving communities should provide spaces for residents to work within the community. As previously established, one large demographic for coliving communities is the ‘digital nomad’ and other contract/remote worker that will require space to work since they may not have an office outside of the community. Out of the four case-studied communities, two provided a dedicated area solely for working. Roam provided a large conference style room with a table and chairs, as well as some sofas, occasional tables,
bookshelves, and a printer. Roam also provided a few smaller rooms that were meant for taking phone calls and meetings or working on focused work. The Collective had an on-site co-working lounge that was also open to individuals outside of the coliving community for a fee. This co-working lounge offered mostly open workstations in a lounge-like atmosphere. Both questionnaire participants stated that they worked within the community daily, which suggests that this is an important amenity.

The other studied communities often provided areas within the lounge spaces that would be appropriate for working, along with amenities such as printing services, but did not provide spaces that were specifically designated for work in the common areas. This flexible working setup could be appropriate for smaller communities and those that offer space within the private suites for working (i.e. a workstation). The flexible arrangement also allows the spaces to be used more frequently for a variety of uses but may pose challenges to residents that work varied schedules and may require the space when others are socializing within it.

Three of the four coliving communities studied had a fitness amenity. This may make sense for a larger community that has more square footage of amenity space to offer and provides an additional opportunity for socialization among residents. The larger communities studied offered fitness classes to residents within their spaces. The community that did not have a fitness amenity, Roam, often scheduled fitness events, such as runs through local parks and group trips to yoga classes at studios in the community. This can be a good alternative to providing the amenity within the
community for facilities that are in urban areas that have many fitness offerings in the vicinity.

Most, but not all communities offered a **restroom** outside of the private spaces. This is a critical element to offer as it is likely that when residents invite friends or other individuals from outside of the community to socialize or work, they likely would prefer to not have those individuals in their private spaces. Also, as a matter of convenience, a restroom should be located with each grouping of amenities or on each floor that contains large amenities, so that residents do not need to travel back to their private room in the middle of a social event to use the restroom, which may encourage them to stay in.

Depending on the size of the community, a **media room** can be a useful amenity, but is not necessary. Smaller communities can combine uses of a lounge and media space, while larger communities might prefer the flexibility of being able to host a ‘movie-night’ while an additional social event is taking place in the lounge. Three of the four case-studied communities had dedicated media rooms provided.

Similar to a media room, a **game room** is an unnecessary addition but can provide additional options to residents for social activities. In smaller communities it is advisable to combine amenities so as to not spread out residents and reduce social interaction, but in larger communities multiple social amenity areas can help reduce the overall scale of the community by breaking it into smaller spaces. Games are an excellent way to encourage social interaction and should be considered in all coliving communities, whether they have a dedicated space or are a part of a common lounge.
Three of the four coliving communities studied had game rooms, WeLive combined the game room with the laundry space, which serves to combine uses and reduce overall square footage required and provides opportunities for social interaction that would otherwise not be possible. This combination of social and utilitarian functions could be perceived either as positive or negative by residents; some individuals may not like doing their laundry at a ping-pong tournament, while others may appreciate the opportunity for social interaction.

**Laundry** in coliving facilities should be provided and be communal. All the case study coliving facilities employed communal laundry, and the survey study also suggests that this an amenity that users are willing to share (SPACE10, and Anton and Irene, 2018). Additionally, shared laundry creates a secondary or intermediate space where informal interactions can take place. This increases the quantity of social interactions between users and the potential for developing deeper relationships.

All case-study communities offered an **outdoor space** as an amenity, though the space at Roam was not usable for anything at the time as it was a small (approximately 8’x8’) unfurnished patio. The other three communities provided roof-top spaces as lounges for residents. Outdoor space can be an attractive amenity for a potential resident but is not a requirement for a coliving space. The 2030 study suggested that the thing that residents would most like to share is a communal garden (SPACE10, and Anton and Irene, 2018), though this would likely require a decent amount of maintenance and none of the communities studied had gardens. Typically provided in the outdoor spaces is lounge seating, with some communities providing additional amenities such as **BBQ**
grills, hot tubs, and outdoor movies, all of which can provide additional opportunities for residents to socialize.

One key provision that coliving communities must provide but is not a built component is a **community manager**, ideally that lives on site. These individuals act as both problem solvers and community creators by being available to tackle issues that arise, as well as schedule and plan events that are relevant and interesting to residents. Community managers can also introduce new members into the community, making it easier for a new resident to join in.

Additionally, coliving facilities need to provide reliable and fast wireless internet service to meet the requirements of the typical tenant. Media amenities such as memberships to streaming services are also attractive to potential tenants and provide opportunities for socializing.

**Private Space Provision within Case Study Facilities**

![Table]

<table>
<thead>
<tr>
<th>PRIVATE AMENITY</th>
<th>COMMON</th>
<th>WELVE</th>
<th>OLD OAK</th>
<th>ROAM</th>
</tr>
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<tr>
<td>Bedroom</td>
<td>X</td>
<td>X</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Bathroom</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Kitchen/Kitchenette</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workspace (desk)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Wardrobe/Closet</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X X</td>
</tr>
<tr>
<td>Media/TV</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furnished</td>
<td>X</td>
<td>X</td>
<td>X X X</td>
<td></td>
</tr>
<tr>
<td>Cleaning Service</td>
<td></td>
<td></td>
<td></td>
<td>X X</td>
</tr>
</tbody>
</table>

*Figure 34: Case Study Facilities, Private Space Provision*
Within the private accommodations in the coliving spaces toured were several similarities. In all case studies the private accommodations were furnished, including at a minimum a bed and wardrobe, with most also including a workstation. This would be suggested as a minimum of accommodation. The 2030 survey suggests that users would prefer to furnish their own spaces (SPACE10, and Anton and Irene, 2018), but this is at odds with the flexible ideal of coliving, which allows a member to move easily between properties and be less burdened with possessions. An option for coliving facilities may be to offer a small number of un-furnished rooms for less money to offer to those wishing to furnish their own spaces.

Provision of a private bath for each private suite is recommended. In all but one of the case-studies the suites contained private bathrooms with toilet, lavatory, and shower. Common offered two baths shared between four private suites. The 2030 survey indicates that the majority of users are not willing to share bathrooms (SPACE10, and Anton and Irene, 2018). When bathrooms are shared the inclusion of a cleaning service is recommended to reduce potential disputes. Not enough data was available to determine an appropriate size for the private spaces within a coliving facility.

Inclusion of a full kitchen or kitchenette within the private suite varied across the case-studies, from having none included to providing one for every 2-4 suites or having a full kitchen in each private suite. The 2030 survey results state that members are as willing to share their kitchens as they are to share lounge space (SPACE10, and Anton and Irene, 2018), which suggests that a full kitchen is not required within the private suites. Kitchenettes could be provided in every suite or regularly shared among a portion
of suites. Including a kitchen within the private space would likely result in a reduction in social interactions that would otherwise occur in the communal spaces, which may be detrimental to the goal of creating community. It also creates an environment more akin to a traditional studio apartment.

**Adjacencies and Spatial Hierarchy**

In addition to providing the appropriate spaces and amenities in a coliving facility, care must be taken to configure them in a way that is conducive to positive social interaction. Some of the theories discussed earlier provide guidelines into how a coliving facility might best be organized.

The theory of territoriality breaks down spaces into three categories for how users view spaces, these territories are primary (most private), secondary, and public (Kopec, 2006). Within a coliving facility, a primary territory consists of a resident’s bedroom (and potentially bath), which they can expect to have exclusive use of and be able to personalize and feel secure within. Care should be taken to allow users to control their primary territory to the fullest extent possible and create a high level of privacy to encourage them to feel secure.

Secondary territories within a coliving community consist of spaces that are largely used alone but may be shared with other residents. Key examples of spaces that fall into this category are workspaces, both larger, open spaces but even more so smaller, enclosed working spaces such as conference or phone rooms, laundry areas, and shared kitchenettes (outside of a main kitchen), and fitness areas. These spaces are ones that a
user feels they should be able to have some control over some of the time. For example, a user should have some ability to occupy a conference room privately when necessary but will not be able to take ownership of that space long term.

Public territories within a coliving space consist of the spaces where major socialization is expected to take place, such as the communal kitchen or lounge spaces. These are spaces where residents expect to have little control over, both in terms of their arrangement and their use at any given time. These spaces may be active most or all the time and provide opportunities for residents to socialize if they desire.

In addition to territories, the spaces within a coliving facility can be evaluated based on the 3 classifications of functional space (Kopec, 2006). These classifications offer a very similar picture as the territories, but are focused on the activities that take place rather than the amount of control an individual has over that space. The ‘primary space’ classification includes the communal or common areas, where residents go to interact with each other. These spaces are in line with public territories. Secondary spaces are tied with secondary territories and are the spaces in between the private and the public where interaction happens but is not necessarily intentional. Tertiary spaces are the private areas where residents go to be alone and are composed of the primary territory of an individual.
A key consideration for coliving facilities is the adjacencies between these spaces and territories. A resident will better be able to control visual and auditory ‘access’ to their private space if it is located away from where individuals gather. This suggests a linear approach to the configuration, where primary spaces are separated from tertiary spaces (or have a weak adjacency). According to McCamant and Durrett’s guidelines on cohousing, secondary spaces can be used to create the ‘buffer zone’ between these spaces. These buffer zones offer opportunities for spontaneous, unplanned interaction that
is an important component to increasing the familiarity and comfort among residents with each other.

Within all four of the case study communities the primary spaces were grouped into a main area and the tertiary spaces separately. Secondary spaces were either spread out across the facility or were adjacent to the primary spaces. In both WeLive and The Collective, where the tertiary spaces were separated from the primary spaces by floors, the secondary spaces were provided on each level, offering a smaller lounge and kitchen space that users could access and expect to have more control over than the public spaces.

An additional consideration for coliving spaces is the ability for a resident to observe when social interactions are taking place and choose whether or not they want to participate in the activity (Williams, 2005). This can be a challenge for larger properties, where individuals may have to take elevators to the primary spaces in order to observe social interaction. Ideally a user would be able to observe from the secondary spaces the activities taking place, where they may feel less obligated to join into group activities, and would be able to choose whether to retreat to their private space or join in. It is also important that a resident not have to feel as if their private space is overlapping the public space, as this allows for too little control over their primary territory.
Limitations of the Study

1. The four case studies were located within two cities, New York and London, which only provides data on coliving facilities located in dense, urban environments.

2. While the primary investigator was able to reside at two of the four coliving communities, the stays were for short time (7 days at Roam and 3 days at WeLive).

3. Tours of two of the coliving facilities were provided by the development and management groups, which tend to only share data that presents the community in a positive light.

4. The 2030 study was taken by a general demographic that is not representative of an entire world population.

5. Sample size for researcher conducted survey was insufficient to produce data for conclusive analysis.

6. Access to ideal questionaire response audience was not available to researcher.

7. Coliving is still widely undefined in the market and many models exist, which muddies the ability for the spatial qualities of the architype to be evaluated.
Recommendations for future research

Further survey research is recommended, directed at individuals who have resided in coliving communities, as this audience may best be able to suggest what is most important in coliving communities. Additionally, research focused on the community aspect may be of particular use. Some suggestions of possible future research include:

1. Interview users of a specific community and evaluate their responses alongside the programmatic data for the community where they reside.

2. Re-conduct questionnaires distributed to current and past residents of coliving communities to determine successes and failures within the model. Participation may be increased by soliciting responses directly/in-person at the coliving communities.

3. Interview designers of coliving communities.

4. Analyze in-depth demographic data for coliving residents.

5. An audit could be completed of coliving facilities, detailing the sizes of the facility, sizes of the spaces within the facility, adjacencies, and amenities provided.

6. Compare the coliving model with that of other high-amenity residential models, such as senior living.

7. Partner with social science researchers to investigate the community component of coliving.
Afterword

Coliving is an emerging typology unexplored in scholarly research as of yet. This thesis aimed to create a baseline understanding of the model as it currently exists. I believe coliving has promise to continue to expand in regions that offer opportunity to young adults, particularly in cities where the cost of living is high. The exploration of this innovative housing model also suggests some exciting opportunities for further research.

Partnering with social science researchers to investigate both the desire for community among the residents of coliving facilities and the effectiveness of these communities at fulfilling this desire would be of particular interest. Coliving could be game changing if residents can be convinced to give up private space and belongings in exchange for social connection. The reality is that many current apartment buildings could easily be transitioned to coliving communities, simply by introducing more communal elements (scheduled events, common spaces, shared resources); but in order to create a community the residents must possess the desire to participate.

Three elements of coliving communities work together to encourage community; residents self-select by deciding to live somewhere that actively states it as one of their goals, facilities staff their communities with individuals that maintain social activity through the coming and going of residents, and the combination of reduced private space and increased public space creates forced opportunities for socialization. A fascinating opportunity for future research could be to compare coliving with senior living, which is
similarly heavy in shared amenity space, and has worked for years to provide community and engagement to the resident population.

It is my view that active and engaged community managers are a very critical component to a successful coliving community; without the community, these properties are simply micro-apartments. Stakeholders should understand the increased management costs associated with this if they are truly interested in creating a community, and not just consider the reduced cost per unit when deciding to open a coliving facility. Whether the coliving trend is rooted in a resident’s desire for connection rather than a way to differentiate properties in competitive housing markets while reducing the cost per unit is yet to be seen.

Coliving can be an excellent solution for individuals that are new to a city or neighborhood and/or are looking to establish friendships, or those that are self or remote employed and want to live in exotic locations but with individuals that are similar to them. I look forward to reading continued research on coliving and watching the typology evolve.
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Appendix A – IRB Certificate of Exemption
Official Approval Letter for IRB project #18215 - New Project Form
April 4, 2018

Rachel Osborne
Interior Design Program
103 12th Ave. #504, Seattle, WA 98122

Lindsey Bahe
Interior Design Program
ARCW 231, UNL, 685880107

IRB Number: 20180418125EX
Project ID: 18215
Project Title: A Case-Study Analysis of Urban CoLiving Communities

Dear Rachel:

This letter is to officially notify you of the certification of exemption of your project for the Protection of Human Subjects. Your proposal is in compliance with this institution’s Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt. Exempt categories are listed within HRPP Policy #4.001: Exempt Research available at: http://research.unl.edu/researchcompliance/policies-procedures/

You are authorized to implement this study as of the Date of Final Exemption: 04/04/2018

- Review conducted using exempt category 2 at 45 CFR 46.101
- Funding (Grant congruency, OSP Project/Form ID and Funding Sponsor Award Number, if applicable): N/A

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:
* Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
* Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
* Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
* Any breach in confidentiality or compromise in data privacy related to the subject or others; or
* Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board.

If you have any questions, please contact the IRB office at 402-472-6965.

Sincerely,

Rachel Wenzl, CIP
for the IRB

University of Nebraska-Lincoln Office of Research and Economic Development
nugrant.unl.edu
Appendix B – Participant Invitation Letter

Participant Invitation Posting on Community/Social Media Boards (reminder posting to be the same)

I want to know about your coliving experiences! I am completing a research study on coliving spaces as a graduate student at the University of Nebraska studying architecture. This research examines existing coliving spaces and resident experiences in order to provide architects and interior designers data about how to better design coliving spaces.

If you are a current or past member of a coliving space, you are invited to participate in a short 5-10 minute research survey to gather information and opinions about coliving spaces from the people that know them best - the residents. Please use the following link to access the survey, which will be available until (date). Prior to the questionnaire, please review the informed consent form on the first page of the link provided which describes your role as a survey participant. Your input is greatly appreciated and will help shape the future of coliving.

If you have any questions or concerns, please let me know.

Thank you for your time,

Rachel Osborne
Appendix C – Participant Informed Consent
A Case-Study Analysis of Urban CoLiving Communities;
Resident Survey

Participant Informed Consent Form
IRB# 18215

Title:
A Case-Study Analysis of Urban CoLiving Communities

Purpose:
This research project is a set of case-studies analyzing CoLiving facilities and the motivations and opinions of the occupants of these facilities, in order to determine best practices and design guidelines for interior designers and architects of this emerging space typology. You must be above the age of majority (legal adult) to participate in this survey. You are invited to participate in this study because you are or have previously been a resident of a coiving community. Your participation will aid in identifying user preferences regarding programming and space planning within coiving facilities, which in turn may help inform the design and operation of these facilities in the future.

Procedures:
You are asked to answer an online questionnaire through Qualtrics, linked at the bottom of this page. The questionnaire should take 5-10 minutes to complete and will be available until (DATE).

Benefits:
There are no direct benefits to you as a research participant.

Risks and/or Discomforts:
There are no known risks or discomforts associated with this research.

Confidentiality:
Any information obtained during this study which could identify them will be kept strictly confidential. The data will be stored electronically through the primary investigator's dropbox and will only be seen by the research team during the study. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as group or summarized data.

 Dropbox Security Statement:
https://www.dropbox.com/security

 Qualtrics Privacy Policy:
https://www.qualtrics.com/privacy-statement/
Compensation:
You will receive no compensation for participating in this project.

Opportunity to Ask Questions:
You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may contact the investigator(s) at the phone numbers below. Please contact the University of Nebraska-Lincoln Institutional Review Board at (402) 472-6965 to voice concerns about the research or if you have any questions about your rights as a research participant.

Freedom to Withdraw:
Participation in this study is voluntary. You can refuse to participate or withdraw at any time without harming your relationship with the researchers or the University of Nebraska-Lincoln, or in any other way receive a penalty or loss of benefits to which you are otherwise entitled.

Consent, Right to Receive a Copy:
You are voluntarily making a decision whether or not to participate in this research study. By submitting responses to the online questionnaire, consent is implied and certifies that you have decided to participate having read and understood the information presented.

Participant Feedback Survey:
The University of Nebraska-Lincoln wants to know about your research experience. This 14 question, multiple-choice survey is anonymous. This survey should be completed after your participation in this research. Please complete this optional online survey at: http://bit.ly/UNLresearchfeedback.

Name and Phone number of investigators
Rachel Osborne, Principal Investigator Phone: 1 (206) 858-2825
Lindsey Bahe, Secondary Investigator Phone: 1 (402) 472-0033

By advancing to the survey you consent to the above, and confirm that you are of the age of majority (legal adult).

☐ Agree (1)
Appendix D – Participant Survey
1 What is the name and city of the coliving space you are staying/have stayed at?


2 How long is your current stay or your most recent stay at this coliving space?

- Less than 1 week (1)
- 1 week - 1 month (2)
- 1 month - 6 months (3)
- 7 months - 1 year (4)
- More than 1 year (5)

3 Which of the following best describes your coliving accommodations?

- Private bedroom with shared bath (1)
- Private bedroom with private bath (2)
- Private bedroom with private kitchen and bath (3)
- Private apartment (1 bedroom with living space, kitchen and bath) (4)
- Private apartment with multiple bedrooms and private bath(s) (5)
- Shared apartment with multiple bedrooms and shared bath(s) (6)
- Other: (7) ________________________________
4. Do you share your private accommodation with another individual?
   - No, I do not share my private accommodations (1)
   - Yes, I share my private accommodations with a friend (2)
   - Yes, I share my private accommodations with a significant other (3)

5. How satisfied are you with the amount of private space you have within these accommodations?
   - The private space is too small (1)
   - I have the right amount of private space (2)
   - The private space is larger than I need (3)
6 How important were the following factors in motivating you to stay at this coliving space?

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<thead>
<tr>
<th>Factor</th>
<th>Very Important (1)</th>
<th>Somewhat Important (2)</th>
<th>Slightly Important (3)</th>
<th>Not Important (4)</th>
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<td>Flexible lease; ability to move in or out at short notice (1)</td>
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<tr>
<td>Sense of Community (2)</td>
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<tr>
<td>Cost (6)</td>
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7 How important are the following amenities to you?

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<th>Slightly Important (3)</th>
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<td>Community Kitchen (8)</td>
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<td>○</td>
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<tr>
<td>Gym (9)</td>
<td>○</td>
<td>○</td>
<td>○</td>
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</tr>
<tr>
<td>Lounge Space (10)</td>
<td>○</td>
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<tr>
<td>Laundry (11)</td>
<td>○</td>
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<tr>
<td>Flexible lease (2)</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Sense of Community (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Fully-Furnished Living Space (4)</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Hospitality services such as housekeeping and coffee service (5)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Community Manager (6)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other (7)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
8 How much time do you spend at this coliving space in a typical week?

- Almost all of the time (130+ hours) (1)
- I spend most of my time here (100 -130 hours) (2)
- I spend some of my time here (65-100 hours) (3)
- I only sleep on-site (0-65 hours) (4)

9 Which common area amenities do you use? (select all that apply)

- Workspace (1)
- Shared Kitchen (2)
- Lounge Space (3)
- Gym (4)
- Laundry (5)
- Other (6) ____________________________________________
10 Which best describes your work status while staying at this coliving space? (select all that apply)

☐ Work from Home/Remote Work (1)

☐ Work from office locally (business office or coworking) (2)

☐ Self-Employed (3)

☐ Student (4)

☐ Military (5)

☐ Retired (6)

☐ On Vacation (7)

☐ Unemployed (8)

☐ Other (9) _______________________________________________________________________

11 If currently employed, what is your occupation?

________________________________________________________________________________

12 How much time do you spend working in the common spaces at this coliving space?

☐ More than 8 hours a day (1)

☐ 6-8 hours a day (2)

☐ 3-5 hours a day (3)

☐ 1-2 hours a day (4)

☐ None at all (5)
13 To the best of your knowledge, about how many residents are currently staying in the coliving space?
   - Less than 8 (1)
   - 8-15 (2)
   - 16-25 (3)
   - More than 25 (4)

14 How often do you socialize in the common spaces?
   - Daily (1)
   - 5-6 days a week (2)
   - 3-4 days a week (3)
   - 1-2 days a week (4)
   - Never (5)

15 How often do you attend community activities organized by management?
   - Never (1)
   - Occasionally (2)
   - About half of the time (3)
   - Often (4)
   - Always (5)
   - Management doesn't organize activities (6)
16 How would you describe the sense of community at this coliving space?

- Very strong sense of community (1)
- Strong sense of community (2)
- Some sense of community (3)
- Very little sense of community (4)
- No sense of community (5)
- Neutral (6)

17 In your opinion, what advantages does coliving offer over a traditional apartment?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

18 If you could make one change to improve the experience of coliving what would it be?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
19 What gender do you identify with?

- Male (1)
- Female (2)
- Non-binary/third gender (3)
- Prefer to self describe; (4) ____________________________
- Prefer not to answer (5)

20 What is your age range?

- 18-24 years (1)
- 25-29 years (2)
- 30-34 years (3)
- 35-39 years (4)
- 40-49 (5)
- 50-65 years (6)
- 65 years or older (8)
- Prefer not to answer (9)

End of Block: General
Appendix E - Questionnaire Results Report

A Case-Study Analysis of Urban Coliving Communities; Resident Survey

August 19th 2018, 5:26 pm MDT

1 - What is the name and city of the coliving space you are staying/have stayed at?

What is the name and city of the coliving space you are staying/have stayed at?

Haas San Francisco

Bali

2 - How long is your current stay or your most recent stay at this coliving space?
3 - Which of the following best describes your coliving accommodations?

- Private bedroom with shared bath
- Private bedroom with private bath
- Private bedroom with private kitchen and bath
- Private apartment (1 bedroom with living space, kitchen and bath)
- Private apartment with multiple bedrooms and private bath(s)
- Shared apartment with multiple bedrooms and shared bath(s)
- Other:
4 - Do you share your private accommodation with another individual?

- No, I do not share my private accommodations
- Yes, I share my private accommodations with a friend
- Yes, I share my private accommodations with a significant other
5 - How satisfied are you with the amount of private space you have within these accommodations?

- The private space is too small
- I have the right amount of private space
- The private space is larger than I need
6 - How important were the following factors in motivating you to stay at this coliving space?
7 - How important are the following amenities to you? - Importance

<table>
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<tr>
<th>#</th>
<th>Question</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Slightly Important</th>
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<td>Community Kitchen</td>
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<td>9</td>
<td>Gym</td>
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<tr>
<td>10</td>
<td>Lounge Space</td>
<td>0.00%</td>
<td>100.00%</td>
<td>0.00%</td>
<td>0.00%</td>
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<td></td>
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<td>Laundry</td>
<td>Flexible lease</td>
<td>Sense of Community</td>
<td>Fully-Furnished Living Space</td>
<td>Hospitality services such as housekeeping and coffee service</td>
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<td>0.00%</td>
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</tbody>
</table>
8 - How much time do you spend at this coliving space in a typical week?

100.00%

- Almost all of the time (130+ hours)
- I spend most of my time here (100-130 hours)
- I spend some of my time here (65-100 hours)
- I only sleep on-site (0-65 hours)
9 - Which common area amenities do you use? (select all that apply)

<table>
<thead>
<tr>
<th>#</th>
<th>Answer</th>
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<td>1</td>
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<td>2</td>
<td>Shared Kitchen</td>
<td>22.22%</td>
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<tr>
<td>3</td>
<td>Lounge Space</td>
<td>22.22%</td>
<td>2</td>
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<tr>
<td>4</td>
<td>Gym</td>
<td>11.11%</td>
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<td>5</td>
<td>Laundry</td>
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<tr>
<td>6</td>
<td>Other</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>100%</td>
<td>9</td>
</tr>
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</table>
10 - Which best describes your work status while staying at this coliving space? (select all that apply)

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<th>Answer</th>
<th>%</th>
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<tr>
<td>1</td>
<td>Work from Home/Remote Work</td>
<td>66.67%</td>
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<tr>
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<td>Work from office locally (business office or coworking)</td>
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<td>3</td>
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<td>Military</td>
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<td>Occupation</td>
<td>Percentage</td>
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<td>------------</td>
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<tr>
<td>6</td>
<td>Retired</td>
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<td></td>
<td>Total</td>
<td>100%</td>
<td>3</td>
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</tbody>
</table>

11 - If currently employed, what is your occupation?

If currently employed, what is your occupation?

Designer
12 - How much time do you spend working in the common spaces at this coliving space?

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<th>#</th>
<th>Answer</th>
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<tr>
<td>1</td>
<td>More than 8 hours a day</td>
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<td>2</td>
<td>6-8 hours a day</td>
<td>50.00%</td>
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<tr>
<td>3</td>
<td>3-5 hours a day</td>
<td>50.00%</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>1-2 hours a day</td>
<td>0.00%</td>
<td>0</td>
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<tr>
<td>5</td>
<td>None at all</td>
<td>0.00%</td>
<td>0</td>
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<tr>
<td></td>
<td>Total</td>
<td>100%</td>
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</tbody>
</table>
13 - To the best of your knowledge, about how many residents are currently staying in the coliving space?

<table>
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<th>#</th>
<th>Answer</th>
<th>%</th>
<th>Count</th>
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<td>3</td>
<td>16-25</td>
<td>50.00</td>
<td>1</td>
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<tr>
<td>4</td>
<td>More than 25</td>
<td>0.00</td>
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<td></td>
<td>Total</td>
<td>100</td>
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</table>
14 - How often do you socialize in the common spaces?

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<td>Daily</td>
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<tr>
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<td>5-6 days a week</td>
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<td>3-4 days a week</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>1-2 days a week</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Never</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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</table>
15 - How often do you attend community activities organized by management?

<table>
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<th>Count</th>
</tr>
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<td>1</td>
<td>Never</td>
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<td>0</td>
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<tr>
<td>2</td>
<td>Occasionally</td>
<td>0.00%</td>
<td>0</td>
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<tr>
<td>3</td>
<td>About half of the time</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Often</td>
<td>100.00%</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Always</td>
<td>0.00%</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>Management doesn't organize activities</td>
<td>0.00%</td>
<td>0</td>
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<td></td>
<td>Total</td>
<td>100%</td>
<td>2</td>
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</table>
16 - How would you describe the sense of community at this coliving space?

<table>
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<th>Answer</th>
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<th>Count</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Very strong sense of community</td>
<td>50.00%</td>
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<tr>
<td>2</td>
<td>Strong sense of community</td>
<td>50.00%</td>
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<tr>
<td>3</td>
<td>Some sense of community</td>
<td>0.00%</td>
<td>0</td>
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<tr>
<td>4</td>
<td>Very little sense of community</td>
<td>0.00%</td>
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<tr>
<td>5</td>
<td>No sense of community</td>
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<tr>
<td>6</td>
<td>Neutral</td>
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<td></td>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>2</strong></td>
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</tbody>
</table>
17 - In your opinion, what advantages does coliving offer over a traditional apartment?

In your opinion, what advantages does coliving offer over a traditional apartment?

Persistent exchange of ideas and knowledge sharing. The exposure to events in the city with a bigger community. Solid companionship in a relatively lonely society.

18 - If you could make one change to improve the experience of coliving what would it be?

If you could make one change to improve the experience of coliving what would it be?

More organization, better management, better systems. Ensure the quality of people is very high.
19 - What gender do you identify with?

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<tr>
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<td></td>
<td>Total</td>
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</table>
20 - What is your age range?

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<td>Prefer not to answer</td>
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<td>Total</td>
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Appendix F - One Shared House 2030 questions and results

Demographics: How many of the following would you want in your co-living community?

• Couples – 15%
• Single Women – 14%
• Single Men – 13%
• Families – 12%
• Seniors – 10%
• Single Moms – 10%
• Small Children – 9%
• Single Dads 9%
• Teenagers – 8%

Development: Which of these industries do you think would organize the best co-living community?

• Design – 33%
• Architecture 26%
• Community Organizing – 14%

• Social Works – 9%

• Technology – 7%

• Business – 7%

• Real Estate – 2%

• Government – 2%

Origins: Should the people behind your community have co-lived themselves?

• No, it doesn’t matter – 55%

• Yes, they should have co-lived – 45%

Service: Would you pay extra for a service layer to manage all house related items?

• Yes, I’d pay extra for a service layer – 70%

• No, I’d decide on everything with the house-members – 30%

Tolerance: Which of these items are you comfortable sharing in your home, long-term?

• Self-sustainable garden – 11%

• Internet – 11%
• Utilities – 9%

• Common Room – 9%

• Workspaces – 9%

• Household Appliances – 8%

• Kitchen – 8%

• Self-driving Car – 8%

• Cleaning Responsibilities – 8%

• Child care – 6%

• Daily Dinners – 6%

• Groceries – 4%

• Shower and Toilet – 3%

• Bedroom – 0%

• Nothing – 0%

Size: What is the right amount of people for your community?

• 4-10 persons = 49%
• 10-25 persons = 31%

• 25-50 persons = 13%

• 50-100 persons = 4%

• 100+ = 3%

Energy: How do you want to negotiate energy use?

• Pay based on the amount of energy used per person – 51%

• Agree on a set quota and let the smart things negotiate – 23%

• Split everything evenly, regardless of the amount of energy used – 13%

• Management determines and includes it in the rent – 13%

Dynamics: What should your fellow house-members be like?

• People from different walks of life – 60%

• Similar to me – 40%

Pros: What do you think will be the biggest pro of living with others?

• More ways to socialize – 37%

• Splitting costs and getting more value – 21%
• Having a community outside of work or school – 19%

• A higher level of convenience in every-day life – 8%

• A better home in a more attractive location – 8%

• Having people around to ask for help – 4%

• Having perks like a gym or yoga studio – 2%

• Having access to multiple common areas – 1%

Cons: What do you think will be the biggest con of living with others?

• Lack of privacy – 34%

• Other people’s mess – 21%

• Not having full autonomy on decisions impacting daily life – 17%

• Potentially not liking someone in the group – 14%

• Potential arguments when disagreements occur – 14%

Ownership: Who owns your community?

• Members share equal ownership – 51%

• Some members own, others rent – 18%
• Members pay rent to management – 16%

• Members share different levels of ownership – 15%

Personality: What are some of the most important qualities in a house-member?

• Honest – 15%

• Cleanliness – 15%

• Considerate – 12%

• Social – 10%

• Interesting – 8%

• Proactive – 8%

• Intelligent – 7%

• Financially Secure – 7%

• Funny – 6%

• Healthy – 6%

• Handy – 5%

• Hot – 1%
Resolution: Someone never cleans up after themselves, how do you solve it?

- Talk to them privately – 62%
- Call a house-meeting to discuss – 22%
- Leave a note – 9%
- Report anonymously to management – 7%

Assembly: There’s a free space in the house, who should choose the new house-member?

- The current group votes – 74%
- An algorithm – 18%
- Management – 6%
- The leader of the existing group – 2%

Space: How do you prefer the space in the house to be utilized?

- Set private spaces and communal spaces with clear boundaries of use – 66%
- Modular walls that grow or contract space based on needs – 34%

Furniture: Should the house come furnished?

- Only the common areas should come furnished, and I’ll furnish my private space – 79%
• Yes, the whole house (including my private space) should come furnished – 21%

Privacy: When you are not home, are others allowed to use your private room?

• My private room is off-limits – 56%

• Maybe, but they’d have to ask on a case-by-case basis

• Anyone in the house is welcome to use my room – 3%

Cooking: If healthy food can be delivered for free, do you still want a private kitchen?

• No, I’d use the communal kitchen so I’d have more flexible private space – 61%

• Yes, I’d still want my own kitchen even if it takes up some of my private space – 39%

Commuting: If your community has a self-driving car, where would you prefer to live?

• City – 54%

• Countryside – 24%

• Suburb – 22%

Location: Do you want to live in a community that has location all over the world?

• Yes, I want to be a nomad – 72%

• No, I prefer to stay put – 28%
Pets: Are you okay with pets in the house?

- Sure, love pets – 63%
- No pets in the house – 17%
- Only dogs – 10%
- Only cats – 6%
- Only robotic pets – 4%