Nudging the boundaries between public and private space in student housing; scoping TU Delft students' perception of co-housing

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Abstract:
As the housing shortage in the Netherlands increases, students have a harder time finding living spaces. On top of that, there has been an increase in psychological issues and feelings of loneliness among students. This loneliness can be exacerbated by the focus on building large studio apartment complexes without collective spaces. The proposed solution for both these problems is community housing (co-housing). In this paper we are going to research if co-housing can indeed decrease loneliness among students while intensifying the use of space and we will research the willingness of students to share their space. A boardgame was developed to establish TU Delft students' attitudes towards co-housing, offering insights to inform the design of future housing compositions. The main question in this research was: How can the spatial, social, and emotional preferences of TU Delft students be systematically mapped to inform design decisions related to their loggings? The literature review on co-housing showed that co-housing can reduce the spatial need per individual and provides strong possibilities for social and emotional bonds which could reduce loneliness. Data gathered from the boardgame revealed that the majority (68.4%) of TU Delft students are willing to pursue co-housing principles to achieve a reduction in rent and climate impact. This makes co-housing a potential typology for student housing to intensify the use of space and create a possibility to reduce loneliness.

Keywords: housing shortage, loneliness, community housing, shared living, boardgame

1 Introduction

Many students at the Delft University of Technology are faced with a pressing housing shortage. Currently there is a deficit of 1500 rooms for student inhabitants. It is expected that in the coming years this deficit will only increase, and it is predicted that in 2028 there will be a deficit of 3600 rooms (Fig. 1). This problem is not unique to Delft, as on a national scale there is a shortage of 26 500 student's rooms (M. van der Veldt, 2021). The total housing deficit in the Netherlands is around 330 000 homes, a number which has led the Dutch government to set a goal of building one million new homes by 2030 (ten Teije, 2021). To reach this goal, the build environment needs to speed up the way houses are being built, and urban environments need to be densified to tackle the deficit.

In the city of Delft, developers try to tackle the shortage by building large student housing projects on the university campus, on street such as the Stieltjesweg. Of the newly built residential units, more than half are studio appartements. This in spite of the fact that 62% of the student population desires shared housing (de Bruijn, 2022). The arguments for the developer to focus on studio apartments, is that the sustainability demands for buildings nowadays cannot be met while keeping housing affordable within a student rent budget. Students renting studio appartements can get rental assistance which means that part of the rent is paid for by the government. This allows developers to rent their units for a higher price, which results in a higher budget to build sustainably (de Bruijn, 2022).

Year	Student houses	Shortage
2021	16 500	1500
2028	22 830	3600

Figure 1: The current and expected shortage of student housing in Delft (M. van der Veldt, 2021)

In contrast, there is a higher demand by students for shared housing, studio appartements can have negative results to the mental health of inhabitants. Research conducted by the student board of ORAS shows a relationship between loneliness and studio apartments, where it is evident that single dwellers experience loneliness more frequent in comparison to students living with. The frequency of feeling lonely decreases when there is an increase in the number of housemates (Scholts et al., 2020). How many students feel lonely? The RIVM reports that 80% of the student's experience feeling lonely. In addition, it also shows that 51% of students experience psychological complaints such as anxiety and sadness. (Dopmeijer, 2021).

Loneliness is defined as perceived social isolation (Hawkley & Cacioppo, 2010) and can be divided into two types, namely emotional and social loneliness (Fig. 2) (R. Weiss, 1973). Emotional loneliness is defined as the lack of intimate relationships with, for example, a life partner or close friend. Social loneliness refers to the lack of belonging to a larger group. In the long run, loneliness can have dire consequences on people, in the form of accelerated physiological aging, increased morbidity and mortality, personality disorders and psychoses, increases in depressive symptoms and suicide (Hawkley & Cacioppo, 2010).

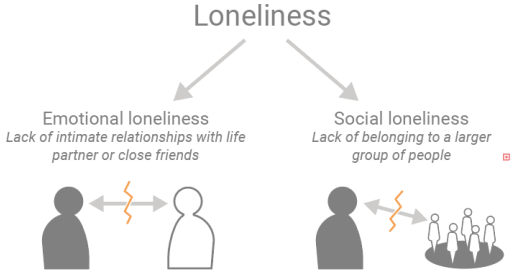

Figure 2: Two types of loneliness

"Loneliness is synonymous with perceived social isolation, not with objective social isolation. People can live relatively solitary lives and not feel lonely, and conversely, they can live an ostensibly rich social life and feel lonely, nevertheless. Loneliness is defined as a distressing feeling that accompanies the perception that one's social needs are not being met by the quantity or especially the quality of one's social relationships"

(Hawkley & Cacioppo, 2010, p. 1)

The current emphasis on building studio apartments could be shifted towards prioritizing the development of shared housing, fostering a stronger sense of community and social interaction among residents. An example of a housing typology that puts an emphasis on living together is community housing (co-housing). In this paper, co-housing will be addressed as a possible solution for housing scarcity and loneliness among students.

The aim of this paper is to define the qualities of co-housing and establish if there is willingness among TU Delft students to live in a housing situation with a more co-housing-focused approach. How can the spatial, social, and emotional preferences of TU Delft students be systematically mapped to inform design decisions related to their loggings? To answer the main question two sub-questions are formulated. Firstly, how can co-housing help reduce loneliness and provide solutions intensify the use of space? Secondly, how can the social and emotional needs of students be mapped to enhance co-housing design?

2 Methodology

To answer the main question this paper aims to first define co-housing and second discover if there is willingness among students towards co-housing. Two methods of research were chosen which complement each other to define co-housing and scope the willingness among TU Delft students towards co-housing.

2.1 literature review

The first research approach consisted of a literature review on co-housing. To start, in order to have a clear understanding of this typology, co-housing will be defined. Secondly, co-housing will be reviewed on its potential to provide a solution against loneliness. After this, the environmental and spatial advantages of co-housing will be discussed.

2.2 Interviews

The second research method consisted of student interviews through use of a boardgame. The boardgame was developed to one potential answer to the sub-question: how can the social and emotional needs of students be mapped to enhance co-housing design? The boardgame provides a way to systematically map the spatial, social, and emotional preferences of TU Delft students in both a qualitative and quantitative way. The final layout of the board shows the preferences of the individual respondent and data can be extracted from the board to have a qualitative perspective on the preferences of the full target group. Interviews with the boardgame will be conducted at five different student housing complexes with different housing typologies, to make sure there is a diverse group of respondents. The development and implementation of the boardgame as an interview method formed a significant part of this research and therefore will be further discussed in chapter four.

In summary, the literature review aims to find argumentation for co-housing as a solution against loneliness and housing scarcity. The interviews utilizing the boardgame aims to find if there is willingness to live in a co-housing typology among TU Delft students. Together they provide an answer to the main question.

3 On the case of co-housing

This chapter will define co-housing and discuss the key characteristics that distinguishes co-housing from other housing approaches. This will be done to answer the sub question: How can co-housing help reduce loneliness and provide solutions to intensify the use of space?

> *"Basic conditions for the development of cohousing projects are identified in intentionality, design for facilitating processes of socialization, the presence of private and common facilities, group size to support community dynamics, and control self-management."*
>
> (Williams, 2005)

Or in other words, co-housing is synonymous with the intentional design for facilitating processes of socialization (Williams, 2005). This indicates the relationship between physical design and social processes that take places whilst living in a community. The design of the community intends to influence the way inhabitant live their lives together.

3.1 Co-housing against loneliness

Loneliness is associated with a lack of social or emotional relationships (R. Weiss, 1973). The aim of co-housing is to intentionally design for processes of socialization and therefore could provide possibilities to reduce loneliness. So, what are the social advantages of co-housing? Firstly, the physical design encourages a keen sense of community. Secondly, there is a presence of extensive shared functions, these shared functions form an integral part of the community. Furthermore, the inhabitant involvement in operational processes in the community and thereby supporting each other in fulfilling daily tasks like cooking, cleaning, and other household processes. Finally, community housing offers inter-dependence and support networks (McCamant & Durret, 1994).

> "As we move to association, and from association to community, mutuality reaches exchange to create more enduring bonds of interdependence, caring, and commitment. A transition, we may say, from reciprocity to solidarity, and from there to fellowship."
>
> (Selznick, 1992)

The social aspects of co-living stimulate the forming of emotional bonds could be stated as a transition from community to fellowship (Selznick, 1992). Co-housing, due to its strong focus on socialization and building a community allows for a sense of belonging to a larger group. The presence of interdependence, sociability and support networks also allows for emotional bonds to be formed. To conclude, the social and emotional needs could be fulfilled by co-housing, but this remains a possibility and not a certainty.

3.2 Environmental and spatial advantages of co-housing

Co-housing does not only have social advantages, but it also stimulates a reduction in the environmental and spatial footprint (Daly, 2017). The social, environmental, and spatial advantages are largely intertwined. The change in attitude and behavior is influenced by the community, by informal diffusion of knowledge among community members, practical knowledge to reduce consumption and environmental impact is shared (Meltzer, 2000).

One of the key characteristics of co-housing is sharing resources (McCamant & Durret, 1994). Sharing entails explicit and implicit agreements by the all the inhabitant, or by smaller groups within the community. Sharing is both dependent on and a shaper of social relationships, in the sense that the willingness and mutual trust between inhabitants determines the degree of sharing. Sharing can lead to a decrease in household consumption, enabling households to reside in more compact living spaces. This is due to the reduction of necessary goods and causes less need to buy items (Meltzer, 2000). The average space savings in US co-housing communities was 31% in comparison to mainstream

households (Daly, 2017). The spatial reduction whilst improving the quality of life makes co-housing a viable option for densifying the urban fabric (Williams, 2008).

To summarize, co-housing can be defined as the intentional design for facilitating processes of socialization. The social advantages of co-housing consist of a keen sense of community, sharing functions, inhabitant involvement in operational processes and sociability (McCamant & Durret, 1994). Reduction in the environmental footprint of co-housing when compared to mainstream households is caused by several factors. First, a behavioral change causing less consumerism and a different attitude towards the environment. And secondly, the sharing of resources results in the reduction of necessary goods (Meltzer, 2000). As a result, there is also a spatial reduction noticeable (Daly, 2017),which causes a lower number of materials necessary for the building which also reduces the environmental footprint. Co-housing therefore can provide solutions to intensify the use of space, allowing for more dwellings in the same place (Daly, 2017).

4 The game – Boardgame setup

The literature shows that co-housing can help intensify the use of space as well as help foster a sense of community which can reduce the feelings of loneliness. Our next step was to gather information among TU Delft students about the willingness to live in co-housing typologies, which was researched trough a boardgame.
The game has been developed to gain perspective on the desired living situation of the respondents, with an additional focus on their attitude towards sharing activities and emotions with others (Fig. 2). Based on the 1-7 Likert scale, the gameboard consists of seven columns each representing different levels of privacy (Joshi et al., 2015). The game was conceptualized as a measuring device in which respondents decide their preference towards sharing or not sharing activities and emotions with a small or large number of people in an interactive way. There were 17 different activities to be placed on the board (Fig. 2) from most private to most shared after which borders could be placed to differentiate between private, shared, and public. Then respondents were nudged to move their placed borders and lastly to divide the emotions among the three spaces where they would want to experience them. A range of emotions was chosen, to comprise both positive and negative emotions.

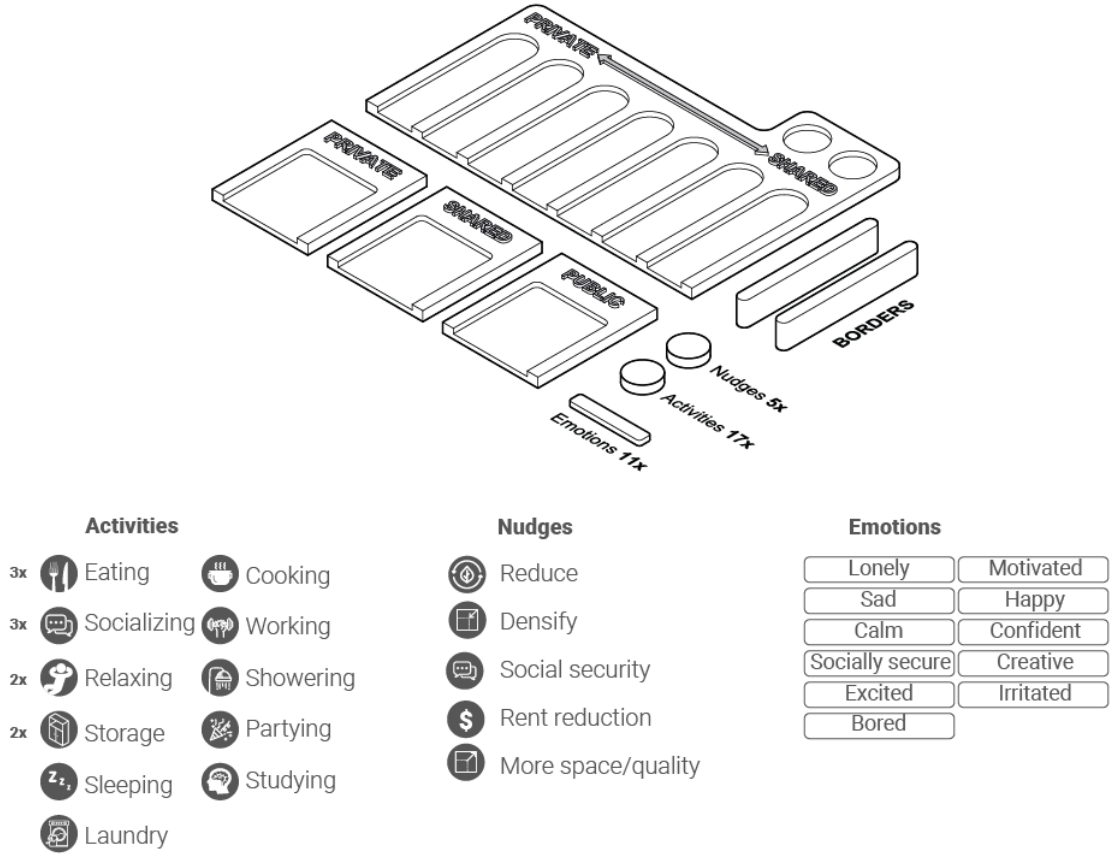

Figure 2: The parts of the boardgame

4.1 The game - Motivation

A boardgame was used as an interview method for several reasons. Firstly, to encourage stronger engagement with the interview. The visual and physical connection to the boardgame make it easier for the respondent to be engaged with the task at hand (Rowley et al., 2012). Secondly, the game gives a direct visual interpretation of the choices made by the respondents in which it is immediately possible to reflect and adjust if desired. Thirdly, this allows the respondents to be able to control the pace of the interview, which again results in higher engagement with the interview (Rowley et al.,

2012). Fourthly, the boardgame puts the focus on what is necessary, namely the interview instead of the interviewer (Kitzinger, 1994). Furthermore, the necessity to physically conduct the interview results in visiting the houses of respondents, because of that the interviewer gains additional insight in the housing situation of respondents (Appendix 2). Finally, the game creates a sense of enjoyment around the interview causing more willingness among respondents to partake (Rowley et al., 2012).

4.2 The game – Conducting the interview

The game consists of four steps, which the respondents were asked to complete (Fig. 3). The game was explained one step at the time to the respondent. The instructions were as follows:

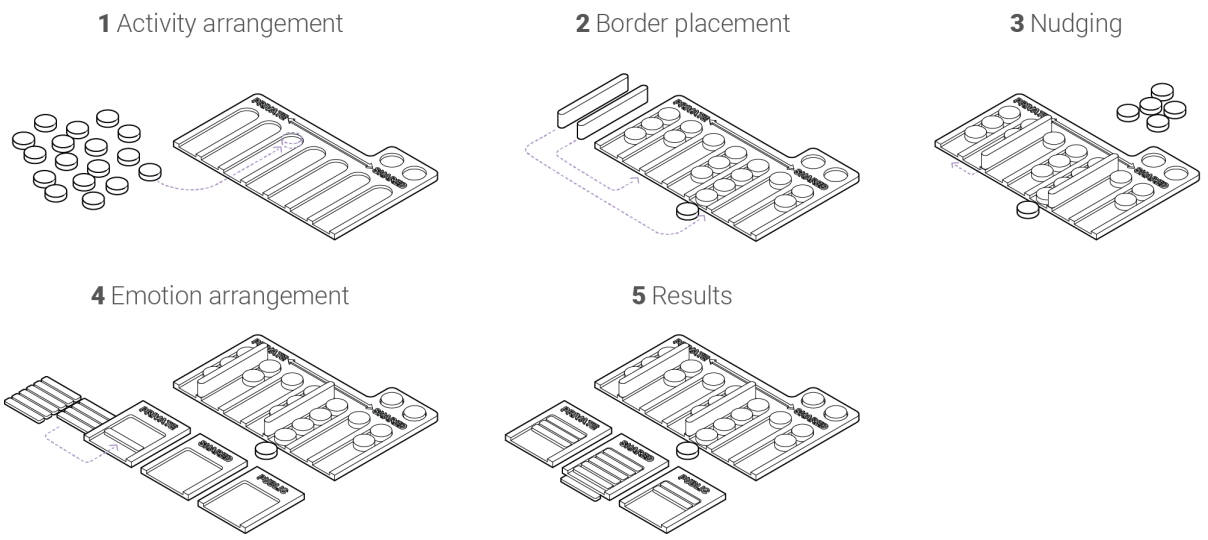

Figure 3: The step-by-step plan for performing the board game.

Step 1: Activity arrangement mapping existing traits
In the first step, the respondent is asked to arrange the activities that are listed in figure 2 from the most private to the most shared space. To help the interpretation of the range of the board the respondent is told that the left-most slot could represent their bed and the right-most slot a large party in a public space. Furthermore, it is made explicit that this is about the willingness to share the activity. The showering is used as an example of an activity that is performed alone, but the actual space where this happens can be shared. Providing a clear view of the intention of the game.

Step 2: Border placement
In the second step, the respondent is asked to place two border elements dividing the activities in a private, shared, and public space. A private space is a space for oneself as individual, a shared space is space shared with housemates and a public space is a space shared with other inhabitants of the building complex and beyond. The border elements create the visual separation between two different spaces.

Step 3: Nudging
The respondent is then asked if they are willing to move either one of their borders more to the left for one of the five nudges listed below (Fig. 4). It is made explicit to the respondent that not moving their borders is also an answer. In addition, they are asked what the two most important nudges were to move their border if they do so. The nudges towards increased sharing try to demonstrate to the respondent that their choice makes a difference, which in turn can incentivize them to move their borders.

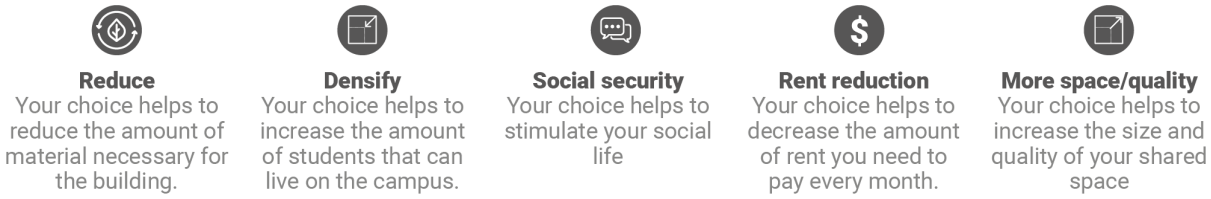

Figure 4: The nudges presented to the respondents and their explanation

Step 4: Emotional arrangement
Lastly, the respondent is asked to divide the emotion discs between the categories private, shared, and public space (Fig. 2). The respondent is clearly instructed that the assignment is to arrange the emotions to where they desire to be when they feel a certain way, not which space gives them the stated emotions. The categories private, shared and public relate to how the respondent has arranged their own game board in the previous steps.

Step 5: Results
After step four, the interview is complete. The last step is to document and translate the results. After step two and four a picture is taken of the game board. Comparing these pictures demonstrate the potential movement of the borders during the boardgame.

The output of the interview is both quantitative and qualitative. The information is two-fold; the current setup of the board gives a view on how the individual respondents would like to live, and the data can be translated to give an overview of the general opinion of all the respondents. The placement of the activities, borders, nudges, and emotion discs are all translated to histograms.

4.3 The game – Interview locations

The students in Delft live in very different housing typologies, with large variation in the room sizes, number of housemates, type of building and the amount of social interaction between housemates. All these factors could influence their opinion on their desired living situation and therefore influence how they would respond while participating in the boardgame.

Prospective respondents were found by asking inhabitants of five different buildings to participate to create a diverse group of respondents. The five buildings vary in the number of housemates from a single appartement to a co-housing typology with forty-two housemates (Fig. 5). In the results a distinction is made between the different typologies, to discover if there is a difference in their opinion towards co-housing due to their current living situation. The two houses that both had four housemates were seen as one category in the results since they had a similar typology.

Figure 5: Floorplans of the five buildings where the interviews were conducted

5 Results

This chapter will discuss the results found by conducting interviews with the boardgame at the five different housing typologies presented in the last paragraph. In total thirty-five interviews were conducted. Prior to the these interviews the boardgame was trialed among eighteen architecture students to see if the game was functioning as intended. These interviews were not included in the results due to their bias through a connection to the presented topic.

Firstly, the sharing of activities on the scale from private to shared. Secondly, the placement of borders and the willingness to be nudged to move these borders. Finally, the desired location to be when feeling certain emotions. The histograms shown in the results all derive from the gameboard, and the scheme below shows which parts of the gameboard result in the three parts of the results (Fig. 6).

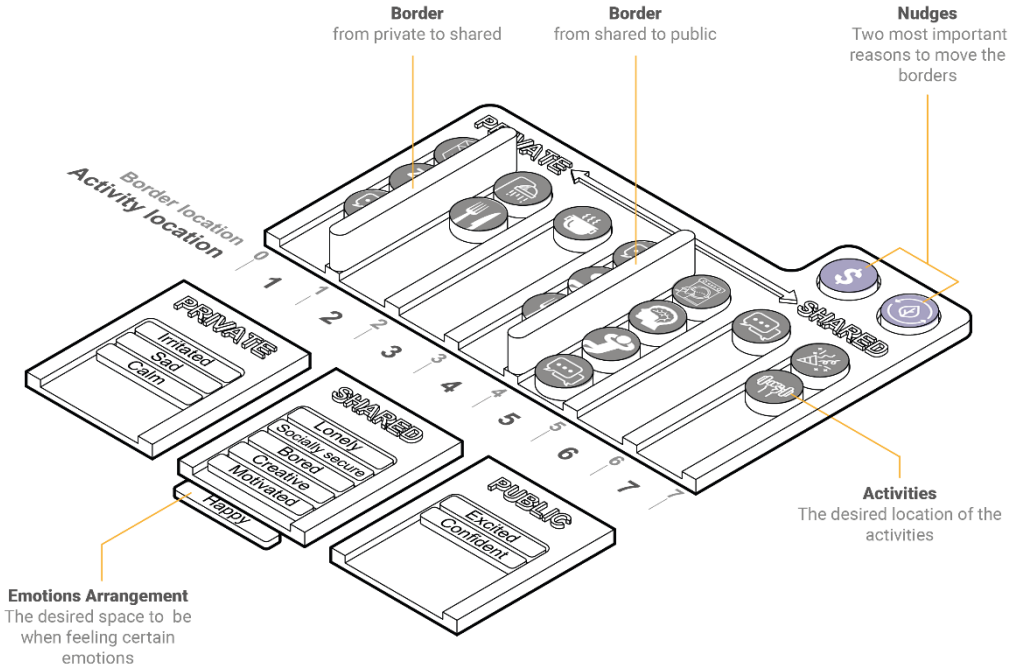

Figure 6: Example final layout of the gameboard with indication where the different results are located

5.1 Sharing of activities

Firstly, the desired location of the activities on a scale from the most private to the most shared is shown (Fig. 7). The placement of the activity on the scale from one to seven shows to which degree the respondents would like to share the activity. The higher the activity is rated on the sharing scale the more people shared this activity is.

Sleeping is an activity which is rated as very private with only five respondents not indicating it in the left-most slot. Both studying and storage tended to lean towards the private side. The activities that were rated as the most shared were predominantly partying and working out. The remaining activities show that that there is no true consensus on where the activity should take place. The Bagijnhof, a co-housing community, was the only house where all respondents placed the laundry in the two most right slots.

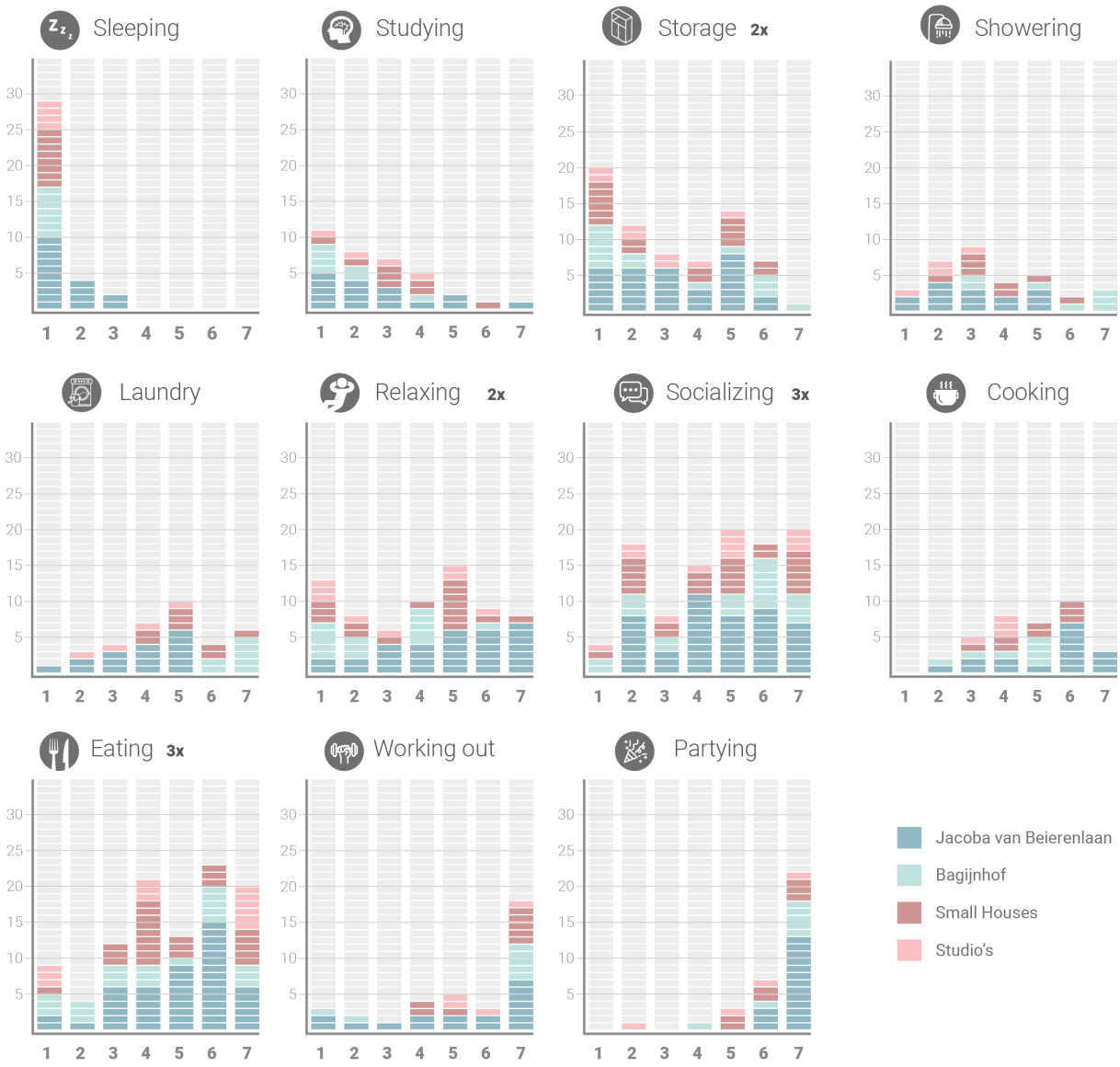

Figure 7: Activity arrangement from the most private to the most shared by the respondents of the five buildings

5.2 Border placement

In the second part, by looking at the placement of the border elements in the boardgame that were mapped before and after nudging the following can be stated (Fig. 8).

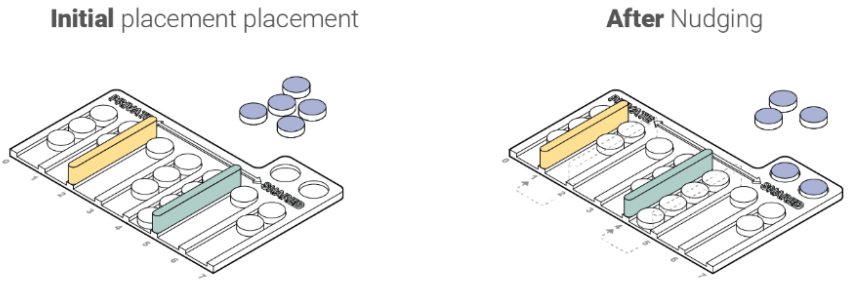

Figure 8: Example of the border placement before and after nudging

Firstly, most of the respondents were willing to move their border after being presented with the nudges. The number of respondents that were willing to move their border was 68.6%. The most frequently chosen nudges were a reduced environmental impact and rent reduction. Furthermore, it can be derived that the border from individual to shared space is more often moved towards the left then the border from shared to public space (Fig. 9). This suggests that the respondents are more willing to share more activities with housemates than with people living in the building complex and beyond.

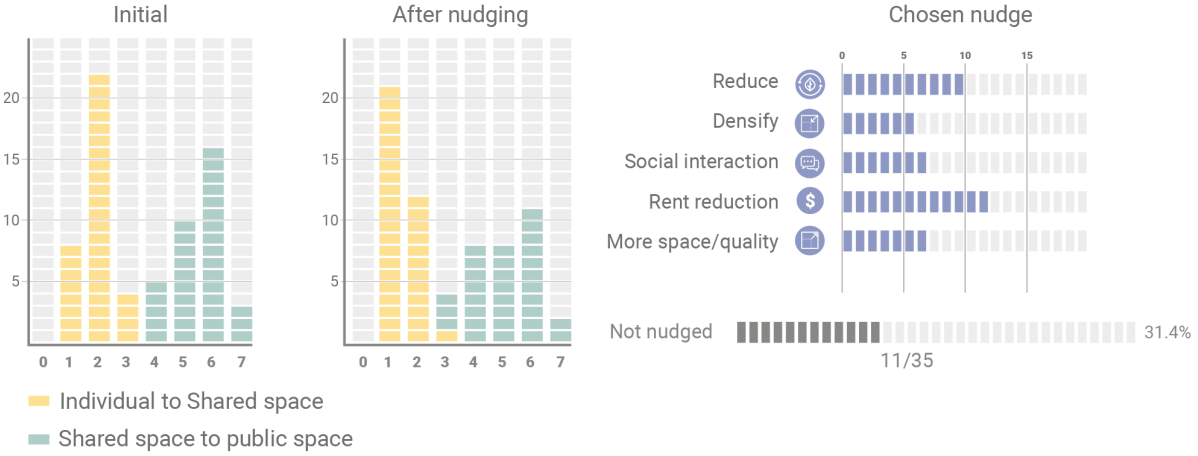

Figure 9: The placement of the borders before and after nudging, the nudges used, and 'not nudged'

5.3 Emotional arrangement

From the final step of the interview, we came to the following results. The respondents tend to want to be in a private space when they experience negative emotions like sadness and irritation. Irritation was the most conclusive with 77 % of the respondents wanting to be in a private space when they feel irritated (Fig. 9). Other emotions where respondents prefer to be in a private space are calmness, creativity and when they feel motivated. The shared space has a more homogeneous distribution, although three outliers can be indicated: happiness, social security, and loneliness. Within these three, loneliness is the emotion where respondents are most likely to want to go to their shared space, with 67% of the respondents wanting to be in the shared space when they feel lonely. Finally, in the public space the respondents indicate a higher number of positive emotions, of which the most evident outliers are confidence (66%) and excitement (54%) (Fig. 9).

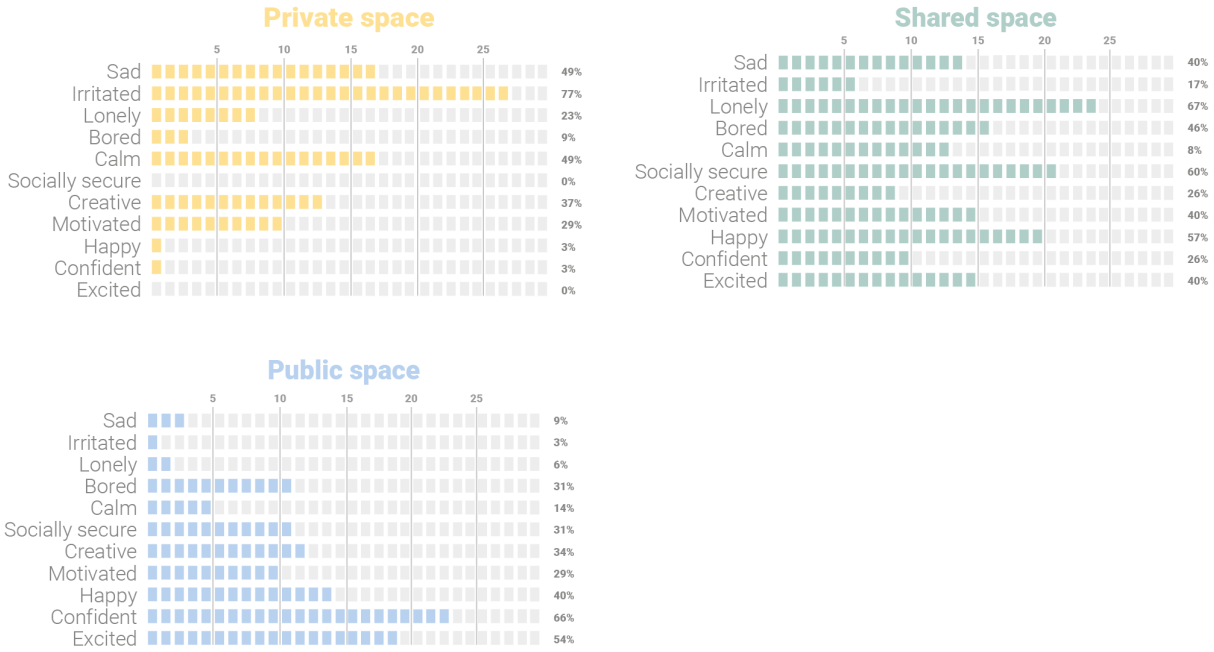

Figure 10: The desired space where the respondents wanted to be when feeling certain emotions

By taking the average of all results, an arrangement of private, shared and, public space can be drawn up that complies with the most respondents (Fig. 11). This average division of the scale from private to public and associated emotions provides insight into the perception of TU Delft students towards co-housing.

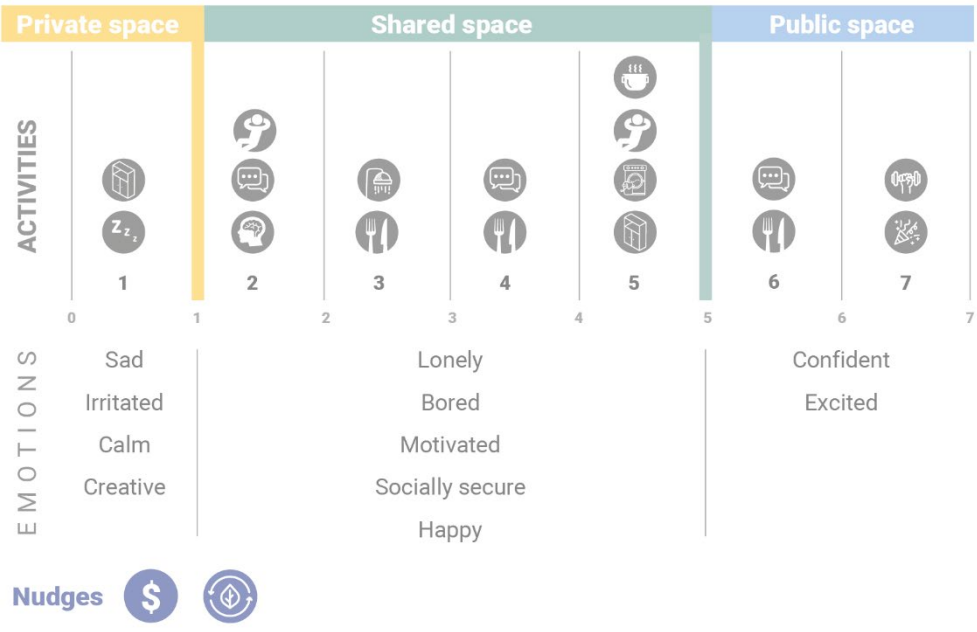

Figure 11: The gameboard with the average results of all the respondents

Discussion

The results of the boardgame show that 68.4% of the respondents were willing to deviate from their initial wishes to achieve co-housing principles. The most frequently chosen nudges that stimulated this deviation were a reduced environmental impact and rent reduction. This indicates that there is willingness among TU Delft students to live in a more co-housing environment. The results of the boardgame interview can function as a guideline for coming up with a spatial arrangement that aligns with their social and emotional wishes.

However, the results pose a challenging task in creating a spatial arrangement that complies to all the respondents. Most of the surveyed activities do not show consensus on where the activity should be on the scale from private to shared (Fig. 7). As a result, it becomes difficult to create a spatial arrangement that complies to every individual preference.

If we try to quantify the data from the interviews, the specific relations between the activity and border placement of individual respondents will be lost. Therefore, the individual game board should be seen as qualitative results which provide information about individual wishes. A set of examples can be seen in (Appendix 3). In addition, the boardgame posed an abstracted version of space from private to shared, this means that it missed the intricacies that make some co-housing projects work or not. The results that could be derived were in this sense limited by the parameters of the game.

The success of a co-housing project is never solely dependent on the spatial arrangement of the building, it is highly dependent on the behavior of the inhabitants which is linked to the environmental and social benefits of co-housing. Co-housing is a demanding housing situation which requires their inhabitants to have a well-equipped set of social, organizational, and architectural skills to coordinate community life (Huber, 2017). On average, co-housing shows reduction in spatial and environmental footprint but this varies from group to group (Lietaert, 2010).

However, this does not mean co-housing should not be pursued. The difficulty of designing a well-functioning co-housing complex in both a spatial and social perspective is challenging but the pursuit is justifiable given the possible social and environmental benefits. Although the results of the boardgame are not directly translatable to a building it provides an additional tool for architects to better understand the social preferences and limitations of prospect inhabitants. This means it could play a role in future co-housing design to scope the perception of potential co-housing inhabitants beforehand, in order to better tailor the design to their social and emotional preferences.

The results acquired from these interviews are representative for students of the TU Delft. This poses a very specific survey group in age, life phase, education, and interest. Therefore, these results are not representative for the general Dutch public. However, the developed research methodology can be utilized to acquire data from different survey groups.

Another goal of this paper was to discover how to intensify the use of space in student housing. Co-housing proved to be able to get a spatial reduction compared to traditional housing (Daly, 2017). The student houses visited for the interviews however had between twenty and twenty-six square meters per individual (Appendix 1). In comparison to the fifty-three square meters on average per individual in the Netherlands it will be hard to create a spatial reduction (CBS, 2022). Nonetheless, the use of available space can be intensified by sharing more functions. Studio appartements have private kitchens, bathrooms and living space, these could be shared to intensify the use of available space and reduce the amount of material necessary for a building (Meltzer, 2000).

The main aim of this paper was to ascertain if we can intensify the use of space, which was researched by scoping the opinion of TU Delft students on co-housing. The gameboard was able to scope to which extend prospective inhabitants are willing to share functions. This essentially decides to what extent the use of spaces and functions can be intensified without crossing social and emotional boundaries. However, as the results are not directly translatable to a co-housing arrangement, for future research it would be of interest to include more parameters to get results that more directly relate to a building. Examples of parameters could be the number of housemates, sizes of spaces, floorplan configuration and spatial transitions. In addition, a larger number of respondents would increase the validity of the results.

Conclusion

The Netherlands as whole, but for this paper more specifically the students of TU Delft, are dealing with a pressing housing shortage. Besides struggling to find a house, students in the Netherlands are coping with increasing loneliness and psychological problems. Therefore, it is essential to develop housing typologies which focus on creating a strong social foundation and can densify the urban fabric.

For this reason, co-housing was reviewed as a possible solution for loneliness and housing scarcity. The community-centered approach of co-housing can provide the social needs to reduce loneliness. The sharing of resources results in a reduction of the spatial footprint and the environmental impact of a building. Therefore, co-housing provides possibilities to reduce loneliness and housing scarcity.

To discover the willingness of TU Delft students towards co-housing a gameboard was developed as interview methodology. The results provided insight into the initial wishes on the social and emotional arrangement of their house. By trying to nudge the respondents towards co-housing it showed that 68.4% of the respondents were willing to deviate from their initial wishes to achieve co-housing principles. The most important reasons to do so where a reduced environmental impact and a reduction in rent. The final layout of the boardgame after nudging can function as a guideline for a co-housing design which complies with the social and emotional wishes of TU Delft students. However, with a strong sidenote that there was no consensus of where certain activities should take place. This indicates that following this guideline would not align with every individual.

Now the main question can be answered: How can the spatial, social, and emotional preferences of TU Delft students be systematically mapped to inform design decisions related to their loggings? By mapping the social and emotional aspect of co-living among TU Delft students a more tailored fit housing typology can be designed. Possible nudges to create willingness for this typology were a rent reduction and reduced environmental footprint. By knowing how and to which extend TU Delft students can be nudged towards a co-housing typology, the use of space in future co-housing design can be intensified. In addition, a reduction in loneliness and environmental footprint is a possible due to the qualities of co-housing.

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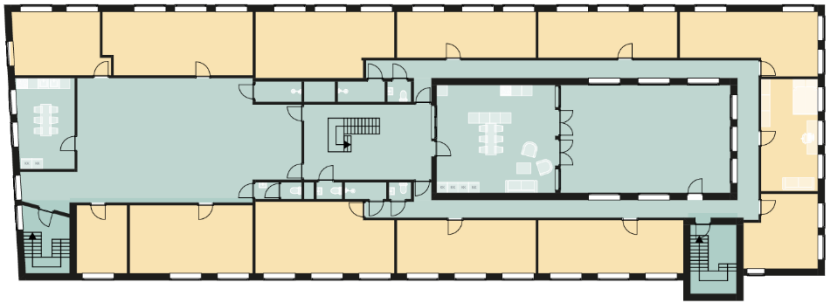
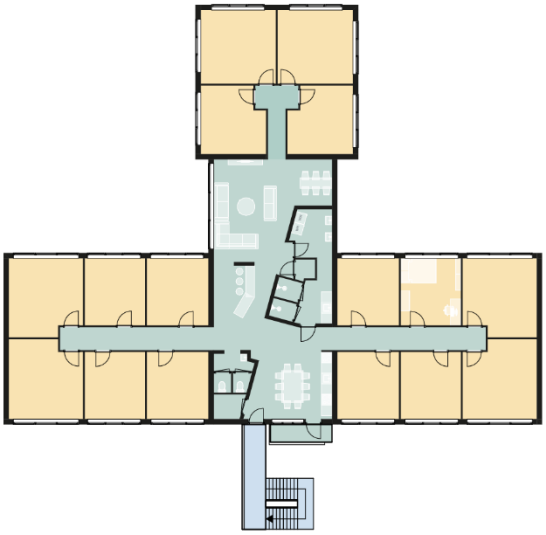
Appendix

1 Case studies

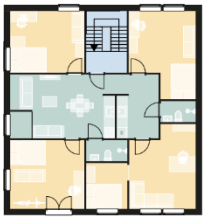
Bagijnhof



Jacoba van Beierenlaan



Spieringstraat



Stieltjesweg

Warmoezierstraat

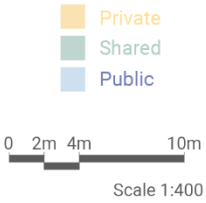
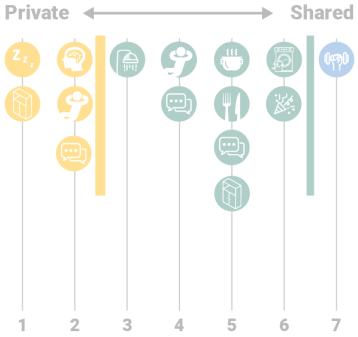


Figure 12: Floorplans with private, shared and public space indicated.

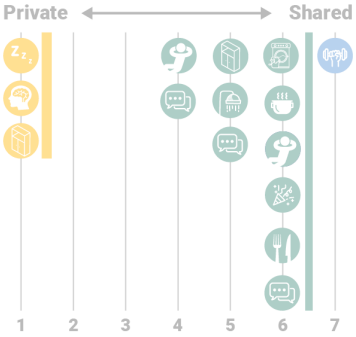
Bagijnhof

Residents:	42
Avg. roomsize:	35 m2
Collective space per room:	11 m2
Space per individual:	44 m2
Ratio room to collective:	0,31



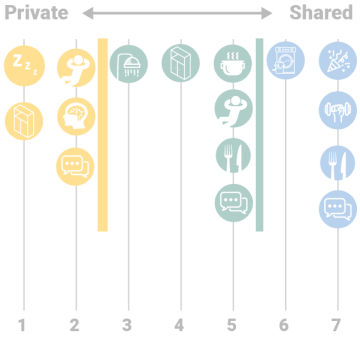
Jacoba van Beierenlaan

Residents:	16
Avg. roomsize:	12 m2
Collective space per room:	8 m2
Space per individual:	20m2
Ratio room to collective:	0,67



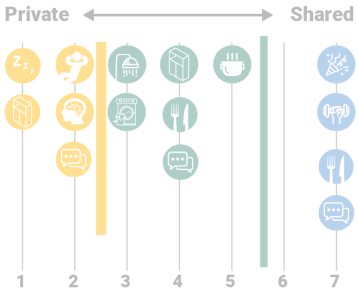
Spieringstraat

Residents:	4
Avg. roomsize:	16 m2
Collective space per room:	9 m2
Space per individiual:	25
Ratio room to collective:	0,56



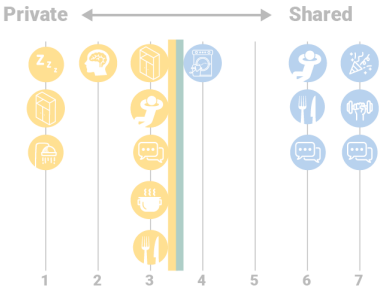
Warmoezierstraat

Residents:	4
Avg. roomsize:	16 m2
Collective space per room:	6 m2
Space per individual:	22 m2
Ratio room to collective:	0,37



Stieltjesweg

Residents:	1
Avg. roomsize:	26 m2
Collective space per room:	0 m2
Space per individual:	26m2
Ratio room to collective:	0



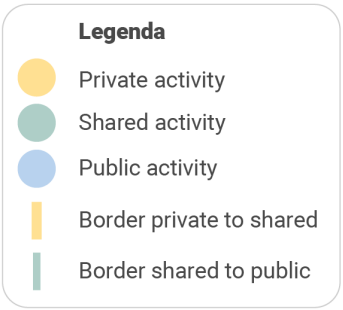


Figure 13: The activity arrangement from the most private to the most shared space of the five selected case study

2 Experiences

While taking the interviews the experience of doing so also brought up information about the housing situation of the respondents. This chapter describes the experiences that have not been captured in the game.

Jacobo van Beierenlaan

The large houses had an inviting atmosphere. When entering the shared space of the Jacoba van Beierenlaan (JvB) the inhabitants do not seem to be bothered by an unfamiliar person in their house. The inhabitants explained that through the large number of housemates, sixteen, they are not often bothered by strangers in their house since this happens on a regular base. The hospitality of the larger houses was also evident. Housemates encouraged each other to partake in the interview. A downside of this hospitality could be that the shared space of the house is always in use by unfamiliar visitors. Causing the actual residents from restraining to inhabit the shared space if they do not feel like meeting new people. The residents seemed very happy with their living situation but were hesitant to live in an even bigger house. Mainly because they did feel their reached the upper limit of what they could share.

Stieltjesweg

By contrast the Stieltjesweg, a single appartement complex, posed a less welcoming atmosphere. Two hallways and an elevator were needed to arrive at the front door. The front door directly lets you in the private space of the inhabitant. Creating a feeling that the privacy of the inhabitant was infringed. In addition, the studios of the Stieltjesweg where not often suited for hosting. Causing the inhabitant to let the interviewer on their couch next laundry or other personal items. The inhabitants

Bagijnhof

The Bagijnhof was a true co-housing complex with forty-two residents with a mixture in age, education, life phase and profession. The house consisted of ample shared space but interestingly did not have a lot of spaces that could host all forty-two housemates. There where multiple living rooms where around seven housemates were assigned to, but people were not shy or hesitant to crossover and come in for a cup of tea. The people felt truly at home and made a very calm and peaceful impression.

Smaller houses

Two households were visited with both four housemates, namely the warmoezier and spieringstraat. The most apparent difference in comparison to the other house was the way inhabitants communicated with each other. During the interview respondents had more elaborate conversations about there preferences and were willing to share more personal experiences and thoughts. To a certain extent they were also more willing to adjust their current living situation or at least discussed the options more elaborate.

3 Boardgame examples

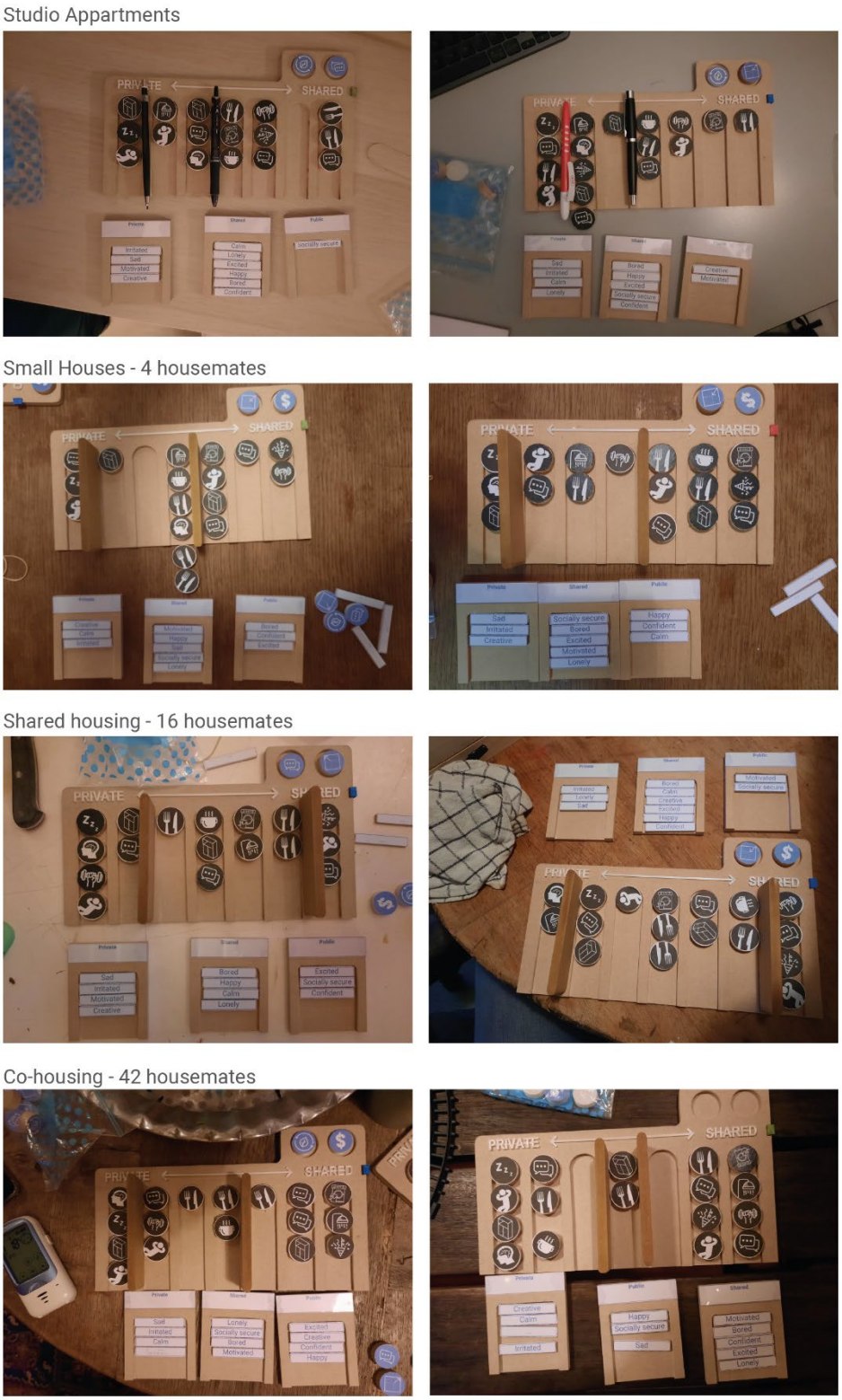


Figure 14: Final layout of boardgames related to their number of housemates