Explain your choice of research method. How was this research method used?

During the initial phase of my research, presumptions of architectural "solutions" to loneliness were consciously suspended in favour of an authentic focus on first understanding the phenomenon of loneliness itself. In doing so, my ambition was to use my Master of Science thesis as an opportunity to freely explore how a deeper comprehension of psychology could be applied to architectural research. This approach stems from my personal conviction that applying a deeper understanding of people (drawn from psychology, anthropology and other fields of study) is the most valuable way of safeguarding the relevance of our profession.

Knowledge was acquired using a deliberately hierarchical sequence of epistemes (or "knowledge frameworks"). My initial research consulted psychological and sociological fields of inquiry, before moving on to into the fields of politics and culture. These (conventionally) non-spatial dimensions of research were then used to critically re-appraise common spatial responses to loneliness, and to find (or indeed theorise) more suitable responses to the task of alleviating it. The resulting cross-disciplinary body of knowledge also informed subsequent forays into typology, before being funnelled through situational research (the chosen site and the city of Eindhoven) to support the design proposal. Indeed, this process of implementing my research (for instance, as part of an urban programme), followed by reacting to local conditions is relevant at all scales of the project.

To what extent was this method successful? Did your approach work?

Before conducting my research into the topic of loneliness, my presumed solution to it was to construct a program that focused on bringing people together: to connect as many people as possible. However, many of my research findings actually supported a surprisingly different form of response. For example, the knowledge that *being alone* isn't the primary cause of *feeling alone* (supported by Jon Cacioppo's psychological research and hard data from EU health surveys) was a genuine surprise. The emancipatory capacity of living alone (e.g. esp. in terms of gender equality) was also an unforeseen conclusion, as were the benefits of encouraging greater levels of responsibility; challenging the idea that loneliness could be "cured" simply by "giving" something to lonely people (in fact, it would be better to provide them with a platform to "give back"). Indeed for the most part, my preconceptions of how to tackle urban loneliness were significantly challenged by my research findings, which I feel highlights the advantages of my research approach. Following on from this, I felt able to devise a program and design that are much better-suited to the problem statement.

However, although the adopted research approach took on a broad range of information and influences (necessary for dealing with such a broad topic), one disadvantage of this was the subsequent heavy dispersal of design ideas. Within the context of a graduation project in architecture, this impeded the obligatory progression towards a choice of site and a more "fixed" design idea. However, now that I have had more time to sharpen the architectural aspects of my project, I am confident that the adopted research approach can indeed produce a quality outcome.

Explain the key aspects of the feedback you received from your tutors. How did this feedback inform your work? How did this process of working allow you to learn? What did you learn from this process?

From the beginning and throughout the project, the most valuable aspect of tutorial feedback was using the meetings as an opportunity to condense the wide spread of information I had gathered into a small, memorable set of "big ideas" (or indeed "core values") to be reflected in the design. The first instance of this was the converging of general thoughts on migration (globally) onto the more specific, personal topic of loneliness. Other "big ideas" formulated together with my tutors include underpinning the importance of trust and responsibility as tools for alleviating loneliness, formulating a critique of "smart city" forms of surveillance, and using building technology not just to solve problems but to create space. The key theme of enabling opportunities for "opt-in" social interactions (thereby challenging the oft-accepted default of "forced togetherness") also formed a notable milestone in the development of my project. Outside of the relatively

relaxed environment of a tutorial, group sessions and formal graduation presentations provided a valuable opportunity to test if the main narrative of my project was being communicated clearly.

This continual sharpening of the core values drawn from my research also informed the choice of site. Eindhoven is a tech-booming city with a conscious drive to increase international migration, but one that also embraces urban policies (glamourous city-branding schemes and "smart city" forms of surveillance) that, when viewed through the lens of my loneliness research, warrant a critical response. During the early design phase, difficult lessons were learned in understanding how such "big ideas" from research fields could be translated in spatial/architectural terms. Carrying this thread forward, materials and details are not integrated into the project as an afterthought, but instead as a tool to embolden the values I am seeking to project. Typical processes such as drawing sections and making models are therefore recognised as *tools* for shaping the design - not just outcomes of the design process.

What is the relationship between your research and your design?

At the urban scale, the program responds to the brief of alleviating loneliness with a series of non-residential components which are directly informed by my research, described by three categories: platforms for volunteering and connecting skilled people, tools for assembling spaces of restoration, and opportunities for improving cultural understanding. This urban plan for this program also supports the underlining principle of developing a "mosaic" of spaces with varied levels of exposure and control (a theme drawn from Edward Hopper's famous painting *Nighthawks*). As before, this "mosaic" principle is applicable at all scales of the project.

At the scale of the block, the devised management system is also shaped by my research findings. For example, the proposed ratio of 40:60 permanent-to-temporary residents is drawn from David Halpern's empirically-supported advice for embedding a permanent "critical mass" (necessary for social cohesion) into the project, along with similarly supportive data from the extensive "One Shared House" co-living survey and by the Centre for Research on Socio-Cultural Change's economic manifesto for "The Foundational Economy". Such findings support the project's underlying goal of social durability, which compels the design to cover possibilities beyond a "fixed" end result. The shared benefit of a large, diverse garden at the centre of the block (application of research at the scale of the block) thereafter forms an important local condition for the design of each dwelling to react against.

At the scale of the dwelling, I have sought to heighten the fixed characteristics (atmospheric qualities geared towards "connection" or "withdrawal") present in each space. To do this, the otherwise smooth gradient-change from "connect" (garden-facing) to "withdraw" (outward-facing) is intentionally disrupted with an almost-ornamental piece of architectural "hardware" (or "structural furniture") placed in the centre of each dwelling. This central element provides residents with a clear "jumping-off-point" for developing their spaces of expressed-personality and restoration.

What are the relationships between your graduation project, your studio topic, the track of architecture and the Masters of Science degree?

One of the larger aims of this project is to construct an environment in which there is a "social baseline" reciprocal bond with society: where new-comers feel welcome and longtermers feel part of something bigger than themselves. Recognising loneliness as intrinsic to the process of migration, I believe my thesis makes an essential contribution to the studio theme of "A City of Comings and Goings". My project seeks to build strong, politically-significant reactions against convenience-oriented "co-living" developments (e.g. "The Collective" in London) and against urban policies recently adopted in Eindhoven. Along with clarifying general misunderstandings in tackling loneliness, the program also seeks to highlight the potential for government involvement in working to preventing its affects. Within the track of architecture, my project seeks to process the "big ideas" unearthed by my research into tangible, spatial outcomes which reflect my central manifesto's focus on applying a deeper knowledge of people to the built environment. The Master of Science graduation year therefore provided the perfect opportunity to adopt a necessarily exploratory, research-oriented approach to dealing with the complicated and nuanced topic of loneliness.

Elaborate upon the scientific relevance of your research method. Elaborate upon how your project relates to society, the profession of architecture and the scientific community. How transferable/applicable are your results to other fields?

The pursuit of a well-informed response to loneliness presents the opportunity to reemphasize core components of both our collective well-being and our evolutionary biology. As mentioned above, I believe the scientific relevance of my research method is grounded in its application of lessons learned from the fields of psychology and anthropology. This is indicative of an approach that I feel could be more widely-adapted to the benefit of the profession. Indeed, the project was born from an essential criticism of convenienceoriented modes of "co-living" as being completely out-of-touch with more effective thought-processes for alleviating loneliness. This project also grapples with the unfortunate incompatibility of "village in the city" modes of architecture development, seeking instead to embed the themes of responsibility, trust, control, exposure and opt-in social scenarios as part of a high-density development better-suited to the wider challenge of densifying the post-industrial city.

Are there any ethical dilemmas to be discussed during the research phase, during the design phase, or in the practical application of your results?

The most significant ethical dilemma I have encountered this year was working to ensure that the project was not reduced to an exercise of telling others how I personally think they should (or assume they would) like to live. To avoid this, I tried to maintain an empathetic and curious approach to research throughout the year. I believe it is also important to recognise the ethical dilemma present in problematizing loneliness as something to be "solved" within the context of an architecture graduation project, as this carries the risk of overstating the capacity of the discipline in "solving" what are often very serious health problems. Especially when transferring my research findings to other fields, this carries the risk of overlooking more conventionally-non-spatial remedies that might prove much more effective, such as: an improved understanding of (and control over) psychological devices, reducing the stigmatisation of loneliness, changing cultural narratives pertaining to the value placed on individualism, or improving government policies towards the provision of affordable housing.