

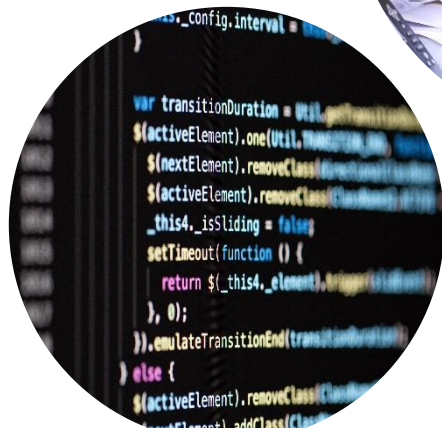
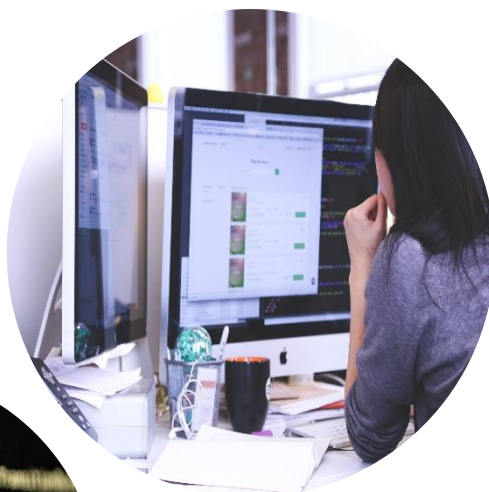


AALBORG UNIVERSITET
STUDENTERRAPPORT

KNOWLEDGE WORK POST COVID-19

A FUTURE PERSPECTIVE OF PARADIGM CHANGES IN POST-COVID SOCIETY

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ABSTRACT

This project explores the future of urban planning and knowledge worker work paradigms in the wake of Covid-19. This project utilizes future scenarios and personas in order to analyse potential outcomes of post pandemic society. Focusing on increased autonomy and flexibility among knowledge workers and the effects on urban space as a consequence, potentially leading up to the establishment and acceptance of the 15-minute city concept. The result of the analysis is used to create guidelines that can navigate potential dark futures, and risks of gentrification in establishing the post-pandemic society.

PREFACE

This project was written as to fulfil the final thesis requirements of the master program *Mobilities & Urban studies* MSc program at Aalborg University, Denmark. The purpose of the thesis is to utilize the knowledge sought and gained through the last two years. Seeing the world through the lens of the “Mobilities Turn” and use this knowledge to guide decisions moving forward.

It is my hope that this thesis reflects some of the theories, knowledge and experiences gained through the last two years following the program under the guidance of Professor Ole B. Jensen and Claus Lassen who have made the Mobilities & Urban Studies program what it is today.

During the process of this thesis, it was established to explore the possible futures post-covid19 from the perspective of paradigm shifts in work culture, and the benefits and risks to society associated with a change in work culture.

It have been an eye opening, and challenging experience to be part of this program, and I hope to utilize the knowledge, skills and experiences earned through the program and apply the knowledge of mobilities to projects and policies in the near future.

ACKNOWLEDGMENTS

I would like to extend my heartfelt gratitude and thanks to my supervisor Andrea Victoria Hernandez Bueno for her invaluable guidance, insight, and trust in my capabilities in the planning and development of this thesis. I wish her all the best in her future career. My gratitude also goes to Professor Ole B. Jensen and Professor Claus Lassen for their valuable input during the development of this thesis.

Furthermore, I would like to extend my respect and gratitude to the semester coordinator Michael Martin, for an outstanding job with excellent and efficient information and communication during the covid-19 lockdowns of 2020, that made the process as intuitive and approachable as it could be during the circumstances.

A special thanks goes out to the experts interviewed for this thesis, for their valuable time, experiences, invaluable insight and observations.

Lastly, I would like to thank my friends, family and peers for the support, exchange of ideas, feedback, and time through the last two years.

READING INSTRUCTIONS

This thesis uses the Harvard referencing standard (Surname, Year, Page).

Quotes and statements from interviews are referenced to the Appendix, which contain the full transcripts of the interviews. Due to the importance of context in statements, it is advised to read the full interviews, summarized statements can be found in section 4.2.

All interviews have been anonymized according to the GDPR standards set by Aalborg University, so every expert is referred to as their position and speciality. All figures are numbered with a standard number array of 1 through 10, see list of tables.

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1.0 INTRODUCTION

The Globalized World of 2020 and beyond is the perfect vector for the “super-globalist” viruses (Schultz and Latour, 2020) to spread to all nations of the world in record time. This occurred in 2019 with the novel Corona virus and the impact on the world was immense, swift, and possibly with everlasting effects.

As a result, the world shut down overnight, restrictions of mobility and movement was put in place and people had to adapt to this new normal. The world responded by widespread adoption of digitalization to continue operation, it is estimated that the world jumped forward as much as 7 years in context of digital adaption, doubling interaction via digital tools and surprising leaders in how fast adaptations were made (McKinsey, 2021)

Predictions have been made as to what we can expect what we can change in the wake of covid-19, where factors such as massively increased digital adoption and definition of workplace will change as response to Covid-19 (Parakala, 2021).

Knowledgebases companies have a golden opportunity to redefine values they want to keep and what to throw away, and an opportunity rethink how society would look like post-covid19, as the world have proven to itself that change is possible and adaptations are quicker to happen than what we would have considered possible pre covid-19, we are able to change our future and take control of our future (Schultz and Latour, 2020)

This thesis will focus on the potential paradigm shift happening among knowledge workers as a consequence of the restructure corporations had to face to continue operating during the lockdowns of covid-19. This paradigm change will be explored in future scenarios to possible societal effects, options for mobility and establish what policies much be enforced to avoid potential dark futures.

As a consequence of the increased digitization, and as a result the way we will be working it might be relevant to look into what demands knowledge workers will have post-covid19. This will be done by introducing the 15-minute city as a core vector in the possible futures.

The thesis will be utilizing a theoretical framework of mobilities, urban planning and utilizing future scenarios combined with personas to explore the world of post-covid19 and used to see potential futures as a way to establish guidelines to reach or avoid these futures.

To quote my supervisor Andrea Victoria Hernandez Bueno:

“We cannot find the path to utopia, if cannot imagine how it would look like” (Bueno. A, 2021)

1.1 RESEARCH QUESTION

The starting point for this project was to explore a future where most work could be completed via digital means, enabling the concept of the Digital Nomadic work paradigms as the norm for knowledge worker as a result of covid-19 to explore the effects on urban space and mobility, and how these effects affects the future of knowledge workers and by extension society, as to gauge the viability of a future with digital tools replacing aspects such as commuting to be able to work. This process ended up with the following question:

How could future society potentially change as it adjusts to work paradigm changes observed among knowledge workers during the 2020 and 2021 lockdown due to covid-19?

2.0 THEORY AND CONCEPTS

With emerging and changing societal paradigms there is a potential for massive impact of change in the society and cities we know of and live in today. While these paradigms can be slowly changing over decades and subtle, sometimes events or new emerging technology will take effect and in a very short and obvious timeframe, can and will change the paradigms that the urban cities follow and know.

The effect of the change in these paradigms can only be speculated upon, although qualified speculation rooted in theory and observations, as the habits, needs and desires of the populace develops as they adjust to the new and emerging paradigms with changes in their personal mobility to follow.

This section aims to outline the theory used to establish the analysis framework of this thesis, with the known and unknown paradigms of knowledge work outlined as the Factory Paradigm and its opposite the Digital Nomadic Paradigm, as to create a foundational understanding of what Covid-19 could impact in the future scenarios.

This section will also include investigation of the emerging paradigm of “Knowmad” behaviour or alternatively called the “Worker Autonomy Paradigm”. Furthermore, this section outlines the theory used to understand a potential “end state” of post covid-19 urban development named “The 15-minute City”.

The paradigms will in the analysis also include the theory of Meetingness popularized by John Urry, as human interaction with one another strongly affects how the change in paradigms might play out in the future scenarios.

2.1 THE FACTORY PARADIGM

Since the industrial revolution society has approached work from the perspective of factory management creating an archetypical environment with specific expectations modelled after the Taylorist principle established by Frederick W. Taylor in 1909. Taylorism is also called the principles of scientific management and is still very visible and relevant in the modern corporate structure. (Wang et al., 2020)
The four principles of Taylorism are as follows:

“First. They develop a science for each element of a man's work, which replaces the old rule-of-thumb method.

Second. They scientifically select and then train, teach, and develop the workman, whereas in the past he chose his own work and trained himself as best he could.

Third. They heartily cooperate with the men so as to ensure all of the work being done is in accordance with the principles of the science which has been developed.

Fourth. There is an almost equal division of the work and the responsibility between the management and the workmen. The management take over all work for which they are better fitted than the workmen, while in the past almost all of the work and the greater part of the responsibility were thrown upon the men.” (Taylor, 1923)

These four principles have heavily contributed to shaping the work paradigms of modern society, albeit with modifications, and framed the societal understanding of “work” and with it shaped the way mobility surrounding work functions in a modern setting.

This approach to work has been named the Factory paradigm (Wang et al., 2020) and is defined by the norms and arrangements that modern day workers are managed under in the 20th and 21st century. These norms and arrangements include but are not limited to the “9-5 work day” (8-16 in Scandinavia), the typical corporate hierarchical management structure, measurements of performance etc. all created to maximize profit and company growth (Wang et al., 2020)

The Factory paradigm is also heavily present in how knowledge work is approached in society as it is the default and expected approach to handle and manage workers, this can be problematic as the differences between the factory sector and the knowledge work sector are substantially different. (Wang et al., 2020)

The Factory Paradigm have although been heavily criticized in recent years as the widespread use and acceptance of digital technologies makes the Factory Paradigm obsolete and outdated in regards to knowledge workers (Moravec et al., 2013; Golden and Gajendran, 2019). The argument made is that all current forms of work in the knowledge sector already include digital work, and that especially knowledge work can be entirely digitalized and done remotely with limited or any impact into the current corporate structures of knowledge workers (Wanda J. Orlikowski and Susan V. Scott, 2016)

Recent studies of telework also suggest that telework have a positive impact on worker performance among individuals who telecommute at a greater rate than their peers, as these workers have increased personal agency compared to the office environment, which provides opportunity for the workers to alter their workday schedule to fit their productivity rhythms. (Golden and Gajendran, 2019)

This research combined with impact of covid-19 have made public society obviously aware that the daily commute to the office is entirely unnecessary with the current and developing digital technologies. (Wang et al., 2020)

The rapid change as society was locked down, gave many workers a first-hand experience on purely digital telework and with it the Digital Nomadic Paradigm became dominant during the lockdown.

2.2 THE DIGITAL NOMADIC PARADIGM

In the opposite end of the work spectrum is the Digital Nomad. A digital nomad can on the surface level be described as a location-independent, but digitally connected-dependent worker who utilises the globalized world and travels while they perform work on corporate projects, gig work or independent personal projects (Nash et al., 2018)

In contrast to Nomadic workers, who travel for work (Trade skills, construction etc.), digital nomads are able to work while traveling, and lack a home base as their lives are revolving around being on the move, and changing locations as they desire or as they benefit from their immediate situation (Nash et al., 2018)

With Covid-19 Digital Nomads got “grounded” and local as the travel restrictions got implanted to combat the pandemic and travel patterns likewise changed for the digital nomad, to travel around the nation instead of the world a change that will reflect and expand into the traditional work regimes (Nicholas Bloom, 2020).

Covid-19 have rapidly and forcefully made the working population aware of the option of teleworking and the trends towards a more flexible and personally mobile work flow have been accelerated and amplified to such a degree that companies in the future will more heavily consider teleworking as a viable option, as workers demand greater personal agency in their working lives. (Nicholas Bloom, 2020)

Both of these paradigms are both extremes and are not immediately applicable to the majority of knowledge workers, who are follow a general work/time routine and are more rooted in their location but with the introduction of Covid-19 and the restrictions became more flexible in the way they work and interact with the office environment. A term for this have been coined in recent years and named Knowmads(Moravec et al., 2013).

2.3 KNOWMADS / THE WORKER AUTONOMY PARADIGM.

“Knowmads are extensions of Peter Drucker’s (1992) knowledge workers concept, embracing the convergence of accelerating technological change and globalization. In particular, the use of advanced information and communications technologies enable Knowmads to work beyond pre-19th century notions of nation states, corporate identity, and community identity”(Moravec et al., 2013).

Moravec defines this category of knowledge workers as workers capable of fully utilizing the technological development to circumvent and break the “traditional” structures of workspaces, by breaking free of the restrictions of the factory paradigm, but not fully commit to the extreme lifestyle of the Digital Nomadic paradigm. They possesses greater autonomy and greater freedom to pick and choose projects that are in line with their interests and can jump from gig to gig or project to project as they please (Moravec et al., 2013).

The lockdown created by Covid-19 have accidently demonstrated to companies that workers who enjoy greater autonomy, and flexible work situations have positively affected performance metrics. (Wang et al., 2020). Personally the workers who follow the flexible structure have also enjoyed less stress, as their social and physical needs get met more efficiently when the worker have greater autonomy in when and how they work (Wang et al., 2020).

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2.4 COVID-19 CITY DISRUPTION AND THE 15-MINUTE CITY CONCEPT.

The disruptive nature of the Covid-19 restrictions and lockdowns have created opportunity to rethink the current concept of cities, and possibly created an opportunity to work towards more desirable cities, as society and people have become increasingly aware about the vulnerability society faces moving forward in the globalized world (Jensen and Schultz, 2020).

One escalating trends during the covid-19 lockdown is the concept of Localism as a continuing trend post covid-19 as the demand for localised goods and services arose compared to the globalized pre-covid world (Cresswell, 2020).

With the localism trend came a greater recognition of local travel and mobility in the form of increased walking and cycling awareness and mobility options to support this (Carlos Moreno et al., 2021), although this development are also somewhat rooted in the generated fear of public socialising due to the virus and to a greater extent the concerns of the environment (Cresswell, 2020).

This fear translates into a shaming culture of non-localised forms of travel such as car trips and flights, both as a factor of the spread of covid-19 but on top of that adding to the ongoing fear for the climate change (Cresswell, 2020). The consequences of this reinforced fear based shaming, may possibly harm the way global mobility have developed and thus impact the overall mobility moving forward (Cresswell, 2020).

The possible trend of increased localism has already made an impact in the minds of urban designers and city planners as the idea of the 15-minute city post covid-19 have gained more and more traction and attention.

2.5 THE 15-MINUTE CITY IN THE WAKE OF COVID-19.

The concept of the 15-minute city is a very recent term for city design that prioritize and values the needs of the residents, making the life easier and bring a higher quality of life by abolishing the car centric designs many cities have adopted in the last 50 years (Carlos Moreno et al., 2021).

This idea is established from the concept of “chrono-urbanism”, which states that urban life quality is enriched by citizens investing less time in transportation (Carlos Moreno et al., 2021).

As Moreno states:

“The 15-Minute City rides on the concept of “chrono-urbanism”, which outlines that the quality of urban life is inversely proportional to the amount of time invested in transportation, more so through the use of automobiles.” (Carlos Moreno et al., 2021)

Moreno have outlined six pillars of urban social functions that needs to be present, to meet the criteria of 15-minute city and to live a comfortable and decent life in a city environment.

These pillars are living, working, commerce, healthcare, education and entertainment (Carlos Moreno et al., 2021).

The pillars are self-explanatory, as they cover basic needs that needs to be available within 15 minutes of walking and/or biking to the citizen to improve their quality of life in a city environment. Cities need to comply with a change in ideology and focus on factors that include proximity, diversity, density and ubiquity to achieve these pillars and make the city space inclusive for the citizen (Carlos Moreno et al., 2021).

2.5.1 THE DIMENSIONS OF THE 15-MINUTE CITY.

Additionally, the concept has been further developed and refined by compiling the pillars of the earlier model into four dimensions. Establishing these as the concept model (figure 1.) based on the observations made during the covid-19 counter-measurements done worldwide and the challenges citizens faced in the world where mobility were limited.

These four additional dimensions added to and making up the framework of the updated 15 minute city model are named Density, Proximity, Diversity and Digitalization (Carlos Moreno et al., 2021).



Figure 1. The 15-minute city framework. (Moreno et al., 2021)

The concept of these four dimensions and how they include the six pillars outlined requires some further insight.

2.5.2 DENSITY:

As of the updated 15-minute city model density is the concept of defining people per kilometre square, as to plan for a city that is sustainable for the city in terms of resource consumption and urban service delivery (e.g., goods and services). The number of people should be comfortably sustained by the availability of the above (Carlos Moreno et al., 2021).

This contrasts with previous planning models where there was emphasis in creating high-rise dwellings, offices etc. and with it overconsumption and over-reliance on traditional energy sources to power districts and buildings (Carlos Moreno et al., 2021).

2.5.3 PROXIMITY:

This is one of the critical dimensions as it is the dimension coupling spatial and temporal dimensions residents use to navigate the transition between the pillars first proposed in the section so living, working, commerce, healthcare, education and entertainment, but noticeably in a reduced timespan (Carlos Moreno et al., 2021).

This exploration of “chronotopy” or time-based urbanism, as opposed to distance based urbanism, enables the planning model to utilize a greater multimodal approach to reach basic necessities and infrastructure, thus providing greater service and “liveability” for the urban dwellers (Carlos Moreno et al., 2021).

2.5.4 DIVERSITY:

This dimension argues for a twofold approach to the 15-minute concept. With two arguments.

First. To provide a healthy mix of residential, commercial and entertainment options it is important to make use of mixed socio-economic neighbourhoods (Carlos Moreno et al., 2021).

Second. A need for diversity in culture and people as opposed to monocultures and secular communities (Carlos Moreno et al., 2021).

This is to ensure there is an optimal **Density** and **Proximity** to essentials as outlined in the six pillars, while also providing the necessary means for the walkable and bicycle friendly street and lanes. The approach ensures residents can gain access to necessities without the need to travel extensively to obtain these.

Furthermore, this dimension also helps ensuring the public spaces are preserved and upheld as well as opportunities for increasing these public spaces (Carlos Moreno et al., 2021).

2.5.5 DIGITALIZATION:

This dimension aligns closely with the Smart City Concept, or the adaptations of ICT's to optimize city functions to benefit the inhabitants experience on the move, which the 15-Minute city arguably have drawn inspiration from (Carlos Moreno et al., 2021).

The dimensions are very relevant and important to the updated 15-minute City concept as it is the ensuring factor in actualizing the three other dimensions. By enabling opportunity to reduce travel needs of inhabitants, and contribute to travel with more sustainable modal options as to ensure safety and efficiency (Carlos Moreno et al., 2021).

The Covid-19 pandemic have greatly made this dimension more relevant, as it have assisted in proving the concept of the 15-minute city more desirable than previously with the demonstration of successful telecommuting in cities reducing the need for travel massively (Carlos Moreno et al., 2021).

The four dimensions and the 15-minute city concept ultimately seeks as an objective to maximize time for urban dwellers to accomplish social functions associated with the six pillars, by reducing time wasted on roads, in traffic and benefit society as a whole by not incurring the high costs of commuting and degrade the quality of life of city dwellers (Carlos Moreno et al., 2021).

2.6 MEETINGNESS

The understanding of value in human face-to-face interaction and how the interaction with social networks informs choice of mobility and values within increasingly digital world.

With the restrictions of Covid-19, it is increasingly important to be aware of the complex social network activations human participate in everyday, be it at work, informally in passing or as a consequence of obligation to family, extended network etc. (Elliott and Urry, 2010).

“Meetingness is a crucial human property and value, the stuff of social life” (Elliott and Urry, 2010)

Co-presence and shared physical space is the social glue that helps people establish meaningful and relevant relations, that with the usage of accommodating mobilities help people experience connectivity, meaning and association with the context of life they find themselves in (Elliott and Urry, 2010).

Humanity activate and deactivate complex social networks, and utilize network capital to feel included and accepted in the daily activities of life (Elliott and Urry, 2010).

The need for face-to-face communication co-presence, engagement and interaction inform our decisions to utilize mobility to accommodate this need, a need to travel and sometimes far to meet the need for “meetingness”. Facing the world of increased digitalization there is yet no substitute for physical interaction. Which for individuals who have low network capital might experience “missingness” or in other words isolation and exclusion. (Elliott and Urry, 2010).

The virtual simulation of “meetingness” still lacks a lot to be desired, technology might find ways to accommodate “meetingness” in a virtual and digital context. It will be a long way before it can realized as an efficient and good substitute (Elliott and Urry, 2010).

2.7 MOBILITY; SOCIAL, PERSONAL AND WORKER AUTONOMY

Mobilities is more than “From A to B”, it is the embodiment of experiences made of people traversing space and place, it is the experience of the moving through space that makes the space come alive (Jensen, 2013).

Throughout this thesis, terms of mobilities are used to describe effects of the futures established. These terms are Social Mobility, Personal Mobility and Worker Autonomy which is distinctive because it encompasses both Social and Personal mobility but is an independent actor as well.

When establishing mobilities, it is important to note that all terms mentioned above all share and reference back to mobilities, as they are all distinctive parts of the umbrella mobilities. It is thought necessary to establish differences in the context of this paper, and this section will establish the definitions, as understood by the researcher going forward.

2.7.1 PERSONAL MOBILITY

This term encompasses the ability of a person to displace space, referencing the ability to move of one's own accord (Kellerman, 2012). This also includes the mobility options available to a person who wishes to traverse space, and the way they utilize these options available to them (Kellerman, 2012). Likewise, it is the term associated with the concept of virtual mobility as the internet has become an increasingly large factor, making humans an abstract entity capable of traversing digital space. (Kellerman, 2012)

“People's corporeal mobility is like liquids, in people's ability to change travel modes, and in their ability to be partially self-motored, though mobility usually requires some preparations. Moving objects is the moving of solids and is thus slower, always requiring handling for the very mobility of objects. All three movables are human in some way, since objects and information are sent by people and for people, sometimes replacing human corporeal mobility. The mobilities of people and information have become integrated, as communications permit the coordination and management of physical mobility. Furthermore, it has become possible for individuals to move corporeally while communicating virtually.” (Kellerman, 2012)

Personal mobility the ways and modes we choose to traverse spaces, and the options of traversal available to us.

2.7.2 SOCIAL MOBILITY

Social Mobility concerns itself with the social and hierarchical class positions of families, and how they traverse the ladder up or down the social ladder. This is a well-established area of sociology (Breen, 2004).

Social mobility is the examination of the current circumstance of people and where they originated. Looking at the changes that made them climb or fall down the ladder via the approaches of *intergenerational* or *intragenerational* mobility (Breen, 2004). Which are the circumstances surrounding the individual, such as family status, earnings, access to mobility etc. and circumstances of an individual's own life, like how jobs affect resources, status and personal mobility (Breen, 2004).

2.7.3 WORKER AUTONOMY

Worker autonomy is a fundamental part of the Knowmad paradigm, and encompasses both Personal Mobility and Social Mobility, but also enables increased and decreased Personal and Social Mobility as worker autonomy in this context extensive use of digital tools to break free of traditional restrictions in relation to work imposed by society (Moravec et al., 2013). Given that increased autonomy over work schedules and transport as a result of digital adaptations, worker autonomy is used to describe the associated freedom that extends to how personal mobilities is approached, and opportunities to challenge the individual social mobilities.

3.0 METHODOLOGY

3.1 PHILOSOPHY OF SCIENCE

This thesis is constructed around personas and the building of scenarios gathered from primarily expert accounts and secondary quantitative data. As a result, it is required to have a scientific approach that allows for flexibility in methods and theory as to operationalize it. As a result of this, the chosen lens to explore this is Pragmatism.

The principle of pragmatism consists of five core elements, first knowledge is not fixed and is subject to change, second knowledge is to be critiqued. Third, Knowledge is socially constructed and a result of the communities of which it is explored. Fourth, to accept new truths it is required to have an open mind, be adaptable and able to adopt these new truths. Fifth, one should strive to be aware of how thoughts and ideas can accommodate or oppose one another. Lastly, a single truth cannot be constructed from our collective knowledge, thoughts and ideas. Our reality is constructed through plurality and diversity in our thoughts (Barnes, 2008).

Barnes establishes pragmatism and its usages as tool for “thinking about thinking”(Barnes, 2008, p. 1551). Pragmatism should be understood as:

“(1) as tools, instruments for achieving particular purposes, and ask whether they are the best tools for the purposes at hand; (2) as gaining legitimacy from the larger community in which they are presented, and thus dependent upon their context of use; (3) as always provisional, never certain, and potentially subject to contingent change; (4) as opportunities for experimentation, and not simply for experimentation’s sake, but for the hope of realising a better world; and(5) as untidy, rumpled, never fully cohering, or capturing everything”(Barnes, 2008, p. 1551).

Using pragmatism allows this thesis to gather previous knowledge, literature and theories of the past and project it towards the future, as to explore the potential futures and take “bets” of the outcomes.

As stated by Barnes quoting Menand:

“Instead, argued pragmatists, our beliefs were merely bets about the future ‘guesses about how things w[ould] behave most of the time” (Barnes, 2008).

The abuctive philosophy(Barnes, 2008) of pragmatism is essential to explore the uncertainty of futures by letting the past inform the future.

3.2 RESEARCH DESIGN AND DATA COLLECTION

This section outlines approach to the research done as part of this thesis. Utilizing a multi-methodological approach combining methods of expert interviews, narratives through the medium of personas and scenario building to extrapolate possible futures to inform guidelines that can help accommodate or prevent these futures. The research process is split into several stages. These stages consist of the thesis design, followed by literature research and data gathering followed up by analysis and scenario simulation as to help inform guidelines for a post-covid society.

The theory extracted from the literature review as well as the information gathered from the interviewed experts will be used as primary sources inform the construction of scenarios in a post-covid society. Personas will be constructed from survey data and statistical data to create an as complete profile as possible within the context of the thesis. To achieve this the researcher will be utilizing the concept of “Persona-Narrative method” by Vallet *et al.*, 2020(Figure 2.).

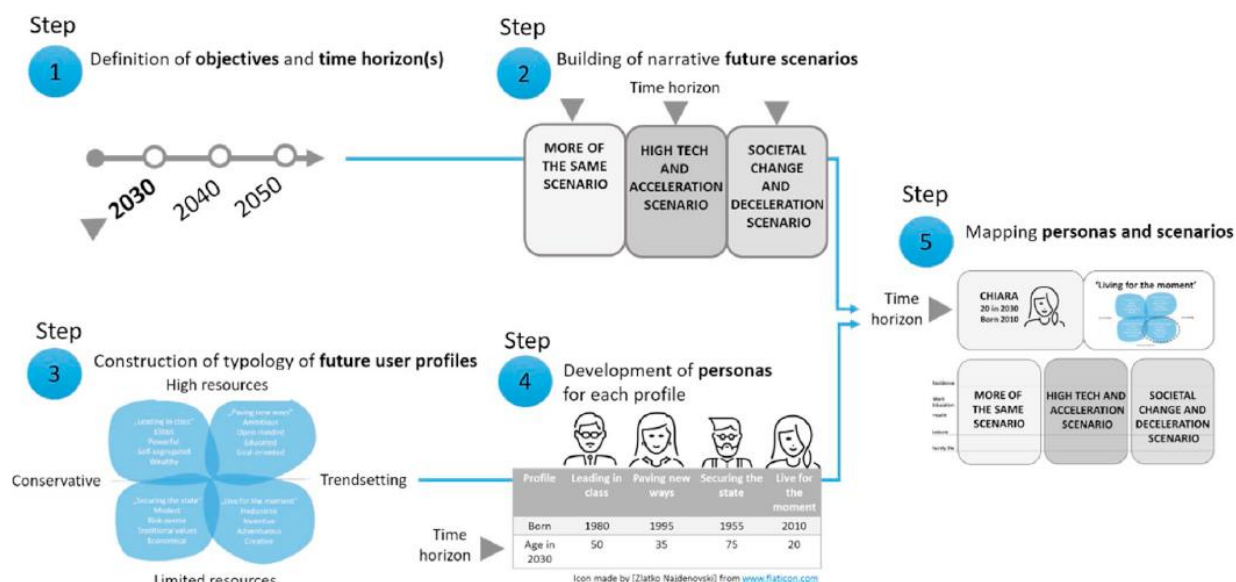


Figure 2. Workflow of the Scenario Personarnative Method (Vallet *et. al.* 2020)

This thesis will employ a timeframe of 20 years since the Covid-19 restrictions and lockdown occurred and the future will therefore be set in **2040**. There will be three personas developed to explore the multiple facets of post-covid trends. One mid-twenties knowledge worker who just entered the work force, one knowledge worker with established career and family and finally a non-knowledge worker to gain more perspective to the broader consequences of the post-covid trends.

These personas will then be assessed and simulated in each of the future scenarios and the results will be measured in a positive/negative summary from the perspective of the individual and from the results recommendations and guidelines will be extracted for policy and decision makers.

3.2.1 LITTERATURE REVIEW

The reviewed literature forms the foundation of this thesis, with a heavy focus on the most recent research to establish solid basis for the multi-methodological approach. The theory and knowledge reviewed and gained from this process will be the basis for selection of experts to interview, as well as pinpointing trends that will inform the design of the scenarios. Furthermore, the literature reviewed will form the starting point for the questions as part of a semi-structured interview with an individual focus on the experts' respective specialisations and observations.

3.2.2 SECONDARY DATA

The secondary data collected from sources such as The Adecco Group and the Danish Statistical Institute will be utilized to design personas based on the trends isolated within the data. As such qualitative data from the expert interviews will be utilized to design the rules for the scenarios along with the theoretical backdrop. The qualitative data will be used to illustrate the personas lives and trends pre- and post-covid19.

3.2.3 EXPERT INTERVIEWS

To establish observed mobility trends of society during covid19 and predicted trends post-covid19 for the purpose of designing future scenarios it was necessary to gain the insight and knowledge of experts within different fields associated with work and commuting mobility and urban design changes and philosophies.

As Covid19 still was in effect when these interviews were conducted, they were done via online video call services and recorded for analysis purposes. The interviews were designed as semi-structured interviews (See Appendix, for interviews) with great respect for the individual knowledge and insight that experts brought from their respective fields. Generally, the interviews were designed as a ladder to first establish the current impact of covid-19, what if any of those impacts are permanent, and how these changes will impact the future. Lastly how that future will impact social mobility. From this the following perspectives were formed.

- A) The immediate impact of Covid-19 on work mobility
- B) The Permanency of changes brought by Covid-19
- C) The future prospect of personal mobility post-covid19
- D) Effects on Social mobility due to paradigm shift

As the interviews follow a semi-structured approach it does not adhere to a strict set of guidelines but will latch on to the individual experts personal and professional insight, that might become relevant to explore as part of the many nuances associated with changes brought by covid-19 and enabling exploration of unseen angles or challenges.

The experts have been anonymized and will be mentioned by their individual fields of expertise. The experts selected for interview were as follows:

- A) A Project manager, Mobilities advisory
- B) A Professor, Social mobility, and inequality
- C) A Professor, Urban design and mobilities

This approach to interviews is multi-faceted as this qualitative method allows for the researcher to explore many angles of a very recent and emerging research topic and utilize the observations and personal opinions of the experts selected but it comes with the downside of statements not being absolute. Although, due to the not yet explored and recent events of covid-19 the open and explorative approach to the topic makes sense as it is yet to be well studied and defined.

To accommodate the downside of semi-structured interviews the statements will go through a interpretative and analytic procedure to extract the information relevant to the theoretical foundation of the thesis. (Corbin and Strauss, 2008). To achieve this the interviews will go through the qualitative content analysis process (Mayring, 2008). Utilising the summary content analysis method to reduce the interviews into manageable summaries where only essential information is retained and highlighted.

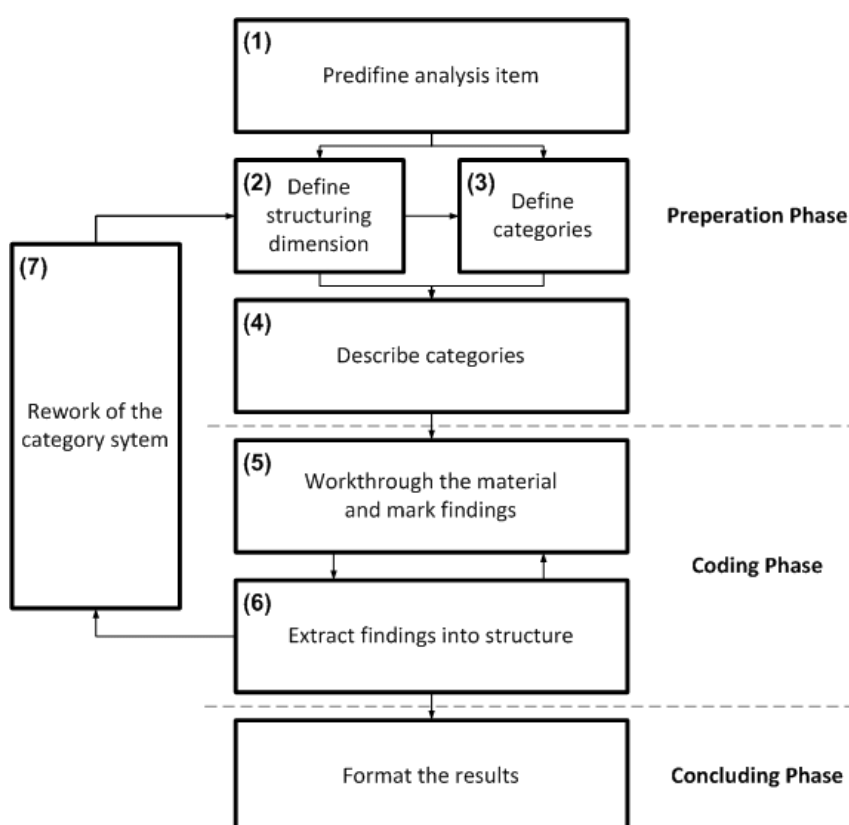


Figure 3. Process flow of a structured content analysis. (Mayring, 2008, p. 84)

There are three phases to this method, the preparation phase, coding phase and concluding phase. The Interviews were first transcribed to be processed, statements were divided into topics relating to the perspectives mentioned above and important statements outside of the perspectives were extracted and added to new topics. The perspectives are then evaluated and converted into an overview format to be usable in the following interpretation. Finally, the statements and information are summarized.

3.3 SCENARIO BUILDING AND PERSONAS

The core analytical methods of this thesis is the use of the Scenario Personarrative Method (Vallet et al., 2020). Build from the interview results, scientific literature and theories surrounding worker mobility, narrative scenarios are constructed. This combines empirical and analytical approaches with a creative and intuitive interpretation. Exploring and evaluating “futures” with this method enables finding possible positive and negative changes based on trends observed during the covid-19 pandemic.

To begin this process, a timeframe must be selected and in this study 20 years into the future so the year 2040 was selected, to enable a timeframe where major changes to urban design could possibly occur. To narrow the process, assumptions about the world must be evaluated. In this thesis it is assumed the world is stable financially and politically, and that trends such as Localism have continued post-covid19 as the baseline for the scenarios.

First a method of scenario chosen for this thesis is the process of complete permutation (Kosow and Gaßner, 2008), isolating two extremes and combining them to form four scenarios each with distinct rules for the future to follow.

Secondly, to run a simulation of these scenarios' personas are utilised to explore the world with individual options and limitations, following the rules of the scenario. A typology of user profiles is generated based on qualitative survey data and user trends during covid19 and expert statements.

Focusing on mobility changes for the individual, the experiences of these personas will be summarized and isolate net positive or negative changes to evaluate the possible effects of the covid-19 trends. To accommodate different needs for Meetingness and behaviours associated with the work activity, three personas will be constructed.

- A) Adult man with family, established career in knowledge work and very mobile.
- B) Adult young man, single, new career and less mobile.
- C) Adult man with family, craftsman, moderately mobile.

The personas have been chosen based on themes and pitfalls in the expert interviews, conversations with peers about their experiences during covid-19 as well as discussion about the importance of Meetingness in different life stages with fellow students. The age difference, and career establishments is significant when talking Meetingness socio-economic opportunity, and as such important to explore in scenarios. It is also very important to avoid one sided observation, so a non-knowledge worker is introduced to get the other perspective in each scenario.

These three personas will each handle the paradigms differently and therefore explore a broader perspective of the effects of paradigm shifts in work culture. Finally, the scenarios and personas as combined to form a narrative about the experiences each individual faces as the paradigms and rules change. This will result in twelve different narratives, four for each persona and from those narratives benefits and concerns will be isolated to form guidelines for decisionmakers.

4.0 DATA AND INTERVIEW ANALYSIS

4.1 COVID-19 CHANGES TO WORK FLEXIBILITY

The primary qualitative data comes from Adecco Group, the second largest private human resources company in the world. Being heavily invested in the work market and being agile and on top of changes in work place management is one of their core resources as they match worker with companies in temporary and permanent positions, as well as talent development (The Adecco Group, 2020).

Adecco Group have gathered survey data about work trends and future wants and needs from 8000 individuals worldwide, with a focus on developed countries. USA, Japan, Australia and within the EU the UK, France, Germany, Spain, and Italy. This mix of countries and societies gives a solid overview of the situation in developed countries with good digital infrastructure, enabling the possibility for a paradigm shift.

With the restrictions of Covid-19 being similar worldwide the data from the survey will isolate trends indicating a paradigm shift and this data will be utilized to define personas wants and needs post-covid19.

Things must change, workers in knowledge fields are holding their workplaces accountable to accommodate them better in the future after experiencing greater autonomy during the lockdown and restrictions (The Adecco Group, 2020).

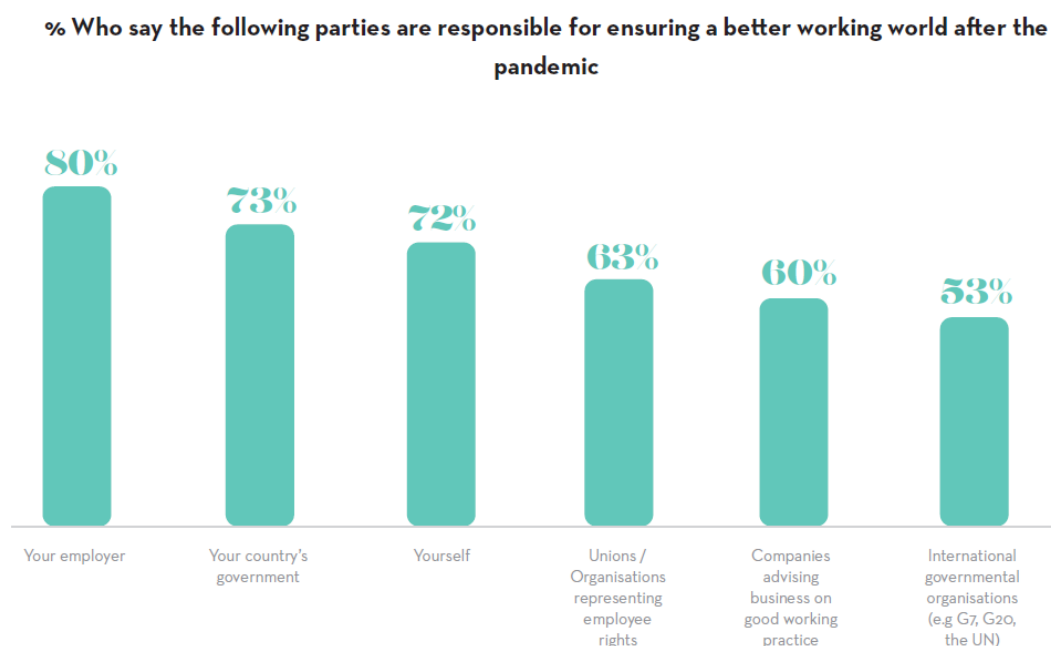


Figure 4. Responsibility of better future workplace. (Adecco Group, 2020)

As seen on Figure 4. The Majority of workers wish for their employers to ensure practices that enables “better” workplace practices, in the context of the pandemic this means ensuring greater personal autonomy and rethinking approaches to the working paradigms of the pre-covid world. Although there is likewise a trend that more systematic changes are

wanted throughout the developed countries via regulations from interest groups. (The Adecco Group, 2020).

Flexible work was already on the rise pre-covid, but the pandemic and the resulting restrictions and lockdowns have massively boosted this tendency. This is a trend that will be ongoing in the future, as workers who have experienced greater freedom and autonomy are unlikely to surrender their new flexible lifestyles. This emerging approach to work-life balance trends to take a few steps closer to the Digital Nomadic Paradigm from the previous 8-16 factory Paradigm. Both workers and leaders agree that this benefits the workplace overall (The Adecco Group, 2020).

% of working week expected vs. wanted to spend in the following environments after the Covid-19 pandemic

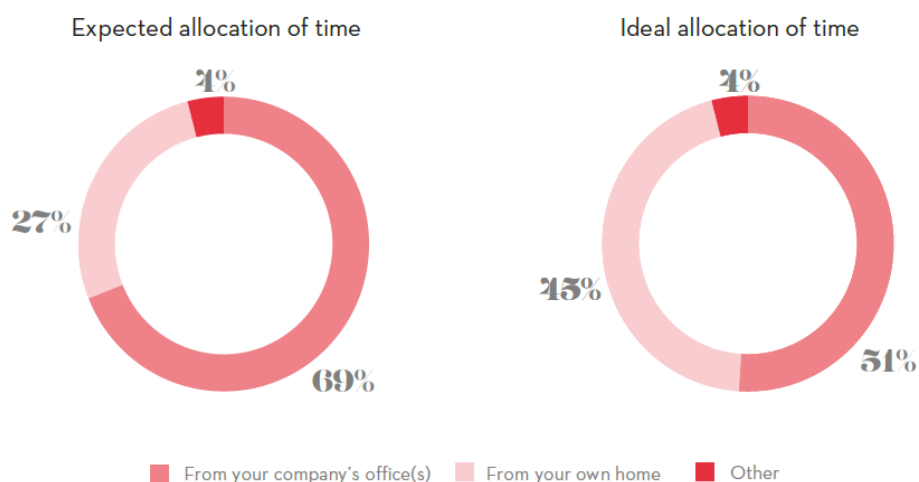


Figure 5. Expected time allocation vs. Personal Ideal Time allocation. (Adecco Group, 2020)

Figure 5. displays the expected time allocations of workers from their employers, with the majority of time (69%) have to be spend at the office. But to improve on work-life balance, the workers prefer are more equal split of 51%/49% with the slight majority of time spend at the place of employment. It is important to note that 50% of workers considered their work-life balance to be improved during the lockdown (The Adecco Group, 2020). A Mix in time allocation is preferred as to engage more efficiently with co-workers, and it is here observable how the concept of Meetingness is a strong factor in how workers allocate their time.

The approach of measured work time, and time at work is changing as the increase of worker autonomy makes time-based productivity measurements less precise and more restrictive to the work-life balance and workflow. The Idea of “going to work” will in the future become more fluid and interchangeable and doesn't necessarily mean transport yourself to work between 8-16 all week (The Adecco Group, 2020).

% of working week workers want to spend working remotely after the Covid-19 pandemic

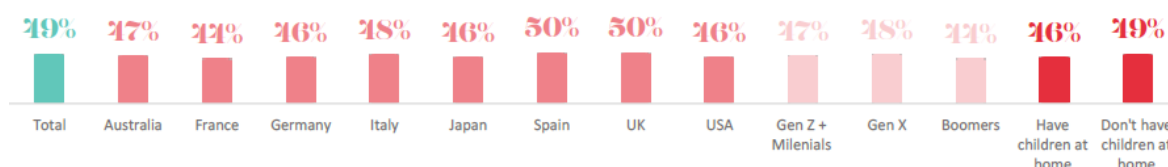


Figure 6. Desired time spend working remotely Post-Covid19. (Adecco Group, 2020)

Figure 6. Displays that the desire to work from home regardless of generation on the job market currently are fairly equal, and that. Workers want to spend on average 49% of their work time away from home. This is a definite step towards the emergence of a Knowmad working class post-covid19 (The Adecco Group, 2020).

Level of flexibility regarding working schedule before vs. during the Covid-19 pandemic

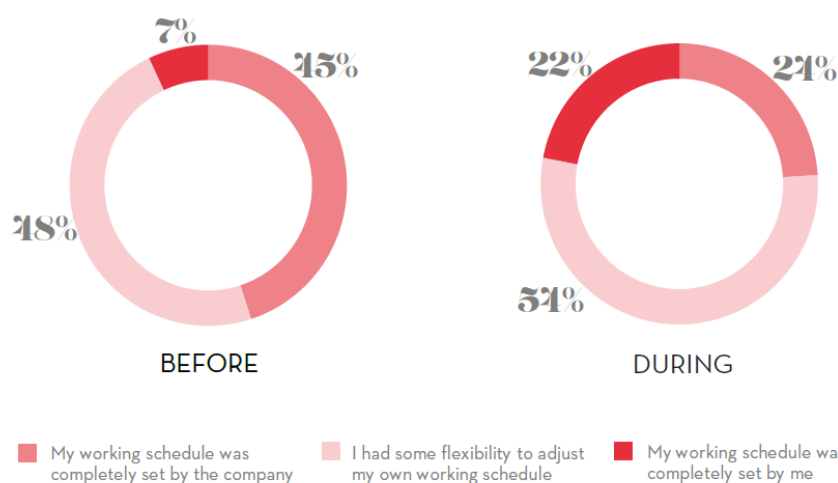


Figure 7. Work Schdule flexibility Pre- and during Covid19. (Adecco Group, 2020)

Figure 7. Displays the flexibility in work schedules before the covid restrictions, where there were less worker autonomy and more structure expected from the employer, but during Covid-19 the majority of the time was set strictly by the worker, creating greater worker autonomy. In the measured countries worker autonomy tripled from 7% to 22% during covid19(The Adecco Group, 2020). Participants stated that further benefits from this change improved work-life balance, and that 75% wish to maintain flexibility over working schedules in the future (The Adecco Group, 2020).

% Who agree with the following statements about flexibility after the pandemic

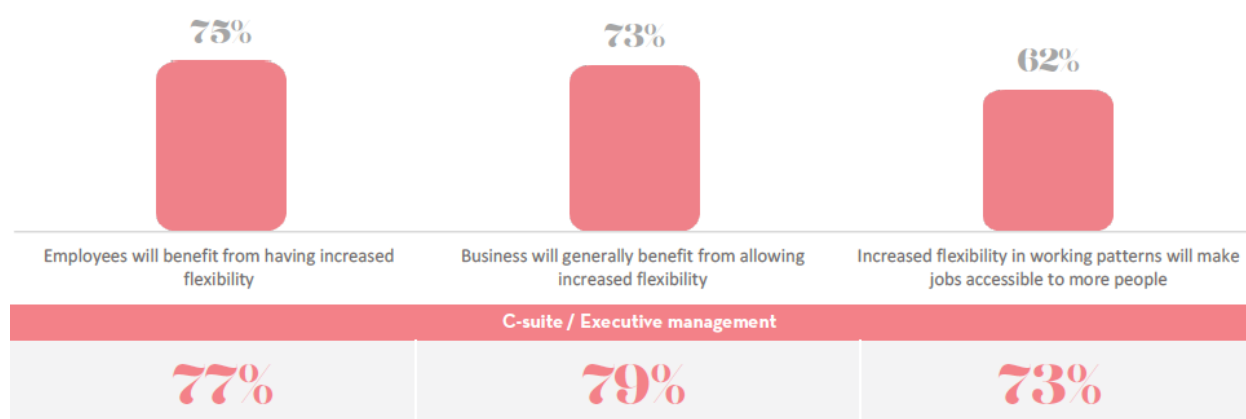


Figure 8. Worker and Leadership agree on flexibility is beneficial. (Adecco Group, 2020)

Figure 7. demonstrates that there is a generalised shared notion among leadership and executives that worker autonomy and flexibility benefits companies and employees and may possibly create opportunity for a more accessible job market for Knowmads post-covid19. This is a large factor for the paradigm shift to become reality (The Adecco Group, 2020).



Figure 9. Time spend in office is not a good indicator of efficiency. (Adecco Group, 2020)

Figure 9. Shows there is a belief among workers and executives that the Factory Paradigm efficiency metrics are no longer feasible in a knowledge work environment. The increased and desired autonomy of the knowledge workers constitute a shift in the way work is valued among Knowmads going forward from a basis of attendance to a basis of impact.

This potential shift in re-evaluating how a company measures work engagement can rapidly accelerate a potential paradigm shift and enable greater increased work accessibility for project-based work (The Adecco Group, 2020).

Summarized, there is an increasing demand for more worker autonomy among knowledge workers, this in of itself will shift the worker paradigms towards the digital nomad and the Knowmad paradigms. This flexibility will change how companies and society approach valuing work and the way work is compensated changing from a basis of attendance to a basis of impact. This will in turn increase worker autonomy as no day will look the same to most individuals going forward. Considering the trends continue being the norm (The Adecco Group, 2020).

Redefining these approaches to work will in turn change the needs and desires of the knowledge workers, giving way for needs and desires in society to be changed and as a result change urban planning to accommodate these changes in needs, desires and behaviour (The Adecco Group, 2020).

4.2 INTERVIEW ANALYSIS

Utilizing the structures content analysis (Mayring, 2008), this section will outline the results from the interviews. The statements will be extracted and condensed into a bullet point format where each statement relevant to the theory and each of the four perspectives mentioned in section 3.3. will be grouped and summarized. Other relevant statements will be grouped as other relevant perspectives. Individual quotes will be used to reinforce the bullet points as necessary. The bullet points and summary will then be utilized in the construction of personas and scenarios in a later section.

4.2.1 PERSPECTIVE A: THE IMMEDIATE IMPACT OF COVID-19 ON WORK MOBILITY

- Workspace flexibility have increased along with general social acceptance of online meetings as a useful tool (Appendix A)
- Increase of productivity, but also seeming an increase to hours worked. (Appendix A)
- Arising tensions between employer and employees centred around worker autonomy, with potentially large implications for how organizations operate (Appendix B).
- Increased opportunity for corporations to restructure themselves to fall in line with climate goals. (Appendix B)
- Increased interest in Digital Nomadic work, along with higher demand for more “liveable” urban spaces. Along with a slight increase in walking as a mobility option. (Appendix C)

The impact of covid-19 has seemingly boosted workspace flexibility among knowledge workers according to the experts as a direct consequence of the greater worker autonomy. Yet there are concerns regarding this increase as there seems to be a tendency of an increase in hours worked, as workers do not differentiate time spend working with leisure time in the same way as pre-covid.

There are rising tensions between employer and employee as worker autonomy conflicts with the wish of come organizations to have workers come back to the office space. The implications of how organizations will handle this tension is not yet established, but will likely result in organizations unwilling to accommodate new demands see a reduction of worker quality as can be seen in the media abroad currently (Melin and Egkolfopoulou, 2021).

Corporations/Organizations have as a direct consequence of Covid-19 been given an opportunity to change their operations positively in relation to climate change, as there is a possibility to eliminate unnecessary travel in the name of business with the social acceptance of online interactions becoming increasingly normal. Digital Nomadic work have gained a larger following during the covid-19 pandemic and along

with it a higher demand for “liveable” urban spaces, green areas, and access to necessities without the need to travel a greater distance.

Lastly there is a slight increase in walking as a modal choice for people, as a consequence of greater autonomy over their own schedule and possibly fear of public transportation.

4.2.2 PERSPECTIVE B: THE PERMANENCY OF CHANGES BROUGHT BY COVID-19

- Workspace flexibility is a permanent demand but might be as exaggerated as it is portrayed now. (Appendix A)
- Greater trust in ICT, in work relations, increasing opportunities for foreign expertise. While also reduce amount of travel needed for business reasons. (Appendix A; Appendix B)
- Smaller incremental changes to behaviour associated with Digital Nomadic Paradigms will be the permanent factor, that over a long time will shift the paradigms slightly and might create an entirely different paradigm. (Appendix B)

The demand is there for greater workspace autonomy and workspace flexibility, and it is not going away, it has for some felt liberating not having to travel to attend work and giving them more personal time to spend with family, on their health or personal project. The full effect of this autonomy might not be as exaggerated as what are portrayed in media but there are non-the less a permanent change.

The greater trust in ICTs among all worker generations have contributed to increased opportunities for specialists abroad to participate in projects easier, this trend will likely continue as the input via digital meetings feels more valid among leaders. As a side effect of this, the need to travel for business meetings will most likely continue to be reduced, unless it is essential for the project.

Big cascading changes are not likely currently, but small incremental changes to worker behaviour are permanent and will over time create different demands that will shift paradigms. These permanent changes can and will likely change and the end effect of this change can lead to a completely different scenario.

4.2.3 PERSPECTIVE C: THE FUTURE PROSPECT OF PERSONAL MOBILITY POST-COVID19

- 50% Desire more flexibility in their work schedule, and with-it corporations might change space allocation in offices, reducing it or increasing it. (Appendix A)
- Corporations might utilize the Digital Nomadic Paradigm by increase the number of employees to maximize office space. (Appendix A)
- Corporations changing the office culture will have large effects on the demand for mobility and can possibly lead to greatly reduced congestion (Appendix B)
- Infrastructure investments might be postponed investing in “liveable” cities. But needs to be carefully planned to avoid “bubbles” of socio-economic monoculture (Appendix B).
- New mobility solutions need to be flexible as demand for social space change (Appendix C).
- In the short term the pandemic creates more car use, but long-term reversing the trend should be possible (Appendix C).
- People will focus on improving life circumstances, more space, access to nature, family relations. Move out of the city to gain access to better housing options. (Appendix C)
- Covid19 might help technology adaption in society. (Appendix B)
- Informal relations are a huge factor in people’s desire to be at the office. (Appendix C)
- Car dependency, car space and usage might go down as more autonomy means more choice in when and how to achieve goals outside of work. (Appendix C)

The data and the experiences of the expert’s state that 50% of employees wish to continue with working from home, in a split similar to what is established by Adecco Group. This change however has organizations and corporations reconsidering they want to manage office space in the future. Some organizations have done away with offices completely, while others choose to downsize or considering keeping the office as is but increasing the number of employees to “fill” the week with different teams each day.

This change in office workspace culture, will have considerable effects on the demand for mobility going forward and can lead to greatly reduced congestion of traffic benefitting the Nomad, but also society as cost of maintenance and lost time decrease.

Current plans for infrastructure investments will possibly be postponed, delayed, or cancelled to meet the new demand for “liveable cities”, as the demand rise for localized urban dwellings that meet the new demand for public spaces that are accommodating to human needs and exclude cars. These demands must be carefully executed, to avoid creating “ghettos” of knowledge workers that become exclusive to non-knowledge workers that would provide necessary services. Incorporating new mobility solutions into the “liveable” city must be flexible to accommodate the altered use of space and needs. With this car dependency might decrease as greater autonomy in the work schedule means people might choose the options of bikes for tasks such as daily shopping, instead of using the car on the way back from the office, or to the gym.

Families could possibly be leaving the cities, as have been observed in Copenhagen, to get more space around them and easier access to nature and spending more time with family outside of work.

Covid-19 have forced adaption of ICTs, and it will be greater utilised in the future among all age groups, enabling more and more complex problems being dealt with via ICTs. Although there is general consensus that informal relations can become a major factor in choosing to go to the office, as direct and indirect communication with equals plays a huge part in our feeling of belonging.

4.2.4 PERSPECTIVE D: EFFECTS ON SOCIAL MOBILITY DUE TO PARADIGM SHIFT

- Limited freedom of movement/immigration. With the need for relocations being a non-factor (Appendix B)
- Increase in gig work, as work/place becomes more fluid and utilize ICT's. Which can increase exploitive behaviour from corporations (Appendix B)
- Short range mobility can become dominating, limiting mobility options for non-white collar workers outside cities (Appendix B).
- Possible exclusion of low-income groups in knowledge worker neighbourhoods (Appendix B).
- Housing prices might drop as people seek larger housing outside cities, enabling greater city socio-economic diversity (Appendix C),
- "What is wanted" in work culture will possibly change over time, creating cascading effects (Appendix B).

A shift to a Digital Nomadic Paradigm, can possibly eliminate the need to bring in foreigners to work for the organization as their work can be accommodated via ICTs and digital meetings, information etc. This can also lead to an increase in gig work among knowledge workers, which will greatly reduce long term employment and create concerns of exploitation from organizations as workers have limited contracts.

While the cities possibly shift towards a 15-minute city philosophy, there is concern that the rural areas or workers who travel with public transportation becomes less mobile as a direct consequence of the reduced demand in the cities. This can also further produce problems as exclusion of certain socio-economic classes as they are not able to relocate for work as the city is dominated by white-collar neighbourhoods. The opposite can also be a factor, as white-collar workers leave the city to establish themselves outside the cities and raise the prices of housing and commerce in the area which can force people of lower socio-economic status out of their homes but can likewise also increase availability in cities for this worker class. This can be adjusted with policies that accommodate diversity in these altered neighbourhoods.

The desires and demands of the knowledge workers can and will possibly change as society accommodates the new demands, and with it there will likely be cascading effects as social mobility is inherently connected via the ways we interact with space and place.

4.2.5 OTHER RELEVANT PERSPECTIVES

- The emergence of communication technologies created higher demand to travel, as to meet the people we engage with face to face (Meetingness) (Appendix C).
- Fear of public transportation might create lasting effects, increasing car dominance or reduce it depending on urban planning factors. (Appendix C).
- Biking in Denmark did not see a large increase, compared to other nations without established biking culture. (Appendix C).
- Short car trips (less than 5km) are still very common, and the biggest source of car trips (Appendix C).
- Digital socialization cannot yet replicate face-to-face interaction meaningfully (Appendix C).

When ICTs emerged in the beginning of the century and as technology developed and travel opportunity increased, people experienced greater connectedness with people all over the world and as a result it created a higher demand to travel to accommodate this need to meet people face-to-face. This is essentially Meetingness, and with these statements it has been quite evident that direct social interaction cannot be replaced or replicated by digital means yet. This also means that there will continuously be a drive to meet with peers, despite the technological development possibly until technology becomes so developed that it can trick the human senses.

The public transportation was hit extensively with restrictions and is an optimal environment to spread virus. This resulted in an avoidance of public transportation and a fear that resulted in car use and sales going up during the pandemic, as people choose to travel with as little interaction as possible. Biking in Denmark was not affected much, as people who have bike as their primary mode of transport are likely to keep it as such but getting new users who prefer another means of transport are likely to choose cars.

It is also relevant to note that the amount of short car trips, or car trips 5km or less are the most common trips taken with car, possibly witnessing the lack of inviting infrastructure to accommodate alternative means of travel.

5.0 SCENARIO CONSTRUCTION

5.1 SCENARIO VECTOR IDENTIFICATION

Proceeding with the design of the scenarios, the data, media, and expert interviews follow a similar narrative of knowledge workers demanding greater worker autonomy and thus an emerging trend of a “Knowmadic” paradigm shift, or to a lesser degree a Digital Nomadic paradigm shift, this narrative will be selected as one vector of which the scenarios in this section will be built.

The second vector is identified from the expert interviews in sector 4.2.3, as there is a narrative of a mobility shift following a paradigm change. One of the experts have identified the 15-minute city as a possible future, and the two other experts have discussed aspects of the 15-minute city concept without mentioning it by name. This makes the second vector identified to be the change towards a 15-minute city concept.

Both of these vectors are similarly identified in the literature review as theoretical effects of changes within worker culture and will reinforce the vectors in the following section.

5.1.1 SCENARIO VECTORS AND SCENARIO RULES

The identified vectors from the research of covid-19 impact on knowledge workers are a Paradigm shift to a Knowmadic Society, as opposed to the Factory Paradigm. Secondly, an urban landscape change to a 15-minute city concept, as opposed to the car dominated cities. Combining these vectors ultimately create four scenarios that will be explored with the Persona-Narrative Method (Vallet et al., 2020)

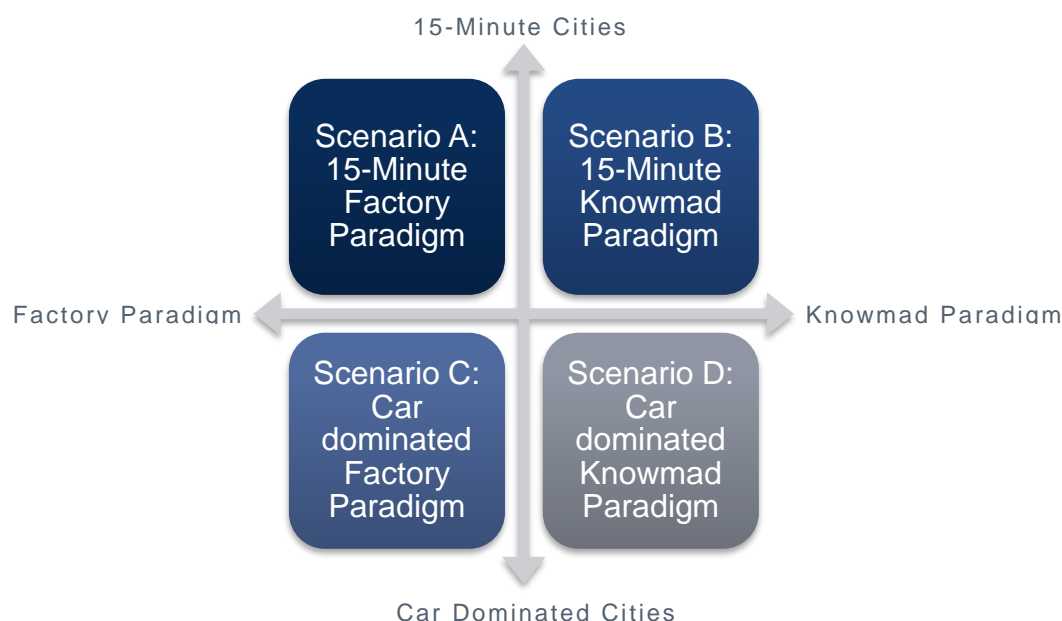


Figure 10. Scenario Overview. Own Figure

The following sections will provide an overview of the scenarios, as it has been 20 years since the Covid-19 lockdowns of 2020. The current year is 2040, this is in terms of future representation a medium-term future and is a minimal time frame for significant urban change to happen.

To be able to focus on the specific detail of Covid-19s impact on worker behaviour and mobility certain assumptions will be made about the futures to narrow the analysis. The assumptions are as follows:

- Scenarios are set in Denmark
- Stable political conditions
- Stable financial conditions
- Cost of living similar to 2020
- Cost of travel similar to 2020
- Widespread use of ICT's and acceptance.
- VR technology is not capable of replicating human interaction
- Digital infrastructure is well developed
- Face-to-face interaction is still desired despite improved ICT.

Scenarios are set in Denmark as two of the three experts have primarily Danish insights and observations; the researcher is also more familiar with Denmark and subtle cultural changes. Stable political and financial conditions is to eliminate uncertainties related to global and geopolitical events outside the introduction of covid-19. Cost of living and travel is similar as to avoid uncertainties and market and political developments in the future, that is outside the scope of this thesis.

Widespread use of ICT's and acceptance of ICT's is to accommodate the increased need of digitization and let the factors of the paradigms carry the narrative. VR technology being limited in development is to avoid a sweep solution as highly advanced VR technology could potentially be a solution to many of the challenges associated with digital communication and is not yet widespread enough to have insight in this development. Digital infrastructure being sufficient and well developed to create equal opportunity.

5.1.2 SCENARIO A: 15-MINUTE FACTORY PARADIGM; LIVEABLE 9-5.

In this scenario there is demand for more liveable cities, but employers have not accommodated the increased demand for worker autonomy and flexibility in the wake of covid-19. As the vaccines got introduced and covid-19 no longer declared a pandemic, society reopened, and knowledge workers returned to their previous habits and continued the factory paradigm as it existed before the pandemic. Employees returned to commuting to and from work on a daily basis. Yet the lockdown had forced people to spend time in their neighbourhoods, and they have become aware of lack of public spaces, noise associated with cars and need for more localised necessities.

As a result, city councils made changes to zoning policies, and planned infrastructure enabling the emergence of 15-minute city districts in selected neighbourhoods. The 15-minute neighbourhood is now a regular fixture of cities.

HOW SCENARIO A: LIVEABLE 9-5 CAME TO BE:

In the year 2020, the world experienced a large event that changed the way we would head into the future. Covid-19 locked down the world and with it the Danish state send every working individual home and society had to adapt rapidly. The lockdown had forced citizens to reflect upon the space they inhabited, and many found it lacking. The demand for liveable neighbourhoods, public spaces, green spaces, and desire for localism it was not forgotten.

In 2023 the events lined up as the newly formed government proposed large changes to the city policies to meet the demands of the inhabitants. By 2025 it came to pass, cities in future public projects would focus on the four dimensions of the 15-minute city concept and enable greater density, diversity, proximity, and digitalization to citizens. In the next 15 years neighbourhoods increased numbers of local shops, services, cafés, institutions and added efficient infrastructure supporting bikes, e-scooters and walking and large public green zones and spaces to spend time when not working. Local public transportation would take people to larger hubs that connect to parking spaces as the neighbourhoods slowly made it less and less desirable to drive within the neighbourhoods. Large ring roads and public transportation with road priority connects the corporate and industrial zones to the changed residential zones as transport efficiency became a larger factor for every citizen.

Commuting to and from work is still a large part of the lives of people who are not fortunate enough to live near their places of work inside the neighbourhoods. Smaller companies saw an opportunity relocated inside neighbourhoods while larger companies stayed and are now the main reason for trips outside the neighbourhoods.

5.1.3 SCENARIO B: 15-MINUTE KNOWMAD PARADIGM: LIVEABLE AUTONOMY

In this scenario there is a demand for more liveable cities and workers requiring high flexibility and autonomy, employers have heavily accommodated this need and knowledge work is accepted and encouraged as worker autonomy have become the norm. The demand for liveable public spaces has led to a massive cascading change in city planning and the 15-minute city concept is well established, greatly reducing or eliminating the needs for cars in the cities. The change to Knowmad culture has as a side effect increased the amount of gig work, as knowledge workers can join and leave projects on short notice and join any project worldwide. Companies have also gone purely digital as a response, or massively boosted their number of employees to utilize office space as meeting space. Public transportation has taken off, to accommodate the need to move outside the neighbourhoods.

HOW SCENARIO B: LIVEABLE AUTONOMY CAME TO BE:

In the wake of covid-19 in 2020 the knowledge workers embraced their newfound autonomy and only came to office when necessary. Companies accommodating this new behaviour started including benefits that in turn made remote work even more attractive, companies who failed to realize the paradigm shift went under as a result. Companies started integrating into the local communities by utilizing shared office hotels, operate solely from the cloud or employ as much as 3x the number of employees to make use of the office space as teams come in once a week.

By 2025 the commuting pressure from car traffic had decreased to such an extent that plans for expansions of road networks got postponed and focus was changed to infrastructure supporting bike and pedestrian users in neighbourhoods. Efficient and non-intrusive public transportation made the way into the emerging neighbourhoods, and shops, cafés, services, childcare, schools and other necessities slowly made it back into the localised communities and slowly making way for the 15-minute city concept to be established throughout cities. After 15 years car usage within the cities is at a bare minimum and working from home is the default among the middle class with sporadic team meetings or colleague get togethers.

Companies have become global entities out of touch with their communities as physical presence have become largely irrelevant. As a result, people who entered the work force right after covid-19 are now heading projects all over the world all from the comfort of home and can select employees freely as they are needed from all corners of the world. This has brought with it a large increase of gig work or short-term freelance employment as competition have risen uncontrollably among the younger generation who are now just entering the workforce.

5.1.4 SCENARIO C: CAR DOMIANTED FACTORY PARADIGM: MORE OF THE SAME

In this scenario, the impact of covid-19 in 2020 created limited ripples in society. The economy bounced right back. After restrictions was lifted, workers returned to the habits they knew and was accustomed to. Life carried on, and soon the effects of covid-19 was forgotten. The world had learned that ICTs can be used in an international context, but it was done from the comfort of the office and only when it wasn't feasible to get together. Life carried on, although with slightly more digitally competent population than pre-covid19

HOW SCENARIO C: MORE OF THE SAME CAME TO BE:

It came as quickly as it went, Covid-19 swept the world in 2020 and 2021 and the world responded with lockdowns, restrictions, and vaccines. But the people are resilient and highly adaptable so while tensions ran high during the run of the pandemic, society was soon back to normal. Shops, schools, cafés, offices etc. opened back up and restrictions was dropped. It was like covid-19 had never happened.

Life kept going, and society quickly picked right back up where it left off, trotting along. With a few new benefits as the workers had gained new competencies in ICTs and with it were able to become more effective as they were able to reach a wider audience worldwide.

The ramifications of these new competencies were unfortunately that the import of foreign knowledge workers became a thing of the past, as companies could utilize them for short term gigs in projects without the need for relocation. By the year 2040 almost no new foreign knowledge workers were imported and diversity in the cities was on a decline.

5.1.5 SCENARIO D: CAR DOMINATED KNOWMAD PARADIGM: URBAN EXODUS

In this scenario, organizations became more flexible and allowing more autonomy for knowledge workers, resulting in knowledge workers leaving the cities as increased commuting time became manageable with less commuting in a week, but with no demand for better public spaces as it was acquired outside the cities. Policy changes were never enforced to create liveable cities and car culture continued to thrive. The resulting brain drain from the large cities have contributed to increased gentrification in the small communities surrounding cities and the cities becoming less liveable as a result of the reduction of the middle class.

HOW SCENARIO D: URBAN EXODUS CAME TO BE

When Covid-19 came society adapted, those who were able worked from home and those who were not worked under heavy and limiting restrictions. The increased autonomy and work flexibility from knowledge workers put pressure on the society and companies adapted by giving way to full flexibility and autonomy as part of the inherent work culture. By 2025 most knowledge workers only came to office twice a week, some not at all. In the wake of this increased flexibility, families of knowledge workers and the upper middle class looked beyond the cities as a better place to live and work.

The reduced commuting made it bearable to live further and further away from the place of work and the city, closer to nature, and smaller societies started to see an increase in families of newcomers inhabiting their smaller societies, and with them came the benefits of cafés, shop, goods, and a rise in the values of homes and general prosperity. For a while.

In 2035, the cities had lost the majority of their knowledge workers to the Urban Exodus, the cities experienced massive brain drain, an increase in crime rates, violence, vandalism, and slums. A demand for social housing, concrete blocks and larger roads meant that all efforts to make the city more liveable did not come to pass as policies get cancelled and changed to try to relieve the change within the cities

By 2040 the populations of local communities had experienced full gentrification and was excluded from their own communities as they could no longer keep up with the costs associated with the influx of the middle class.

5.2 PERSONA DEVELOPMENT

To explore the scenarios from the viewpoint of citizens, this section will focus on creating personas to analyse the experiences of these worlds that have been created from the scenarios. To do this, the method of a fiction-based perspective (Nielsen, 2019) will be used to create personas from the data in section 4.1 as well as insights from the interviews in section 4.2.


As covid-19 restrictions were still in effect and it was uncertain when they were being lifted as this thesis was developed, the mix of quantitative survey data and observations from experts will create more generalised and less personal personas, as the method benefits from qualitative interviews and focus groups to give the personas more personality. Unfortunately, these methods are not feasible under the pandemic. So, the more generalized personas will be used to make broader statements and observations.

As mentioned in section 3.2, three personas will be developed for the scenarios. The base for these personas is chosen based on insight from the literature review, expert interviews, informal conversations with peers and fellow students along with a goal to have

broad representation of different chapters in life within the scenarios. The data in section 4.1 and interviews 4.2 will define the characteristics and habits of the personas, while personality, and character traits will be based on the researchers' personal experiences, as well as extended personal network as to add more personality.

Together this forms a narrative using storytelling and real-world data combined observations to create personas with character but rooted in theory, observations, and empirical data.

5.2.1 MEET: DAVID MØLLER, 44 – PROJECT MANAGER

 <p><i>Photo 1. Project Manager. Creative Commons. Source: Stocksnap.io</i></p>	<p>Basic Information:</p> <p>Age: 44 Status: Married, Sophia (40) Job: Project Manager, Location: Herlev, Copenhagen Children: Two, Jonas (12) and Emilie (8) Interests: Kayaking, reading, cooking, politics</p>
<p>Mobility Patterns:</p> <ul style="list-style-type: none"> - Drives everywhere, modern high-tech car - Flies for longer trips abroad - Kayaks three to four times a month. - Able to use ICTs for work 	<p>Network Capital:</p> <ul style="list-style-type: none"> - Family - Co-workers - Business partners - Neighbours
<p>Bio:</p> <p>David is 44 years old, is married to Sophia, who works as a civil engineer with their 15th year anniversary coming up soon.</p> <p>He lives in a house in Herlev, in a nice neighbourhood with his wife and two children Jonas and Emilie.</p> <p>David is a Project Manager in Atkins (CPH), where he joined the team 8 years ago and oversees project regarding sustainable infrastructure.</p> <p>When he is not working, he tries to keep in shape and kayaks with friends and spends time cooking healthy meals for him and his family.</p> <p>He spends his evenings reading, currently he is into biographies but also enjoys self-development, non-fiction, and the occasional crime story.</p> <p>David is politically involved and are part of two boards that influence decision making in the local area. He priorities a close-knit local neighbourhood and gathers the neighbours a few times a year for social events.</p>	
<p>A day in his life:</p> <p>David wakes up early, he starts his day at 5:30 in the morning, checks the news. E-mails and shares breakfast with his wife and kids. This is important time for him, as he prepares for the daily challenges. He leaves his house in Herlev at 7:20 to make it through morning traffic and arrives at work 7:50 most days.</p> <p>His day usually starts with a status meeting, where he afterwards retreats to his office to deal with contractors, shareholders and policy makers and manages the deadlines moving forward.</p>	

He joins in at lunch in the cafeteria where he spends time catching up on the private lives of the people around him.

Between at around 19:15 he leaves the office, today had been a long day for him as he had a situation that needed to be resolved before he was able to leave for the weekend. On his way home he calls up his kayaking buddy Torben and they arrange to meet Sunday for a few hour trip. He arrives home at 19:45, where he immediately starts cooking and is joined by Sophia where they share their days. Shares dinner with his wife and children and learns about their days.

He and his wife retire to the living room, where he picks up the book he is reading and puts on the tv for the family to spend a little time together. Jonas quickly retires to his room, as he is busy in a game. Sophia puts Emilie to bed around 22 and reminds Jonas of his bedtime. David and Sophia then spend an hour together reading and chatting before they retire for the night.


5.2.2 MEET: NOAH KOCH, 24 – JUNIOR NET-DEVELOPER

 <p><i>Photo 2. Young Man. Creative Commons. Source: Stocksnap.io</i></p>	<p>Basic Information:</p> <p>Age: 24 Status: Single Job: Junior Net-Developer Location: Valby, Copenhagen. Children: None Interests: Games, running, history</p>
<p>Mobility Patterns:</p> <ul style="list-style-type: none"> - Primarily use public transport - Bikes occasionally - Runs every day in the local area - Visits historical sites once or twice a month 	<p>Network Capital:</p> <ul style="list-style-type: none"> - Friends from school - Online friends - His manager - Running acquaintances
<p>Bio:</p> <p>Noah is 24 years old, single, and living alone in a smaller two-bedroom apartment in a larger complex located in Valby.</p> <p>He recently graduated as a Net-developer and have started working on projects as a temporary, he is trying to establish himself in a more permanent position, but he lacks the experience.</p> <p>When Noah isn't working, he spends his free time playing computer games, and chatting up his friends worldwide via ICTs as they explore the game world. He also meets for board games occasionally with a few of his friends from school, but not as often as they used to.</p> <p>He enjoys running, to keep in shape and get a boost of energy for the day. Noah enjoys history, especially within cities and tries to visit historical sites a couple of times a month.</p>	
<p>A day in his life:</p> <p>Noah wakes up at 7:50 and prepares himself for his run. Today he is meeting with Kasper a</p>	

running acquaintance so they can run together, they meet outside the supermarket and starts their 6km route at around 8:15. Chatting about the challenges they face today and what plans they have for the weekend. By 9 Noah is home and showers, eats, and prepares himself for the day.

He is currently working as a freelancer for a web-developer and beside this he has some smaller projects that needs his attention. He only has a deadline and don't need to work at specific times, but he chooses to follow a normal work schedule as its easier for him right now. By 12:30 he starts preparing lunch and eat in front of his computer as he codes away. He keeps working until 18, where he prepares dinner. Afterwards he fires up his game and logs in to the voice chat where he is greeted by his clan. But he doesn't have time to play too much today, as his project needs attention. So, by 20 he logs off again. He spends his evening finishing two of his smaller projects so he has more time tomorrow, as there is a city walk beneath the cathedral that he would really like to attend.

5.2.3 MEET: ADAM PETERSEN, 31 – INDUSTRIAL OPERATOR

 <p><i>Photo 3. Factory operator. Creative Commons. Source: Freepik.com</i></p>	<p>Basic Information:</p> <p>Age: 31 Status: In a relationship, Mette(29). Job: Industrial Operator Location: Ishøj, Copenhagen Children: None Interests: DIY, fishing, soccer</p>
<p>Mobility Patterns:</p> <ul style="list-style-type: none"> - Drives primarily - Occasionally takes public transport - Goes fishing on average twice a month - Goes to soccer practice once a week 	<p>Network Capital:</p> <ul style="list-style-type: none"> - Girlfriend - Co-workers - Soccer team - Childhood friend
<p>Bio:</p> <p>Adam is 31 years old and lives with his Girlfriend of 6 years, Mette, who works as kindergarten teacher, in a two-bedroom apartment in Ishøj. He works as an Industrial Operator for RMIG in Copenhagen, where he has been working for the last 9 years.</p> <p>When he is not working, he likes to use his hands and always have larger or smaller DIY projects going, he dabbles in woodworking, but it has never really taken off as he lacks the facilities.</p> <p>Adam has a childhood friend that he meets up with to go fishing a few times a month and spends this time talking about the events going on in their lives currently. He plays amateur soccer once a week, with a team they don't play many matches but its good exercise.</p>	
<p>A day in his life:</p> <p>Adam rises early, at 5 he is up as he needs to leave at 6. He starts his shift at 7, as the city rises. Today Mette needs the car they share, so he has to take the bus, a trip of 40 minutes to</p>	

reach RMIG. In the locker rooms he greets his team as they gather their security gear and heads onto the floor. During the day, they poke fun at each other and chat away about everything and anything, talking about movies, politics, things coming up and of course work-related topics. At 11:30 they all head to lunch as the floor closes down. At lunchtime he catches up with one of the older guys, who had been hospitalized recently and checks in on him, before he joins his colleagues at the table they usually sit at. at 12:15 they all head back to the floor and continue their shift until they clock out at 15. Being without a car today, he reminds Mette to stop by the supermarket as they need a few things for dinner and heads for the bus. He arrives home around 16:15, showers and spends some time with his feet up. Mette comes home soon after, and they drink a cup of coffee together sharing their day. Mette cooks dinner, while packs his bag for soccer practice, and takes the car so he can be there at 19:00. They play for an hour and practice their shots, before chatting and drinking a beer together in the locker room. He is back home at 21, where he joins Mette on the couch, and they watch their favourite show together before heading to bed as their days start early.

5.3 COMBINING SCENARIOS & PERSONAS

In this section, the scenarios and personas will be combined to form the new narratives of the possible futures of the post-covid society. This will be done as a creative narrative as part of the scenario personanarrative method (Vallet et al., 2020). The following

5.3.1 SCENARIO A: LIVEABLE 9 - 5

5.3.1.1 DAVIDS NARRATIVE: LIVEABLE 9 – 5

David's neighbourhood have undergone a massive change, as the roads that once took up space have been greatly reduced and replaced by bicycle lanes, sidewalks and green public spaces are taking space where the roads once were. Small electric shuttles cover the transport towards the parking lots at the edge of the neighbourhood, but for a lot of people the commute is covered on bike or e-bike. Only the ones such as David head towards the downtown where his office is located.

He makes his way to the car in the morning by bike, as it is fast and efficient and can be stored easily while it awaits his return later in the day if it rains a shuttle is an easy option as well. He no longer has to worry that the kids make it to school on time, as they are perfectly safe walking or biking there as the schools have reconnected the neighbourhoods.

The commute is quite a bit shorter these days, as the infrastructure to support travel by car from neighbourhood to neighbourhood has enabled greater speeds on the roads. Making life a little easier. David has become better at leaving the office in time, as he likes to spend time in the community after work, and can usually finish the tasks by phone, meeting with neighbours and reading in the green spaces that occupy his neighbourhood. His new favourite coffee spot is just down the road from his house, and he and his wife take their time browsing the butcher, cheesemonger, and the greengrocer as they have returned to the neighbourhood. They enjoy improved quality and choice offered. It is peace and quiet in Herlev, people greet one another, and life feels good. The only real trouble David faces is getting his kayak from the home to the car, but he is trying to get established some storage options by the parking lots, so the problem might solve itself in the future.

5.3.1.2 NOAHS NARRATIVE: LIVEABLE 9 - 5

In Noah's neighbourhood the lack of cars has brought a lot of life on the streets as young children, adults and elderly have reclaimed the once busy roads and comfortable green spaces surround the complexes, almost every corner has a small business established selling street food, drinks, snacks and ice cream, the former kiosks are acting as small grocers and you are met with a smile and a nice to see you. Shuttle busses, zip up and down between the complexes and e-bikes zip back and forth on the wide cycling paths connecting parking lots at the edge of the neighbourhood. Christiania bikes lazily drive to the local kindergarten to pick up the little ones and children walk to and from school in the next block.

Noah takes his work with him today, down the street to meet up with a group of net-developers he has met in the last few months, sparring and bonding over work. There even have been talk about starting their own business together, but this might be in the future. Sometimes Noah brings one of his board games outside and sits down at one of the many benches with a 6-pack after work and people join him shortly. It's a good way to meet people he thinks or at least that one girl he has seen a couple of times. Noah have started going for runs before lunch, as he likes to be productive in the morning with his fellow developers. Then he spends the night with his game and his friends online, before prepping himself for the morning as he has a day trip planned to see Trelleborg, with the high-speed train tomorrow.

5.3.1.3 ADAMS NARRATIVE: LIVEABLE 9 – 5

Adams neighbourhood have likewise changed to become more liveable, with smaller shops, cafés, and street food places taking up the corners of the apartment buildings. Adam have gotten rid of the car now, as the increased road efficiency and access to public transportation have made it much easier for him to get to work in a reasonable time. His girlfriend Mette have gotten a job a few hundred meters down the road and she walks to work now. Adam still needs to go to work, but an e-bike takes him via the large bike lane network to the hub space in no time where he can switch to the train and metro. A shuttle bus brings him and his co-workers almost to the front door of RMIG. At 15 he heads back home, and hops by the kindergarten to walk with Mette. They stop by the small grocer and pick up a few things for dinner as they head back to the apartment. A few hours later, just after dinner he changes into his soccer gear and bikes down the road. The new green spaces are a great place to meet up playing soccer, and he have joined a new group in the neighbourhood.

The only thing bothering Adam slightly is that it can be hard to fish in the lakes outside the city, getting all the gear all the way out there without a car is a little tricky. So, he goes to the marina a bit more often.

5.3.2 SCENARIO B: LIVEABLE AUTONOMY

5.3.2.1 DAVIDS NARRATIVE: LIVEABLE AUTONOMY

David wakes up early, around 7 in the morning. Spends some quality time with his wife, catching up on the news of the day as he sets himself up in his home office to start the day at 9 or so his wife sitting in the room beside him, working similarly to him. The neighbourhood have seen an increase in people like him, who prioritize the personal freedom in not having to commute to work, at least not every day, and when they need to, they just hop onto the shuttle system and off they go. These days David manages a lot more international profiles, his office have minimized quite a bit in the last few years and many of the departments are utilizing office hotels in the local communities when it's necessary to meet. Most just check in using their internal communication software, planning software and task handling software. More time is spend now finding the right profiles for the jobs and offer them project-based contracts, which seems to work quite well in this day and age. Many of these workers are part of the cloud-based solutions, as they have expanded hiring effort in the cloud.

David and his wife usually join a couple of other neighbours for lunch at their favourite spot just down the street or invites them over for lunch. The neighbours joined the community a few years ago as it has become quite popular among people such as David and his wife. David spends a few hours before the kids come home reading, and then works to around 18 where the family gathers for cooking together and have dinner. David then spends an hour preparing work for tomorrow before he joins his family at night watching a show or discussing current events. Before sending the kids of to bed. Him and his wife then spends the rest of the evening together, before heading to bed between midnight and 01:00. He thinks he will start a bit earlier tomorrow, as he needs to book the neighbourhood shared car so he can go kayaking this weekend. He sold his car a year ago, since it spend most of its time in the parking lots.

5.3.2.2 NOAHS NARRATIVE: LIVEABLE AUTONOMY

Noah starts his day by running through the neighbourhood, he meets up with Kasper by newly refurbished green zone down the street and they make their rounds talking about the plans for the next days. Noah talks about how his contract is ending, and he need to secure a new gig in the next few weeks, but he feels like he can't always compete with the international market as they can do it cheaper, and it wasn't like this a few years ago. After they finish running, Noah heads by the local grocer and picks up a few things before heading his apartment. Around 10 he starts working and he feels quite productive today, but he still feels a bit insecure about the future, so he starts looking up projects in his lunch break. He finds one of interest, that actually have a local space at the office hotel a small trip away, would be nice to around some other developers for a change. Seems like he can grab one of the shuttles from his street, or maybe even an e-scooter. So, he applies.

5.3.2.3 ADAMS NARRATIVE: LIVEABLE AUTONOMY

Adam gets up at 5 in the morning, he needs to head to work but the routes have been changed to accommodate all these shuttles. They seem to have forgotten about the industry sectors though, so he has to get his his car at the edge of the neighbourhood. People don't start so early anymore in these neighbourhoods, so the public transit doesn't run so efficiently until 8 or 9. He have gotten a bike to cover the distance, but it's not always so pleasant when the weather is bad. After a commute of 50 minutes in total he arrives to the

factory and starts his day. The bosses don't come in anymore, so they have this system of tablets to communicate with them, except, the bosses come in when they want to scold someone for something being missed, so when the boss is here it's never a good day.

Adam spends his working day chatting with his co-workers and complying with the orders before he heads back home. It's been easier to shop though, and at least Mette don't have to commute so much as the kindergarten moved back into the neighbourhoods although there are less and less children there so they might have to change that soon. It is a bit annoying that so many cafés pop up, and they are so expensive, who buys these sandwiches?

5.3.3 SCENARIO C: MORE OF THE SAME

5.3.3.1 DAVIDS NARRATIVE: MORE OF THE SAME

David is quite excited, the new project he is managing includes a lot of international partners and cultures, so he needs to get a team together that can manage that. He takes a look at the people in the office, let's see now Petersen, Larsen, Olesen. Well, seems like he needs to diversify a bit to fill out the competencies. Well, if he established a stable team, then they can just add experts as necessary should save a lot of paperwork and time moving forward. So, he heads back to his office and starts looking into previous partners and sorts through them selecting a few individual experts who can fill out the niches nicely.

Telecommunication have become so effective now, there is no reason to not make use of that. And so, the project is established, with Petersen, Larsen and Olesen and as consultants Banjeree, Latel and Cirillo. David gets it set up and the team connects. The day drags out because of time difference, and he is back home at 22, quickly eats dinner spends time with his family. It will be busy week; he probably has to cancel plans for kayaking in the weekend.

5.3.3.2 NOAHS NARRATIVE: MORE OF THE SAME

Noah is up at 7, he needs to be at his new office at 8:30 to get introduced to the team he needs to spend time with the next half a year as they finish a project for Netcompany. Hopefully if he makes a good impression he can get a contract extension for the next year, so he prepares himself to be the best he can be. He has to walk a bit to take the bus, and hopefully beat the traffic, he could use his bike, but he doesn't want to turn up sweaty for his first day. He also considers how he is going to manage communications to the companies that the tasks are outsourced to, and he can do this within his normal work schedule. But hopefully it all goes well.

5.3.3.3 ADAMS NARRATIVE: MORE OF THE SAME

Adam starts his day at 5, as he has to beat traffic to make it at work before 7, where he meets up with co-workers and start his day at the floor. It's a slow day today and he looks forward to heading back home. Mette calls him and asks him to pick up some groceries on the way home, as she will be a little late. His boss has reached out to him about covering some shifts next week, as they are experiencing a small worker shortage, but it should be sorted out quite soon.

5.3.4 SCENARIO D: URBAN EXODUS

5.3.4.1 DAVIDS NARRATIVE: URBAN EXODUS

David and his wife Sophia have opted to leave the city when they got more flexibility and autonomy in their lives. In the last few years, the cities have started to become crowded, violent and grey. The parks are being used as hangout spots for youth. They could use some more space, and it would be nice to have some more nature around them. So, they found a nice big place close to the forest with a view of small lake in a tiny local community. With them heading to the city once or twice a week they have gotten rid of one of their cars, and the children, they go to school in slightly larger city close by where the bus goes. Their work times has changed, some days it's only a few hours and other days it's spread over the day, this have given them more time to pursue their hobbies and David have a space for a proper library now, even Sophia have taken up kayaking as well in the lake.

They often have friends coming over for lunch and dinner, and they think it's amazing to have these options outside the city, so they are considering making a similar move themselves. More knowledge workers have followed suit in the small-town David live in, and new shops and services have started coming to the city. The locals seem a bit frustrated about these "stuck-up" newcomers, but the town have never looked better, and a lot of nice houses are popping up on the market!

5.3.4.2 NOAHS NARRATIVE: URBAN EXODUS

Noah sees a lot of his co-workers are leaving the cities and have stopped coming in so often. They say they feel less stressed, but he can't quite do that yet as he doesn't have a long-term contract and the bank is not all to happy about loaning him money in his position. He doesn't like how the neighbourhood is changing, he feels a bit less safe on the streets. His downstairs neighbour got his apartment broken into the other day as well. The last few years there have been more and more fights, and violence in his neighbourhood. But hopefully soon, he will be able to get a nice house by piece of forest so he can run there in the mornings. The noise in the cities is becoming too much.

5.3.4.3 ADAMS NARRATIVE: URBAN EXODUS

Adam and his co-workers are a bit upset, they can't quite get a hold of management and are expected to respond outside of their work hours. RMIG also seem to be hiring a lot more aggressively these days, there problems with filling gaps some years ago. On his way home from work, he drives past a few parks, but they have not been kept so well recently, lots of tags and the youth hangs around in large cliques. He also feels like Ishøj have become a bit less accommodating recently, Mette insists on getting picked up as she doesn't like to walk home anymore. Half of their neighbours have recently come to the city, and they don't seem to be the brightest of the bunch sometimes, he is not sure what have happened, but the city is just a bit greyer than it used to be and there is an oppressive atmosphere.

5.4 EVALUATING THE OUTCOMES

SCENARIO A:

In scenario A, across all personas the feeling of meetingness now extends outside of the offices and extends into their neighbourhoods, and as commuting is a factor the need to relocate away from these neighbourhoods is not a desire in this scenario. There is greater personal mobility, as more choice is had in how to travel. “Localism 2.0”, is establishing greater connectivity with peers overall, there is more life and less noise as cars are moved outside the neighbourhoods.

The proximity and diversity dimensions have been drastically changed in most neighbourhoods, although richer communities are experiencing less diversity as demands of amenities etc. are excluding the average citizen, and can result in “bubbles” of affluent neighbourhoods.

The factory paradigm keeps people rooted and need to travel every day, which in the long term might be an annoyance as the neighbourhoods develop and include more and more benefits to the people spending time there.

Overall, the effect on the cityscape is positive as the demand for increasingly liveable cities generate positive conditions for the people living there. The more efficient transport infrastructure benefits all personas as well, as a decreased in travel time is always a net gain.

Positive changes	Negative Changes
<ul style="list-style-type: none"> - Greater liveability - Greater Diversity in goods and services - Greater Proximity - Need for Meetingness extends to local community and enables social inclusion to a greater extent. 	<ul style="list-style-type: none"> - Less Diversity in neighbourhoods of higher socio-economic status - Possibility of future gated communities. - Possible less access to activities outside communities.

SCENARIO B:

In Scenario B, knowledge workers experience ultimate freedom to live in and explore their communities. The communities adapt to accommodate the people spending time there. Offices have taken to the cloud or enabled knowledge workers to gather in their neighbourhoods utilizing office hotels. Otherwise, most work is managed via digital replacements and work can be done from the comfort of your own home, or anywhere.

Unfortunately, this can possibly create issues in the work market, as the lack of Meetingness with peers, co-workers and leadership gives no incentive to look at people as humans and work conditions for many can take a sharp turn to a gig-based economy which in turn creates more inequality among knowledge workers.

If you are outside knowledge work, you will experience problems using the services in your neighbourhoods, decreasing personal mobility during the day, and see a mismatch of your needs compared to the people who spend all day in the local neighbourhoods, over time this can lead to exclusion or gentrification as knowledge workers will gather among the nicest neighbourhoods in the cities, raise prices and have services cater

to them but non-knowledge workers will still have to accommodate commutes as the nomadic 8-16 lifestyle forces them to.

Positive Changes	Negative Changes:
<ul style="list-style-type: none"> - Greater liveability for knowledge workers - Greater digitalization for knowledge workers - Greater Proximity for knowledge workers 	<ul style="list-style-type: none"> - Great risk of gig work to dominate - Less Density overall - Less Diversity overall - Meetingness across diversity reduced. - Risk of gentrification

SCENARIO C:

Not much changes in scenario C, although the increased use of ICTs is a big factor in knowledge work as it affects physical local mobility but enables digital global mobility. It is more accepted to just bring in specialists from their home locations via telecommunication, instead of relocating them to fit project and company needs. This can come with risks as it limits global mobility and potentially enforces localism to a greater extent, which greatly reduces diversity. There is also the subtle factor of Meetingness, where the informal conversations are only for the privileged such as David who can access informal social relations if wanted and needed, in contrast to Noah is severely limited. It can possibly create skewed social relations in the professional field

For non-knowledge workers there is very limited change, but as global mobility changes this sector might experience worker shortage, which creates significant pressure on the worker autonomy in this sector.

Positive Changes	Negative Changes
<ul style="list-style-type: none"> - Greater digital diversity 	<ul style="list-style-type: none"> - Reduced physical diversity

SCENARIO D:

Scenario D is possibly the most dystopian, the effects of giving one class of workers almost unlimited flexibility and autonomy as opposed to non-knowledge workers who are still restricted to physical presence to fulfil their jobs. This creates circumstances that in the short term might seem very positive and the smaller communities outside cities with an influx of people who can boost the economy and as a result might see a blossoming until it starts excluding the locals from their own towns as prices on mortgages, services, commodities etc. create gentrification over time. There is inherent risk in favouring certain demographics over others, which this scenario demonstrates.

For non-knowledge workers, or people tied to gig-work as they cannot relocate as easily, they will experience greater socio-economic decline in the neighbourhoods as housing prices drop and social mobility declines as a result. Furthermore, possible conflict arise as meetingness between the two classes of workers stops at the workplace, potentially giving rise to societal tensions and reactions as a result.

Positive Changes	Negative Changes
<ul style="list-style-type: none"> - Increased digitalization - Increased worker autonomy for knowledge workers - Increased digitalization 	<ul style="list-style-type: none"> - Large risk of gentrification - Decrease in Proximity - Decrease in Diversity - Decrease in Density

6.0 DISCUSSION

The findings of this thesis highlight possible changes to work paradigms amongst knowledge workers as a result of Covid-19 and puts these changes into a future perspective as to identify further trends as well as societal changes as a result a potential paradigm shift. Identifying the trend towards a Knowmad approach to knowledge work, but also identifying possible challenges and dark futures as a result of a paradigm shift.

A paradigm shift change towards digitalization and greater autonomy can possibly accelerate the trend towards more liveable cities and as a result an accelerating shift of trends towards the 15-minute city concept. Although, policy and decision makers need to be highly aware of this possible change as unregulated and unstructured changes to the knowledge sector could result in gentrification of communities and cater to a market that will become independent of national rules and regulations, which promotes freelance, gig and short-term contract-based work.

While the 15-minute city concept is a very attractive and utopian in its concept, but the reality of actually establishing it within the cities is far more challenging. Limitations of municipalities, cities and even the citizens can all cause issues as to implement it, and if implemented wrong, can potentially bring with it severe consequences that made it worse than before.

Meetingness as a basic human need and concept is a counter or a stabilizer to a total paradigm shift as there will continuously be a need to have informal social relations to have better performance, as Noah experienced lacking in scenarios where he could not utilize the enhanced local community. This observation is also clearly backed up by the data in the survey in section 4.1 as there is an almost equal split in the desire to work from home and the desire to be among co-workers and peers.

There is space for greater worker flexibility and autonomy in modern society, as the potential benefits to the city scape will benefit everyone who chooses to reside there, not just knowledge workers. But a fully digital nomadic society will not be the norm, as the data in 4.1 also highlights as workers requires the possibility of better work-life balance, not being at home full time. We as humans want to meet new and likeminded people, we want to explore thoughts and ideas, we want to spend time around the coffee machine as exchange ideas in an informal setting. Ideas and development thrive in that setting, and it will possibly always be a part of work culture just to a lesser extent. But be replaced with greater inclusion and social dynamics where we live.

A fully digital nomadic society will also trend towards being an oxymoron, as the ideas of ultimate flexibility and autonomy asks a lot of questions in regard to how society, nations and the world functions for companies that do not need resources and produce nothing but knowledge. Concepts like borders, nationality, tax, personal identity and even more complex issues like world economy, cyberspace-based companies without physical limitations would practically become extraterritorial entities in a world otherwise limited by territoriality. This can lead to extensive problems in a world where you have to belong to somewhere, and not everywhere.

This thesis demonstrates a potential for very beneficial changes to society, but only if factors surrounding these changes are observed, regulated and policies change to accommodate technology more efficiently in modern societies

6.1 GUIDELINES POST COVID-19

Society post covid-19 have the potential to undergo changes to accommodate a more digitally enhanced future. To make this transition beneficial for the majority of citizens the following guides must be considered.

- Adhere strongly to the four dimensions of the 15-minute concept, with great focus and care of the Diversity and Density dimensions as to avoid gentrification within cities.
- Carefully identify the needs and demands from the newly autonomous workers, as to avoid exodus towards smaller communities outside the cities and create gentrification.
- Heavily consider the needs of workers who follow the traditional Nomad work-life balance and incorporate transport and urban design measures to accommodate. As to avoid a spike in class struggles.
- Create policies that favour companies having a physical representation within the nation, to avoid fully digital entities that otherwise create extraterritoriality.
- Greatly improve digital infrastructure outside the cities, to give citizens more potential for autonomy.
- Invest in fast, efficient public transportation to accommodate the decreasing need of cars as a result of digital autonomy.

7.0 CONCLUSION

How could future society potentially change as it adjusts to work paradigm changes observed among knowledge workers during the 2020 and 2021 lockdown due to covid-19?

Worker autonomy and flexibility will likely have large effects on the demands of the areas they inhabit, and as such there is a possibility for the cities to adopt policies that will push towards wider adoption of the 15-minute city concept as succeed in establish the four dimensions with digitalization being the catalyst. But there are also possible risks associated with a large-scale change in worker autonomy and flexibility as it can potentially lead to gentrification of rural or suburban communities, or a flawed implementation of the 15-minute city concept, as knowledge workers might leave the city, or relocate to better accommodating neighbourhoods in the cities, due to the personal and economic benefits as the need for commuting is greatly reduced.

Therefore, society and decisions makers have to be conscious of such a potential rapid change to accommodate it with policies that push towards a better future and equitable communities and not one of dystopia.

7.1 FURTHER RESEARCH

As this study is a first look into potential futures post-covid 19 and looking at it from a limited perspective it would be beneficial to further explore trends in urban planning as the known factors of the covid-19 aftermath becomes illuminated. Cities who have already taken a step towards the 15-minute city concept such as Paris or Portland (Carlos Moreno et al., 2021) would be interesting to analyse in context of mobility with commuting to work being in focus. Establishing the needs of commuters and workers as the effects of the increased digitalization becomes further known could be used to evaluate urban planning trends in a greater context.

Questions of how, why, where and when we need to work going forward are also possible interesting angles to explore especially across all sectors and how this affects rural communities.

As society opens up, surveys looking into actual behaviours post-covid in regard to workplace adaptations, commuting behaviour and attitudes towards these changes might also be beneficial as to gain insight on the actual long-term reality of post-covid society.

8.0 PERSPECTICVATION

There are many factors not explored in this thesis, as the complex nature of society makes small changes create large ripples and have potentially massive consequences in areas not considered. Aspects becoming so complex that it is outside the scope of this thesis.

One such factor is how important digitalization can be for enabling stable and flourishing local and rural communities outside of the cities, establishing potentially greater diversity and quality of life for a large part of the populace by the introduction of other technologies, such as Virtual Reality can over time be so advanced and transportable that it can enable people to share a space without being anywhere near each other, meaning that the need for Meetingness can be accommodated despite the trend of moving to cities.

Another factor is how a primarily knowmadic knowledge work sector, and the industrial sector co-exists and what challenges there might be. Concepts of worker rights, time working and the introduction of more and more robotics to solve production issues also have far reaching effects on society and should be explored in the context of post-covid society. In addition to this, exploring basic universal income as another factor that can help establish a more equal society despite how digitalization and automation effects different sectors.

Finally exploring how the concept of nations, borders and local economies vs. international economies might affect mobilities under a fully digitalized work paradigm, and how freedom of mobility in a world like that where location would not matter is a very interesting concept and potentially lead to greater insight into how the world will develop, how we will live and how the future of mobilities could be designed to reflect the adaptations and restrictions the world would have to adhere to for it to work with the individual needs of people.

9.0 REFLECTION

This project has been a greater undertaking than what I first imagined, the enormous potentials in a digitalized have made me stumble over ideas, concepts and theories I was not familiar with, and it have been a challenge to focus on one aspect alone without getting spread out over more than what I could chew in the timeframe given. The excitement of discovering the potential extreme ramifications of digitalization tend dominate the thinking and small nuances can easily be overlooked.

The situation surrounding covid-19 and the restrictions have limited access to people and my fellow students during the process, as in turn limited the exchange of ideas and concepts paradoxically highlighting the importance of Meetingness in a work setting and especially in a knowledge work setting. I would have preferred to have been able to use focus groups for the scenarios, and also to gain more insight to the needs and habits surrounding the covid-19 lockdowns. But conducting such interviews in a digital meeting is more restrictive due to the nature of the medium. This would also have enabled the use of more personal personas and creating a less generalized understanding and narrative.

Furthermore, despite efforts, having more perspectives from the companies and their viewpoint in an increasingly digitalized space would be beneficial to get a more complete picture of the effects of digital nomadic workers, and how they expect it to play out in the next decade. In extension of this, input from the industrial sector in how they might believe worker autonomy to play out in their sector could also broaden the perspective and explore futures in between. As a final point, I have learned that I personally perform much better in groups, as the process of sharing thoughts and ideas gives me inspiration and motivation to pursue and solve problems but working alone, I feel isolated with the ideas or concerns that might present themselves during the process of making a project such as this.

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APPENDIX.

APPENDIX A:

INTERVIEW PROJECT MANAGER, MOBILITIES ADVISORY.

Thorbjørn: All right. It should be recording. Great, great, great. So, first of all, thank you very much for taking your time to talk to me.

PM: My pleasure.

Thorbjørn: Yeah, I have a few questions. I have five questions total, I hope that you have the time to answer them all. Otherwise, I will prioritize.

PM: We have around 45 minutes.

Thorbjørn: Yes, precisely. So, I made it as concise as possible. So, just to explain quickly, what I'm trying to do. You are my professional expert. So, from an actual, like working atmosphere, who also works with mobility. So, it helps a lot for the language, which is why we [inaudible 00:00:51]. And I'm trying, I want to have your input to use into building future scenarios for my project in the time limit I have available to me. So, I'm going to utilize you and four other experts to build my projects or my future scenarios. And I'm looking into a change in work paradigms as a result of Corona and how it might change mobility in society. So, my first question for that is, in your opinion, has Corona changed the way society approaches work mobility?

PM: And there, just to make sure I understand the question, work mobility, you're talking about commuting and these sorts of things. Or are you talking about mobility moving between roles in an office or in a workplace?

Thorbjørn: Yes. The physical commuting aspect is, of course, important, but also like the way work flexibility has maybe changed during Corona times.

PM: Yeah. The work flexibility has definitely changed during the pandemic. There has been, in the organization I work in and in the organizations of our customers, of course, a huge transition to more online, more virtual, as you would expect. We have been using this for some years, and it's been technically ready. But it has not taken off to such a large extent until we hit the pandemic. What we are seeing is one of the things that is driving this is the acceptance of people coming in from anywhere into a meeting. Whereas before, you would maybe have to explain that I have a colleague from Singapore who is really good at this, I'll bring him into the meeting, then now it's a more natural thing. And if you say, well, there's a colleague here, he's working from home as well, he happens to be in Singapore, but he has some great knowledge that we can use in this project. Then the client says, "Okay, great." But before it was a little bit more scepticism and say, well, okay, but Singapore is very far away. And yeah, can we trust people on the screen when we can't see them and touch them and these kinds of things. So, I think the acceptance of distance working has increased a lot, which is one of the drivers that we're seeing.

Thorbjørn: Yes. Actually, that's quite interesting. I wasn't considering that it might help get -- One of the concepts I'm exploring as classical meeting-ness, John [inaudible 00:04:01] is the author of that. I don't know if you're familiar with the theory of [inaudible 00:04:04]?

PM: No.

Thorbjørn: No. But basically, to make it short, the concept of meeting-ness is that the importance of physical interaction in work environments is one of the foundations for human behavior and stuff like that. And there is support that the idea that work structure is relying a

lot on the aspects of physical touch. So, handshakes and visual, looking into the eyes of the people you work with and stuff like that. And this is one of the things I'm trying to look into and see how much it affects -- It's very interesting you bring up that specific point to me.

PM: Yeah. As I also experienced this is also a generational thing where senior staff is more used to and more reliant on the physical aspects meaning. And to some extent, it appears to be more difficult for more experienced staff to only be on the screen. Whereas younger staff is definitely quicker.

Thorbjørn: Okay. And, in your opinion, these effects, these new effects, will they be permanent or have long-term effects?

PM: I believe that they will have long-term effects. I think there is maybe a slight over-optimism as to the size of the effects. Because when we now open up our societies more and more, of course, we will go back to the way we used to do things before to some extent. And so we'll probably see that we revert to the office, we reduce the number of online meetings. There are, of course, challenges with being in online meetings a lot and not having contact with your colleagues, and the identity you feel and the connection you feel to your company, and the work you do. So, I think we'll have a counter-reaction to those elements in the short term. But in the more mid-term, long-term, the acceptance of using video online for collaboration, I think has increased a lot. And it kind of made a leap into this space. Which we'll see the effects of it for years to come.

Thorbjørn: All right. And then it leads into my next question. So, how do you believe Corona will affect the office work environments in the future? If you were to lay it out very straight.

PM: Yeah. Some of the immediate changes, and I lead a team of around 100 people and we did a quick survey asking them once you go back -- once we open society again, will you prefer to work from home front or in the office? And what's the ratio? Do you want to work from home one-two days a week? Or is it from home three-four days a week or full week? And we had around half our employees, 50 people said they would like to be in the office three to four days a week. And around half the employee says one to two days. Now the challenge is with one to two days is of course if people come in on different days, then it'll take weeks and months between seeing their colleagues and the kind of informal social [inaudible 00:07:51] coordination that you would get from being in the same office space is lost. So, one of the effects, I believe, we will see from the pandemic is that we'll have these collaboration days, or maybe for one team, like to have one team sitting in [inaudible 00:08:12], they come in on Tuesdays, for example.

So, then the whole team knows that you can be in the office whenever you want, you can work from home, but on Tuesdays, we come in all of us and we collaborate on the things we need to collaborate, we coordinate and never ready for the week. So, I think we'll see more of that sort of coordinated approach to when we meet in the office and when you're free to do as you will. So, that's one of the effects that we'll probably have these days. And then you can say, in the beginning, that might be a bit challenging if a lot of teams want to be there on Tuesdays, then of course, that [inaudible 00:08:51] something from the parking in the office from the cafeteria, if you have lunch provided. So, you also have to get smart about this. And plan which days are the collaboration dates for each team in an office. So, there, I expect that we get better at workforce planning. And we could then size down our offices considerably or alternatively, we can grow our teams quite a lot without increasing the office space by having some collaboration days on Tuesdays, Wednesdays, Thursdays, for example, and different teams coming in at different times.

Then also on the office space, of course, distancing and having the social distance part, could be important also in the future that you have the opportunity to maybe segregate teams or individuals to reduce the risk of spreading if there's a new pandemic. So, people are probably going to think more about the flexibility of their office space and how they can reduce and increase capacity easily. Moreover, for office spaces, of course, and I think we've seen this now as well, it's extremely challenging if you have lunch provided to assess the number of lunch packages or meals that you provide. So, some of these things as well, we might see that

people kind of register in advance if they want to use an office space if they want to have the lunch provided. So, the office as we know it, where it has been kind of available for the employees at any time, you get food whenever you come in, it's a very flexible solution might move more towards the co-working spaces that we're seeing from WeWork and others, where you book in advance. And you show up at the time you booked. This could also help increase the utilization of the office space and increase the value. Because offices today it's kind of a fixed cost. You try to minimize for a company.

Thorbjørn: Yeah. Okay. Great. This is great. This is really good for me because it hits directly in my thesis area. So, this is great. I want to talk about societal mobility paradigms. I don't know if we speak the same terminology. But what I'm thinking about is stuff like the digital nomadic work theory, and factory paradigm. The factory paradigm was a coined term used by some British researchers. It basically means that the 08:00 to 04:00 work week that we're used to might change, right, and in the context of social mobility. So, I want to ask you here, how these changes, how will they enable or disable these societal mobility paradigms such as digital nomadic behavior, the factory paradigm, and overall social mobility?

PM: Yeah. That's a good question. I think what we expected was to convert to this nomadic work culture, where you can, as I understand that you can work from anywhere. Of course, the technology has been there for some years, the social acceptance has not, but now with COVID, we also have the social acceptance to do. So, of course, it is possible. One of the effects that I think we'll see now in the pandemic is that workload and the hours you spend increases, actually, yes. Which is maybe different to what we expected to see when you take away the commuting time, is that oh, you get more time with things you enjoy, spending time with your family, and so on. But most of that time has, unfortunately, gone into more work. And of course, as you move more to more the nomadic society, work society then you might see that the work hours increase even more, and the lines blurs even more between private life and work. So, that's a very difficult challenge that we need to address and keep an active eye on to make sure that we don't just increase work hours a little bit as we become more and more flexible.

Then the factory approach which I understand to be showing up at 08:00 and working until 04:00, for example, every day and [inaudible 00:13:46] every day, just like you do in the factory, it is, of course, outdated. And it is, as most people don't work in factories anymore, it is a strange remnant from an era which we're no longer in. At the same time, it does provide predictability and it does allow for managers, leaders to know kind of when to expect your employees to be available and when not. So, there are some advantages with that working model as well. In most of the Nordic countries, I think in all, we have the concept of flex hours where you kind of, you work a couple hours extra one day and then you work less the next day. So, we're kind of used to having the factory model but with a flex added to it. And I think this intermediary model is quite robust because it's been around for a number of years, and it's also quite popular. And then in that model, of course, there is an expectancy that you are available between say 09:00 and three o'clock, and then hours before after that you can flex.

And of course, that's important on the collaboration scale, if you want to collaborate in real-time. And of course, now technology is making that easier and easier across distances as well. So, then, if you want to collaborate in real-time, it is convenient that people are available at the same hours every day, that not some people start work at 04:00 in the afternoon, and they can't attend a meeting at two o'clock, for example. So, I think it's not like we'll go revert to the factory, work by form, or that we'll move towards the nomadic one. I think we're in a fairly robust state now that I would imagine we would stay in for the foreseeable future with, of course, some strong exceptions. If you are a factory worker, then you're on those hours. And if you work in a small team, then maybe you can have the nomadic culture, a small team with fairly young colleagues, then maybe you can have the nomadic ones. But for larger companies, such as the ones that I work in, I don't really see that changing all that much.

Thorbjørn: No, okay. I had something pop up, but I lost it. It's fine. I have a good [inaudible 00:16:26] things. So, no, actually -- So, this is like from a purely interest's perspective. So, you are leading a team of about 100 people, have you noticed a change in productivity with the models, the different models?

PM: Now, during the pandemic, where we have this more nomadic style, the productivity has increased in the way we measure it. But then productivity, when you're working in an advisory business, is kind of how many hours do you put on the project compared to how many hours you put on the internal areas. And we spent more time with our clients during the pandemic and less on the internal stuff. But that also means less time for learning and development outside of the project. So, it's, also I think, everyone's aware that temporary situation and we expect this to cease at some point. We haven't really built those online spaces for learning and development, which is extremely difficult to do when you have an organization that's used to learning offline. And even if we have access to a lot of great online courses, and all of this, it's not that widely used, because people are more used to get together and discuss things and learn from those discussions. And it's kind of uncommon to do this in a virtual setting. So, I think that's also a large change we'll see over the coming years that people will get more used to also doing learning and development online. And not only passively listening to a course, but actually engaging, sharing ideas, and taking some learning output, which is a lot more challenging on the screen than in a physical situation.

Thorbjørn: Great. Great, great. Thank you for that input. And this is a bit of a floaty question because I needed to look into the extremes of my future scenarios. So, if Corona were to change the paradigms, how will a future city look like under these new paradigms? And I'm thinking stuff like, I looked into your CV, so I've looked into where you have specialized before. So, stuff like transport, urban development, maybe health development and such things. Do you have some insight on that?

PM: Yeah. So, one of the, as an example, last year, the [inaudible 00:19:25] insurance company, they announced that they are getting out of their offices by the lake in Copenhagen and their new office space that they are renting only have space for half their employees at any time. So, they said that two-thirds of their employees will be working from home on a permanent basis. And of course, if other companies follow suit and do the same thing, then this has a huge impact for the demand for mobility, especially around commuting which has been, our transport systems are under the most strain. And it is what we dimensioned for when we say we need a new road, or we need new bus lanes or more cycling infrastructure, we say it's always the cars, during commuting hours, there's an undersupply of mobility, and the demand is too high. So, if the pandemic leads us to a more nomadic work culture, then the commuting strain and society would be much less. And the most expensive problem that we have in our transport systems today is congestion. This is what's costing societies around the world the most out of any issues you have in mobility and transport.

So, a more nomadic work culture could play a role in reducing the problem of congestion. And we can then maybe postpone or even reduce infrastructure investment into larger highways and roads and focus more on making cities livable and nice for humans to be in, rather to make them efficient for cars. And there's a lot of other trends pointing towards a more human city, instead of more and more efficient transport systems with larger and larger highways. I think we've seen across the US that that's not been the right solution for societies for humans to thrive and enjoy the cities. But the pandemic and if there is a paradigm shift that could have a positive contribution effect to that. So, that would be kind of the main point I would see around the -- if we go towards the nomadic work culture.

Thorbjørn: Great. This is super great because it falls in line with the newest theory that we had, during the corona semester, like universities has been shut down for a year now. So, this is really -- it's really great that the like, the professional scene is seeing the same trends. That is great for my future scenarios. So -- [crosstalk]

PM: Okay. Good [inaudible 00:22:23].

Thorbjørn: Yeah, it's amazing. It's amazing. I'm appreciating this feedback very much. But you also specialize in hub spaces at some point, right?

PM: Yeah. Do you mean kind of transit-oriented development?

Thorbjørn: Yes, yes. Transit. Yes.

PM: Yeah.

Thorbjørn: Do you have some input on how that might be developed in let's just say a nomadic culture, traditional nomadic culture?

PM: Yeah, this is a large debate in the field of urban development and how you develop **[inaudible 00:23:03]** nodes. And a lot of the discussion is around kind of how you develop an efficient node, for example, a train station, which has bus connectivity, taxis, micro-mobility, and cycling, without creating kind of a bubble. Because if you would do that, if you say, okay, we have this great city block, it's a mobility node, so it's great to live there, it's super-efficient. And then the next question is another node and you make a new bubble there, then the space in between those bubbles could potentially be very underdeveloped, not very interesting, and not really nice to live in either. So, that's a huge concern that these mobility nodes, they need to be integrated into the fabric of the city. And you have to be really careful not to build up these kind of small islands of where people who can't afford to live close to a node in very expensive apartments and they have any and every kind of service.

And that tails back to how these nodes will look like after the pandemic. Because it's not possible to put every function you need in the city into one of these mobility hubs. You have to rely on the surrounding city and integrate into the surrounding city to make this a space that's used in connection with the city and not as a separate node, which could have a detrimental effect to the urban development. So, what you want to put in the node must be things that it doesn't make sense to have in the city. Because it's very tempting when you say, oh, we have this great connectivity here. Let's put in the dentist, the school and the kindergarten, the offices and the shopping mall, like put everything into this part. But then it's very, very easy to turn it into this bubble. And I think we've seen this. You can look at some places where you have a train station, and there's a shopping mall you come into and you can get everything there, you go to the shopping mall, you go down to the train station, again, you don't see the surrounding city, there's no urban life or fabric that enjoys the benefit of this.

To some extent, you can say, when you get off the metro in Copenhagen, for example, you can see **[inaudible 00:25:38]** then you can go straight into **[inaudible 00:25:39]**, you can spend your afternoon in **[inaudible 00:25:42]** and then go down to the metro gate without seeing anything of the city. And if that's a really strong **[inaudible 00:25:50]**, of course, the space between the metro station is kind of dead, and nothing happens and the stores and restaurants won't be open there. Which is, of course, an extreme scenario. So, the functions you want to put into the mobility hub after the pandemic would be something that drives convenience and efficiency during the workweek, or the working days when people have the efficiency focus. But then it needs to be flexible enough that you can convert the hub into a social space when you don't have an efficiency need. And this is quite difficult because some hours you have this need for efficiency, people are going to work or to pick up their kids, or maybe getting some groceries if those aren't delivered to your home.

And then they want to be efficient, they want to spend as little time as possible, and they want to go straight through. Other times they want to meet other people, socialize, have some kind of interaction, and that's a very different space from the **[inaudible 00:26:57]** space that we see in the transit stations today. And of course, some places this **[inaudible 00:27:02]** by different levels. You can have a restaurant shopping level, and then you have one level for pass-throughs. And these kinds of things. So, there are good ways to solve this. But you have to keep both of those purposes in mind when you do so. And then you have to be careful not to put all the functions you have in the city into this mobility node, but also integrate it into the surrounding neighborhood that it is in.

Thorbjørn: Okay. Good, good. Great. So, my final question here, it's also maybe concise about the things we've talked about in the interview. And the last question is, how will personal mobility patterns change in a post COVID society in your opinion?

PM: That's an interesting question. Personal mobility patterns don't normally change much. And there's several aspects to understand here. One of them being that the first mode of transport, for example, you pick up during the day, is most likely the mode you'll continue on. This is a huge topic within cycling, for example. If you want to get more people on the bicycle, which is more sustainable than a car, then you have to make their first trip a bicycle trip, because then they probably continue with the bike. Whereas if they have the first little trip to deliver their kids in school in the car, then they'll continue in the car. And the personal mobility parents are quite sticky. So, it is very difficult to change the way you get to work, for example. A lot of times this is kind of a land-use issue where you said you've established yourself, your family in an urban environment where there's a high density and you can have car sharing, you can have shared bicycles and these kinds of things. And then it's quite easy just to have different [inaudible 00:29:08] around the city. But conversely, if you have established yourself in a [inaudible 00:29:14] dependent housing development outside the city, for example, then it's very difficult to change the mobility pattern because you are already in a car-based development.

And then if you live 20 kilometers away from where you work, then other people aren't going to cycle that distance, especially if you have to pick up groceries and kids and these kinds of things. So, the personal mobility patterns are not very fluid, they're very static. The way that we might see that it changes is of course and unfortunately, that more people are choosing the car instead of the public transport. That's a huge challenge because we don't have the capacity in our own networks to move everyone from public transport which is very efficient, a lot more sustainable than cars and move them into the cars, this will lead to a lot of congestion. And I think that one of the roles that we have as a society is to try to get the personal mobility patterns to shift towards the sustainable modes; walking, cycling, public transport. And what the pandemic will do for that is probably not contributing to it in a good way, on the short-term. But I am optimistic that in the long-term, we'll be able to reverse that trend and get people back on the bus into the metro again once they feel safe to do so.

Thorbjørn: Yes. So, an extra question. We have a little bit more time with that. Do you think that the concept of mobility as a service might catch on easier because of that, of the new way people might behave?

PM: Unfortunately, it's the opposite.

Thorbjørn: The opposite? Okay.

PM: Yeah. Because the backbone of any mobility as a service is the public transport network. And we did a study of MaaS Global in Helsinki, which was the first fully operational mobility as a service platform in the world. And what we found was that the people who subscribe to the mobility services from Moscow, well, they were actually more likely to use public transport than the rest of the population. And this was, of course, a concern from the public transport operator and the public transport authorities that the MaaS will take trips away from buses and metros, and trains and put them into taxis. And we saw the exact opposite happening, which did a good thing for the city, more people are in public transport. But that's also something that the pandemic is challenging how many people can be in one unit? What's the safe distance and these kinds of things. And then the dynamic doesn't really have an impact on the payment problems and the ticketing problems around MaaS, because that's often the most challenging part is to get the transport operators to agree how you split the revenue and the profits. And there, the pandemic doesn't really offer anything one way or another.

Thorbjørn: Okay. Which was also a side question, because I did MaaS research last year. So, that's why I was also interested in that. But it might be useful in my scenarios of MaaS would catch on. Great. We have a few, we have a few more minutes. So, do you have anything to add that might be relevant for me?

PM: Let me think. One thing that we're seeing to some extent with the pandemic is that people's priorities are shifting a bit. So, people want to be closer to family, they want a bigger space to live in, some of these things. And that also has an impact on the mobility need. Some people are repatriating, they're coming back from being outside of the country for a number of

years. And also bringing in new thoughts, new ideas. So, in that sense, that could help us with increased in technology adoption in society that people are moving around a bit more. It's also made, of course, immigration, these things much more difficult. So, that would be a trend in the opposite direction. But I think there are some large structural changes in societies around the pandemic that we haven't yet understood, or seen the effects of that has yet to come.

Thorbjørn: Great. Okay. I think that is all then. And I just want to ask you, if something pops up during my further research, can I email you and get your input on it?

PM: Yes, please do. It might take me a few days to get back to you. It's very busy here, but I'm happy to help you if you have any further questions.

Thorbjørn: Yep, that is great then. The time is not so bad. That's it. It's okay. I fully understand that the professional lives, you're busy people. [crosstalk] Hopefully, it's me next year sometime. But yeah. Great. Well, thank you so much for your time. It's great to get the insight from people working in the professional aspect of mobility for my thesis. I am talking to urban development specialists and work relations specialists as well to get a full picture. So, it's very appreciated to get the professional aspect as well. And for people who work with actual, like physical development [inaudible 00:35:28] correctly.

PM: Yeah, of course. And once you finish, I would also love to get your thesis if you can send it to me.

Thorbjørn: Yes, I will. I will. I will send it to people involved who ask for it. My leading professor also wants it because I got access to his book before it was published. So, I will definitely send it to you when it's done in May, or maybe after my exam in June.

PM: Sounds great. Then I'll have something to read over the summer vacation.

Thorbjørn: Yes. Hopefully, it's as good as I plan it to be. We will see. Thank you so much, PM. Five minutes earlier than expected. That's great. Hopefully, you have a nice day. Spring is coming.

PM: You too.

Thorbjørn: So, it will be nicer going forward.

PM: Great. Have a good day. Bye.

Thorbjørn: You too. Bye-bye.

APPENDIX B:

INTERVIEW PROFESSOR SOCIAL MOBILITY AND INEQUALITY

Thorbjørn: All right. So, it's recording. Great. So, first off, thank you very much for your time. It's very interesting. You were highly recommended by Klaus. Yes. He said I should definitely get in touch with you. And I looked over at your work, and I agreed with him. So, that's why I'm so happy to have you here. So, we're going to start with the baseline question here. And my baseline question is just has Corona, the COVID-19 changed the way society approaches, social mobility surrounding work at all? And if so how?

Prof: Sure. And by social mobility, you mean, kind of mobility-related to jobs? So, corporeal mobility rather than [inaudible 00:00:51] diversity? Yeah, yes.

Thorbjørn: Yes. Yes. Yes.

Prof: Yeah. Great. Yeah. So, it's obviously an interesting and very pressing question that everyone's racing to try and get their head around. I think one of my frustrations over the last year is that we've been in a situation of rapid social change. And a lot of commentators are making grand statements and claims about what's happening, and how mobility is being changed. But a lot of this is quite -- it's anecdotal. It's actually not based on much reflective research or research with participants. And so I think it's quite interesting that -- and myself included. I've written a commentary and feel quite -- yeah, kind of ambivalent about it. Because I think that in order to understand complex social change, it requires sort of lengthy reflection, and an evaluation, and, of course, primary research. And a lot of that is still taking place now with participants.

And so I think, I guess part of -- this is a very indirect answer to your question I appreciate, but I think that yes, there is incredible social change taking place very rapidly with regard to mobility. So, how often people are moving and where people are moving, and how that then is changing people's kind of broader habits of living. But I actually don't think that we're in a place that we can actually say with any clarity, what those changes are because those changes are still happening now. Obviously, a lot of places, to take an example like Australia, for example, we went through a number of lockdowns last year here in Melbourne, but other parts of the country didn't. So, in Australia, different states have got very different patterns and experiences of changed mobility in the wake of COVID-19. And even within city, so within Melbourne, different areas have had different experiences of lockdown.

So, there are clearly some very interesting kind of micro geographies and macro geographies going on here, where different things are happening in different places. I think one of the, I guess kind of one of the overall things that have interested me is not necessarily the change itself, or the changes that have taken place, but rather, people's capacity to change. You know, I think as we started off, when we started off this call today having a brief reflection on changing use of technology. And it's interesting how, even in conversations now people are surprised at their ability to change and their ability to work differently. And for me, it's actually those things that are really fascinating, because they can tell us something quite fundamental about people's capacity to change and in ways that they never thought was perhaps possible.

And so when a lot of our social research is forward-leaning, it's like what would you like to do? Or what could you change? Or what could you foresee what you anticipate, and I think what the rapid change over the last year or so has shown is that people can change in all kinds of ways that they did not anticipate. So, a lot of the sorts of questions that we ask the social scientists are, to a certain extent, I wouldn't say redundant, but we need to take with a pinch of salt in terms of people's capacity to anticipate what they are capable of. And the changes that many, many people have experienced have been ones that they would not have been able to anticipate at all.

So, yes, so that's a very long-winded answer to your question. I think changes are happening. But I think that we absolutely need more primary research with people who, in different working situations from -- whether that's by different modes of transport, by different sorts of commuting, by different sorts of mobility, we need some decent empirical research with people to actually identify and sort out what has changed. Because as I say, we still don't really know the answer to that yet.

Thorbjørn: No. Hence why I'm doing this and starting slowly, in my master's thesis here. So, it sounds to me like you have an idea about where things are going yourself. Would you care to elaborate a bit on that?

Prof: Sure. Sure. I think there are some interesting predictions being made in this space. And I think what's interesting, and again, I'll talk from the perspective of being in Australia and Melbourne. And again, I think it's really important that we avoid universalizing diagnosis when we talk about these things. I mean, yes there are certainly a mobility of ideas and ways of working in terms of how different working practices spread. But we need to think about these changes as being geographically routed. And I think in terms of I think what's really interesting here in Melbourne, is that there were statewide restrictions here in the state of Victoria on the number of people that were allowed in buildings. And those density restrictions

have progressively been rolled back over the last few months, to the point where now, businesses can operate as per usual.

And I think there's now a very interesting tension playing out between some organizations that are demanding, like my own university, demanding that people should be working back in their office, should be commuting daily back to their fixed place of work away from home. And what a lot of people actually want, which is to work from home, to work remotely. And I think there's a really interesting politics there in terms of where decisions are being made, how those decisions are being made about, who can work remotely, about how often they can work remotely. And the kinds of, yeah, the kinds of decision-making process around that. Because while it's very easy and tempting to imagine these choices as happening at the household level, or for individual workers, the choices that have been made here have really big implications for how organizations work and organizational culture here.

So, when there are much fewer people in the office, for example, or in the workplace, it creates a very, very different dynamic to when everybody is in. And not saying that everyone should be in, but what I'm trying to say here is that we've tended to think about a lot of the news media coverage around working from home tends to individualize it. Whereas actually, what we need to have are conversations at the -- Yes, at the family level, but also at the organizational level and maybe even further up at the city level. What sort of organizations do we want to be a part of, what sort of workplaces do we want to be a part of, what sort of cities do we want to be a part of? Because these changes that are happening are having potentially widespread ramifications for organizations and of course, wider spill-on effects across cities. And again, we can't say this with any kind of great certainty at the moment, but there's certainly anecdotal evidence of lots of businesses and CBD in city centers in central business districts, hospitality, [inaudible 00:09:33], coffee shops, that sort of thing that are really struggling because people are not using those services in the same way that they were before last year.

So, I think, yeah, there's some interesting -- I think some of the most interesting politics of mobility will be taking place around workplaces and the conversations around that. To what extent can your line manager or managers generally dictate where you work? And again, this depends, this is different across different organizations. And there are kind of larger kind of policies at the state level and the federal national level here in Australia, that kind of impact on what companies can or cannot do. And yeah, so I think it's a really interesting time to be doing your projects when there's so much flux, and a lot of the answers to these questions are still to be resolved.

Thorbjørn: Yes. It's also why I choose to do a future scenario approach to basically reflect upon the things. I have also -- I have involved the directional -- no, sorry, the regional manager of mobility from [inaudible 00:10:55] as well in this. And it's very interesting, you're saying this, because he also reflects on this and how it functions for the companies that he is associated with. And he has the same kind of questions that you have. So, there's definitely some reflection going on at the corporate levels of how they want to approach. So, I like the connection here, especially because it matches up well with the theory as I also sent you in January, the meeting-ness concept and similar [inaudible 00:11:31]. There's very -- like it is a deep-rooted issue or a question that will have to be answered at some point [inaudible 00:11:42].

So, I want you to comment a little bit on the permanency of this potential culture change that we might see. So, from your current knowledge and your background, do you think that the permanency of this change is something that we will see established or will be rolled back to what we're used to, like pre-2020, basically? Do you think that people will choose to go back to the normal as I found people adopted factory paradigms, instead of adapting to a less factory paradigm?

Prof: Yeah. It's a good question. And I suppose that a way into that, into giving an answer would be to say that there are obviously different ways of thinking about change, and how we visualize and understand and imagine change and how that takes place. Because on one level, there, certainly -- you can talk about and as sociologists do, paradigm changes. So, that's the

kind of broad macro-level changes that take place. And if we think about change, from that perspective, then that very much affects how we would answer a question like this. So, there's kind of one way of doing things, and then there's sort of a big event, and then you get a paradigm shift that sees people working in quite a different way. And so there's two states of affairs, A and B, and a big event in the middle that creates that kind of change from one to the other.

But I think in my work, there's, I think it's a little bit more complicated than that because I've always been interested in social theories that are, I guess, more attentive to more incremental changes that take place. So, that requires quite a different way of understanding change. And understanding what you're kind of looking for there. And I suppose, just to use a kind of really tangible example. If we were to think of our own practices over the last year, how we started off doing things maybe in March or April, and maybe how we're doing things now. You know, if we were to actually sort of recount on a kind of month-to-month basis, what we were doing and what was taking place, it would likely not look the same at all over that period. So, there's a whole lot of incremental changes that people will have been making during that time, experimenting with new ways of working, experimenting with new spaces. Many of my post-grads here, we're trying out all sorts of different ways of working during that period, both in the office and also in a variety of other kinds of third phases.

And so that change is much more kind of slow creep and much more incremental, and sort of flies under the radar of these more macro ways that we tend to, or certainly the media talks about change in terms of these big paradigm changes. So, I suppose that's kind of my answer to the question. I think there's certainly some big, obviously, there are some big changes that have taken place and changes that may well stick around. But I think that those big changes are, of course, complicated by these much more incremental changes that are happening under the radar. Such that changes that people wanted, or ways of working that people wanted to continue with last year, or even at the start of this year, may not be how people are imagining and thinking about working towards the middle of this year or the end of this year.

Things really -- my work has always been informed by thinking about embodiment and bodily experiences. And bodily experiences, as we know, are very, very changeable over time. And so things like frustration, boredom, these are not things that happen at an instant. These are things that are catalyzed incrementally over time and lead to potentially big tipping points. And so I think, for me, I think what will be very, very interesting is how other kinds of variety of changes that take place over the course of this year where people absolutely may revert to being back in the office.

But then again, just because it looks like people are working in the same place doesn't necessarily mean that that work is -- that we snapped back to a previous state. What if we were to imagine this is state C, state number three, as opposed to going back to state A. So, for me coming in here now, for example, I've come back into work a little bit. But it feels very, very different to pre-COVID, just in terms of the sorts of activities that I'm doing at work, the sorts of interactions I'm having at work, I would never be having video calls through my computer at work, beforehand. So, I think rather than -- even if we're thinking about that first sort of wave understanding social changes, big paradigm shifts, I still think it's probably more useful to think about A, B, C, these kinds of developmental changes, as opposed to going back to a previous state.

Thorbjørn: All right. Great. So, this covers my first question. So, yes. I want you to get a bit more like, go into a little bit more detail now about things. So, we are moving away from the great macro perspective. So, I want your opinion because you're more specialized in this, I gather from your research. So, how the COVID situation, in a future perspective, how will that affect personal mobility and/or immobility from your perspective, or from your, like knowledge bank?

Prof: Sure. Yeah, I mean, it's such an -- of course, it's an interesting question. I mean, I'm thinking of the four projects that I've done recently. One has been on commuting, one has been on fly-in, fly-out long-distance commuting, one has been on gig work? So, kind of mobility within the city, and the other has been on kind of the automation of work and the

various modalities that have happened there. And I think each of those actually, they would probably be quite different answers. And I appreciate that, you know, reading through your outline of research, you're mainly interested from what I can tell in the kind of everyday commuting, am I right?

Thorbjørn: Yes. So, I'm interested in -- like my specific group, like basically I started out way broader, but I've been put in place and said I need to focus on a specific subgroup of people because the time limit of my thesis is narrow. So, I went from thinking very big to thinking in specifically office-type situation workers. So, basically, you and me, people may be teachers and stuff like that, those people who have the capability to utilize technology, so everything that is not trade work. So, people who work -- project managers, and similar things, those kinds of people are interesting in this specific situation. I don't have the time and resources to do extensive group comparisons at this time, maybe in the future. But at this time, I cannot do that. So, this is specifically for this subgroup. But you are more than welcome to reflect on the other groups because that will be part of the discussion at the end of my thesis.

Prof: Yeah. I mean, I think one of the big questions about future scenarios for broadly, white-collar workers, office workers, knowledge workers is the extent to which we will travel to meet up. So, I'm sort of thinking about your interest in meetings and meeting-ness. And certainly in the academic space, obviously, one of the big things that we look forward to with conferences and conferencing and meeting up with other colleagues in our research teams, in other cities, and a big part of that was face-to-face interaction. And, of course, a big part of that was work, but a big part of that was also having -- [crosstalk]

Thorbjørn: Socializing.

Prof: Yeah, exactly. So, I think I'm about to attend the American Association of Geographers' annual meeting over the next couple of days. And it's a virtual conference, which is great because I don't get jet lag. But at the same time, it's really, really sad in terms of just not being able to hang out with people and develop those friendships and connections and allegiances that that really -- I wouldn't say can only be facilitated that way, but are certainly catalyzed by the opportunities for having coffees and having more informal meetups. And, of course, that's a bigger question that a lot of companies are grappling with, at the moment in the project that I did on fly-in fly-out workers, and a large number of those respondents that we interviewed were kind of IT workers that travel between cities were managers that traveled between cities to oversee teams and have meetings. A lot of that activity, of course, last year has been taken away. But I think, and obviously, it's now going to be a big question for those companies, and individuals about whether they need to continue doing that sort of work.

And it was quite interesting, the project because it started out from the perspective that this work is -- sorry, these sorts of mobilities that take people away from their home for days, weeks, and sometimes even months at a time, it creates big significant negative effects for individuals and families involved. And we're looking specifically at the kind of family relationships and how they were evolving in relation to this sort of work. And so I can see that an increase in virtual meetings like this will be beneficial from that perspective, but at the same time, yeah, it's obviously kind of taking away a large kind of, not just social element, but a large element of the kind of the intimacy of work relations that develop between people. You know, John already talks about trust, but of course, there's a lot of other things that kind of go into those relationships. It's the way we work each other out and kind of develop connections. And so a lot of that has obviously been put on hold. And, again, it will be for individual companies and businesses to figure out the extent to which they want to continue that once travel opens up properly. And certainly, domestic travel in Australia is opening up, but we're seeing only a fraction of the travel that did happen.

Obviously, companies, there are multiple other things that are going on here, there are kind of economic challenge that a lot of companies are facing, getting rid of line items with regard to travel is a very easy way to save money. So, that's certainly one of the considerations here. There's corporate responsibility around environmental carbon emissions and so flying, and kind of the sort of flight shaming that we've seen happening in Europe is certainly something that I think companies are going to be taken very seriously here. So, as ever, it's going to be -

- this is an opportunity for organizations and companies to actually sort of really take a step back and think, okay. What travel do people need to do? And how is it integral to not only our operation but also to the kind of well-being of our staff and what they want from their work? And as ever, there's no clear answers here. But I think that recognizing the kind of social aspects, and the kind of more experiential aspects of work-related travel is something that tends to be downplayed in a more business-related, business-oriented evaluations of mobility. And so we really need more research that actually takes those aspects seriously. Because I think a lot of people are missing it at the moment.

Thorbjørn: Yes, definitely. Like, from what I heard previously, as well as. There's a lot of things up in the air right now and that's what makes it very interesting. And it's a juicy, juicy topic in this context. Okay. Great. So, you have done some research on specific ICTs, and similar things, I would like to even go into that a bit more. So, from your perspective, how do you think ICTs will change to accommodate a potential digital nomadic future after COVID-19?

Prof: Yeah, I mean, obviously, it's, as we found last year, many IT providers have been the big winners here. So, conference, online virtual conferencing, via Zoom and teams, it's been a massive, massive, massive increase in the use of those sorts of services. But of course, there's been all sorts of other technologies that have sort of burgeoned over the past year. And I guess my research in the gig economy, space has been one of those that's really changed where people were locked down and relied on the mobility of others to bring food, to bring deliveries, to ferry themselves about sometimes. And so platform companies like Uber, like Deliveroo, here in Australia, but of course, countless others have really been beneficiaries of the lockdown, to a certain extent. So, yeah, so going forward, I think we're going to see, we are likely going to see just the sort of entrenched dominance of specific ICT companies in this space, but I think we'll also see people are talking about how platforms are kind of converging in all kinds of ways.

So, yes we're seeing online providers, like Amazon, stray into the high street, for example, through things like Amazon Go. But equally, we might also see online -- we might see some of the kind of virtual platforms like Uber, increasingly spread their wings into other kinds of physical operations. So, I think, yeah, I think this is a huge -- this is a big-time of big technological change. But I think there's a lot of, and rightly so suspicion and critique, certainly from progressive social scientists, who are raising important questions at the moment about the extent to which such tech company dominance is a good thing. And, of course, we've heard a lot about the exploitation of workers and tech workers that are very often at the other side of things.

Certainly, again, in my project on Uber and Deliveroo, gig work, you can see that. But I think also the extent to which people are having a say in the evolution of these technologies and the way that they sort of filter into our lives. And one of the interesting things with the project that I did on gig work was actually looking at a consumer side of things that kind of what do people want. And what we found is that people were highly attuned to, I guess, the kind of ethical dilemmas of using various platform services. And this is not something that they downplayed, but it was something that they actively wrestled with. And their decision-making practices and the way that they related to these platforms changed over time, as well. And we've got a sense of that through these kinds of interview recollections. And so I think, again we're obviously in a really -- we're in a very, kind of pivotal time in terms of this vast change in the kind of tech ecosystem. But I think that it's really important to keep in mind that the changes that are taking place, by no means inevitable.

And certainly, as a progressive social scientist, I want to see more, not just regulation of these tech companies, but I want to see more dialogue with cities, with consumers, with organizations, in terms of what do people want, and what do families want? What do cities want? Such that it's not just Silicon Valley that's -- we're not just marching to the beat of Silicon Valley's drum in terms of the products that they want to shift on to us. I think there needs to be much, much more debate and dialogue taking place here. And again, my work on automation is it's really kind of taught me that this is a space where politically and ethically we need to be having those conversations.

Thorbjørn: Yeah, I agree on that as well. But it's also like, from my perspective, it is like convenience beats all in that aspect. So, it's the same, I don't know if you're familiar with Gabe Newell, the director of Valve, it's a gaming company that effectively eliminated piracy for a while, online piracy, because it has a terminal community, and that can apply as well to the gig work. It's the same kind of idea about it. But yeah, it's the same thing, but yeah. But it also ties in one of my sub-questions to this specific, like the social mobility or social mobility justice. Right? Would you maybe share your thoughts in relation to that?

Prof: Yeah. I mean, certainly, it goes back to what we were talking about, at the start around the politics of this mobility and who gets to decide on new ways of working, and already, even within a city, a city like Melbourne, there are all sorts of questions around mobility justice taking place, even in the subgroup of kind of white-collar workers that you're talking about here. Generally, less economically advantaged people have to live further away from the city center and therefore have longer commutes to come in. And so if you're demanding people to come to work to come to the office in urban centers like Melbourne, then it's people that are living on the periphery of the city, people that are less well off economically that are bearing the brunt of the challenge of having to do that commute. And obviously, my own work sort of shows that well, commuting is both can be a burden, but also can be uplifting for some.

But in terms of the opportunity costs, in terms of what commuting time takes away from we're going to be seeing questions in mobility justice come up for and those are quite different for people that are living in CBD areas or inner cities that have got roughly 20 minutes cycles into work versus people that have a two-hour train commute from the suburbs. It might be the case that people from the outer suburbs who have these long commutes can negotiate, working from home for a few days a week, and maybe that will make living in those outer suburbs and much more desirable ultimately, possibly. But again, it's the decision-making practices and where and where and how those take place that are going to be important here from the perspective of mobility justice.

Thorbjørn: Yeah. It's one of the specific factors I'm also looking into is the need for commuting. So, the trend is right now that white-collar workers are living in cities. But if the shift to a digital nomadic work ethic, they might want to move away and give more space to the cities for people who need it, "more," right? It's one of the aspects of my scenario design here. So, it's an interesting thing. So, you've also done a lot of stuff that ties into the meeting-ness. I want you to talk a bit more about the meeting-ness aspect here. You do research on interpersonal relations, in the context of mobility. And, in your opinion, how do you see they might change in a digital nomadic future?

Prof: Yeah. I mean, it is interesting, the point you make about the potential for workers to be moving outside of cities into rural areas. I mean, we've heard a lot about that here in Australia. There's anecdotal evidence to show that people certainly in Melbourne have looked to regional areas that are maybe two hours, three hours drive or train ride from Melbourne basically, to take advantage of getting more bang for your buck, a larger house with more land, larger gardens because of the astronomical house prices in Melbourne. So, you can understand, certainly why people are looking to do that. As ever, though, it's complicated. Because imagine if those people do move out, there are new tensions in terms of interpersonal relationships, there's new tensions that are going to emerge in the communities they've moved out to.

A lot of these rural communities, even ones north of Melbourne that I'm thinking of, obviously have very, very established communities, groups of people. And these kinds of new waves of people moving out, are going to potentially mean that these communities have to reconfigure in terms of who they are and how welcoming they are. And you hope that they would be welcoming, but there's already evidence that there's tension there. And of course, it will then put financial pressure on these communities, in terms of house prices there, and we're already seeing that, in some of these desirable locations north of Melbourne. So, I think, for me, it's really interesting that these use kind of social conflicts, interpersonal relations, it's not just about how we relate to work colleagues, and how we become kind of closer or more distant from work colleagues, as has been the case over the last year. But it's also about relationships to wider communities.

And again, I think the question of community is one that has become a little bit lost, potentially, in the focus on just sort of ways of working. It's like, well, okay. If our work changes will our relationship to our communities change? Because potentially, we can do more stuff in the communities that we're meant to be part of. Is that taking place? Maybe it is, maybe it isn't. And certainly, the lockdowns that happened last year in Melbourne, were an interesting experience. We had a five-kilometer radius where we could travel for three months and it meant that people felt incredibly immersed in their local communities and would kind of -- yeah, were doing different things. So, yeah, so I think that's a really interesting part of this equation. I will stop there because I know that you've got other questions to ask, and I've got to leave at five minutes to the hour, I'm afraid because I have [inaudible 00:40:07].

Thorbjørn: That's fine. That's fine. Great. Yes. So, let me just pick and choose here then. So, could you try to sum up from your perspective in regard to personal mobility patterns, in a, let's call it a post-COVID society, do you see positive mobility changes or negative mobility changes? And could you comment a bit on both, maybe?

Prof: Yeah. And I think, again, from my perspective it kind of -- it goes back to the change that I talked about in terms of the way that we think about social change as being kind of the kind of macro matter, or the micro incremental. And I say that because things that can be good can change to bad and things that we might feel as bad can change the good. And I think that's a really, really important consideration when we're thinking about the future of work and the various scenarios that are being put forward by different people. So, yeah, absolutely, there's a scenario where we might all be doing a lot more digital nomadic work from home from third spaces, cafes, and so forth. And that might be something that suits a lot of people from the start. But as we know, things change, and people's relationship to what they do changes.

And so while that might be felt as a positive from the outset, can gradually over time be felt as a negative, as new discomforts draw in, as new relationships start forming, where we might realize that we actually miss a whole bunch of things about how we used to work. So, I think, from my perspective absolutely, there's kind of big changes that are taking place. But I think that from my perspective, I think these various scenarios that are being devised here and by yourself included, are excellent in terms of helping us to think about the various opportunities that we have going forward. But I think also what I would really caution and certainly, when you write your thesis, I would really encourage you to think about the way that we make sense of our choices and our situations is being incrementally evaluated all the time by us.

And so, therefore, rather than thinking about four or five mutually discrete scenarios, and one being the best one being the worst, those things might flip. They might change over time. They might change over time for the same person or between people in a family or between people in a workplace. And so I think that being open to that flexibility, being open to flexible working is as much about being flexible in terms of knowing that what we want changes over time, as it is about remote working, for example. So, I think that's probably how I would answer that.

Thorbjørn: Okay. Great, great. So, yeah, so you have like, three minutes until you need to leave, so I don't think we can -- [crosstalk] Yeah, but I just want to ask you, if I have some follow-up questions later on, can I email you and have your feedback on some of it, maybe?

Prof: Yeah, I'll see what I can do, of course.

Thorbjørn: Great. Don't have to be like, amazing, long phrases or anything. I just want some input from the people I talked to if there's something specific that shows up that I needed input on.

Prof: Yeah, let me know.

Thorbjørn: Great, great, thank you, then. Okay. Then I won't take any more of your time. I'm very appreciative that you took the time to talk to me today.

Prof: No problem at all.

Thorbjørn: It's very useful to talk to someone from a different side of the coin. Because I talk to the professionals in the professional work setting, and they are thinking a lot of growth and economy and you're talking about more like the consequences. So, this is a great, great factoring in my design of this.

Prof: Good. Good. I'm really -- [crosstalk] No, I'm really, really pleased that it's been of some use. And so please, yeah, feel free to get in contact if there's anything else that you want to follow up with. And also, it'd be really great to see your final thesis and what you do with it [inaudible 00:45:06] at the end. So, yeah, best of luck for the analysis and the writing up. And try and enjoy it at the same time. It's a great project and [inaudible 00:45:14]

Thorbjørn: Yeah, I like the topic, the writing. That's the -- [crosstalk]

Prof: [inaudible 00:45:22]

Thorbjørn: Well, yeah. Great, thank you so much. And you have a great evening, I suppose.

Prof: Thank you. Yes. Yes, I will. I'm going to go and get my train now. But I hope you have a great day. Really nice to meet you. And yeah, keep me in the loop as to the progress of the project.

Thorbjørn: I will. I will. Thank you very much.

Prof: All right. Take care. Bye-bye.

Thorbjørn: Bye-bye.

APPENDIX C:

INTERVIEW PROFESSOR URBAN DESIGN AND MOBILITIES

Thorbjørn: So, yes. All right. Yes. Okay, great. It should be working. So, you are a specialist in urban planning?

Prof: Well, you could say actually, I'm more -- I've been working with mobility and transport for all of my career. So, the urban planning thing has always been there. But it's been more during the last maybe 10 years, I've been focusing on that. So, I know a lot about mobilities. I know about mobilities and the urban. But I don't know all the -- I don't know everything about you. Because it's not where I'm originally from. Originally, I have a Master's in environment and technology, and social science.

Thorbjørn: Yes, yes. I can see that. I'm using some of your papers in my projects. That's why I stumbled upon your name. I thought I needed to talk to you. But it's only a benefit that you have a mobility insight because I am from the mobility studies. So, this will help us speak the same language. Okay. First of all, I want your opinion on -- do you think that COVID-19 has changed the way society approaches mobility surrounding the work paradigm? So, by that, I mean, from your perspective, the way we work now, will that change in the future? And is that maybe permanent or have long-term effects from your perspective?

Prof: Yeah. It's always difficult to say anything about how the future is going to be because it's always going to be guessing. I think what is interesting right now is that we had 20 years ago, around 2000, there was a lot of optimism, techno-optimism, and now we got these new technologies. And that would mean that people would do much more tailor working or working much more from home. And there was the -- if you look back at some of the papers, or some of the research that was done at that time, there were big plans on how this would dramatically change mobility. What happened was that the opportunity to be online or meeting people online, actually meant that we started traveling more. Because suddenly, you had contacts and interactions with people in a lot of different places, and you wanted to meet them. Because

one of the things that is still the case is that people still want to meet face-to-face. It doesn't mean that they can only meet face-to-face.

But if you want to do any long-term contracts or obligations with people, you want to meet them face to face. But when that is said, I would say what we also learned during COVID-19 was that there are actually a lot of meetings that was previously thought as not possible that is possible online. I don't see that it's going to be so much as it is now. But I actually do think that it's going to be much more than it was before. So, I think there are going to be some things that it's much more accepted or much more that people are maybe not present at a meeting but are just participating online. I think that we basically were forced to learn how that works. And now I say we because I've been used to having online meetings for many, many years. But a lot of other people who maybe wasn't that used to it.

So, I do think it's going to change. I don't think it's going to stay as much as it is now. I think the need to meet people over the coffee machine or have informal conversation is still really strong. But I do think that a lot of things that people or employers previously didn't think possible, they probably changed. And what you can see already now is first of all that families are moving out of the cities. It's the first time in 30 years, I think that people are -- that there are people leaving, for instance, Copenhagen, and they are doing that because they are expecting that in the future, they're going to be allowed to work from home more. And you can also see workplaces scaling down square meters because they realize they can actually save money on rent by having less space. So, all that is happening now and I think that's clear signs that something is going to change.

Thorbjørn: Great.

Prof: That was a very long answer, I'm sorry about that.

Thorbjørn: No, that is okay. It's a complicated topic. There's a lot of factors in it. So, this is why I like for people to speak their opinion so I can use it to make my scenarios here. It leads me to the next question though, because you mentioned yourself like how can this possibility of a work culture shift from the factory paradigm to a digital nomadic paradigm? How will it change the urban landscape?

Prof: I think it matters a lot, I think what's going to be interesting is that you can say there's something about commuting, that's going to matter. Because if people work from home more, they're not going to be commuting every day. There's also and this is, again, I'm talking about something that you can see small signs of, but we don't know how it's going to be yet. But there is, I also read, I can't remember which article, it was basically saying that if people are going to work more from home, they're going to be even more -- they're going to have even more higher demand or having more expectations to the urban spaces around them.

Because if you work from home, you want to be able to go out for a 30-minute walk, or just go for a small walk or not do that much. And certainly, so it could be that actually, right now we're in a situation where there's a lot of emphasis put on urban spaces for dwelling as well. And then that's basically fighting with the whole, we want to have our cars everywhere and in front of our front door and we want to park it. These two things are basically paradigms that are fighting quite a lot these days, and the car is very dominant in the urban space. So, it could be that this is one of the things that actually might, that that balance might tip a little bit more towards like using urban space for something else than facilitating car transport.

Thorbjørn: Great. So, speaking of that, do you see any risks that are associated with such a change from an urban planning perspective?

Prof: I think in that perspective, but that's a little bit different. I think the biggest risk right now is basically the -- and that's a very dangerous thing. It also happens in other places, but it's a very dangerous thing, this fear of public transport that we have induced in people by putting the mask thing only on public transport for two months prior to that everything else. That meant that public transport has really been deemed as something really, really dangerous. I think that's problematic. And I think in a lot of other cities, we've seen biking

increase, but it didn't happen in Denmark, probably because we're biking a lot already. But car driving is and people are buying more cars, and they're driving more in them more trips. That is what I find the most worrying right now. And that is going to change the city because sometimes, and I think the new infrastructure plan just make -- it's a really good example of that, because it still entails a lot of highways, and highways have people in cars that need to go to their house. And these houses are in cities, most of them not all of them. Some are also in the countryside. But in a country like Denmark, most people actually live in cities. And I think that that's worrying that the car has suddenly become the main mode of transport for so many people for so many short trips. Yeah.

Thorbjørn: Great. Okay. So, with all the previous factors we just spoke about, in mind. How do you see a city develop with a digital nomadic paradigm as the primary work paradigm, where applicable, of course? I'm very interested in cities and suburbs and public transportation.

Prof: Yeah. I think, of course, there's something about the suburb if people want to have more space. The problem with cities is that it's getting more and more expensive to live in them. And if you're working from home, or if you're doing most of your work from home, you can actually move out of the city without bigger problems. So, that's the one thing. The other thing is actually also if, which we see in a lot of places around the world, much more working on cafes, coffee shops, like these meeting working spaces, because people don't want to sit at home all the time, but also want to go out and use public space as a workspace. So, that's also one of the developments we could see. But of course, some of those who have the dream of a garden and a lot of air and a lot of space, I think that's absolutely a realistic scenario that more of these people will start moving out. But right now the prices are rising so much that they can't afford it anyway. So, let's see what happens. Because right now, even two hours away from Copenhagen is getting expensive, right? So, it's going to be interesting. But of course, there is that tendency right now that this is what they're doing.

Thorbjørn: Great. Okay. So, this is more of a meta-question, what current infrastructure be able to handle a change in work paradigms? And would that mean that -- I don't mean only like road infrastructure but in the city space?

Prof: Yeah. But it depends on what kind of mode you use. This is how it is. Because I think that I'm always saying that we need to be -- stop or do this more building and start using what we have better. Yes, we should improve the public transport system because we have been neglecting that for way too many years because the car has been the major -- the number one thing we've been planning for that we have. 60% of all trips is less than five kilometers. So, if we could just start doing the way we use the technology as the car, for instance, there would be a lot of things that's possible with [inaudible 00:11:26] So, of course, we can -- it's enough of the infrastructure we have. And we shouldn't build more and the more we build, the more we also have to maintain, and it's just sustainability wise, we are not moving in a very clever direction. So, I think the best would actually be to not build anymore, figure out how to use what we have. And if we would do anything, it would be improving the public transport system.

Thorbjørn: All right. So, this is more for the mobility focus question. So, in your opinion, does transition to a digital nomadic society as the primary work paradigm cause more social mobility over the cost immobility?

Prof: I think that one of the things we should never underestimate is people's need to be together with other people. And I think actually it's always been one of my favorite things, if you look at futuristic movies, or futuristic films or also often futuristic research, and also just go in and look at automation and automated cars, there is always this lack of connection or lack of need of connection between humans. And I have a favorite picture of automation, which is basically a picture with a two-year-old child, a teenager, and a dog in one of these automated cars, basically, to show that you can send whomever you want. And I think it's the most ridiculous picture in the world because all parents want to make sure that their kids are getting safe to kindergarten, and they want to kiss them goodbye, and they want to take care of these things. So, I think that this idea that, that we are going to -- just because the

technology is there, we're never going to need less interaction, again, like, what happened was that the digital media has made us actually move more because we suddenly got new acquaintances online. I'm not saying that what's going online or in different social forums is not social, or it's not communities, because I actually think it is. But it's just not replacing what we have.

And I think if you ask people, what they're missing the most, is basically being together with other people. Maybe not all the time, but it's never going to -- I don't think it's going to be less. I think it could be different faces as I already said, I think there has seriously been a blooming in people going for walks together and stuff like that. And a lot of that I could actually imagine will continue. But we will not travel less to see friends, families, acquaintances, go to concerts. An online concert is good to have when you can't do anything else, but it's not the same as a real concert. And I think everybody would say the same about like all things in that matter. And I think it's one of these things that we always need to be careful when we predict futures that we don't think that all these basic human emotions and things that matters to people, they're not going to go away. There is a reason why they're there and I am convinced that they will continue to be.

Thorbjørn: This is also one of the reasons why I include the meeting-ness [inaudible 00:14:55] of January and in my -- I'm trying to predict or try to make guessings towards how we might interact with technology in a post-COVID society. So, because you mentioned this now I would like to ask an extra question outside of this. Do you think that if we change from this normal factor paradigm, what we have been doing for so many years into a more digital sphere, will it change where we might find social interactions?

Prof: Yeah, could be. That would be an interesting thing. I think a lot of people get a lot from the coffee machine at work. I think that means a lot to many people, the coffee machine, one office, and it could be that, when that is no longer there, it doesn't mean that the social contact is not still important, but it could be that it's going to be the local coffee shop, or the -- Yeah, local, something else. So, it could be that we start visiting new places to actually get there because if you get back there every day, you start knowing the people who's behind the counter, and you say hi, and how are you and have a good day, and a lot of that, I think can replace the coffee machine at work. So, I think that's not unrealistic. I also think what I see already is and I also do it myself, the people that you work together with that you are living close enough to, then you meet for a Friday walk or a Tuesday walk.

And so I think in that sense, both with people that you already work with, but also with new relationships, if you want to call it that. I absolutely see it can happen because you start -- if you start putting your routine somewhere else, because think about how much a workplace is basically carried by these routines and the way people do it and when they get coffee. And then you still need those routines, so you put them somewhere else, and there will be different people. So, it's an interesting thought. And I think, yeah, it could be absolutely -- it's going to be interesting to see what's going to happen.

Thorbjørn: Yes, I agree. And with that in mind, then I'm trying -- so my current -- I'm still developing my scenarios here and I have basically two lines I want to explore. One is the factory paradigm and digital nomadic and there's a second one. I'm exploring the idea of changing cityscapes to reflect the different social relations. So, I would like to ask you, if let's say that a digital nomadic paradigm will bring different social interactions, how would that affect the way that, like the downtown city areas might look like? Or even suburban areas? Like where people -- Because in theory, if you don't need to travel as much you would crave local things more. So, I'm trying to figure out if there's going to be a demand or need for more local activities. So, within 10 minutes of your --

Prof: Yeah, the 15 minutes city idea. Yeah. But I think absolutely, yes. I think that could happen because I think the car is argued by a lot of people is because of commuting. If you take that structural story out that it's because of commuting, and then they are at home, then the walking or the biking to functions makes a lot of sense. Especially if, like the urban starts thinking in those lines, thinking about the 15 minutes cities, thinking about putting the same functions within there. And I know also, like one thing is Copenhagen, but I know also a lot of

small cities, these smaller cities where most of it is going on by car, they have all these functions, but they are all divided by car space. So, I think actually, like starting to rethink the urban also because people use it more and it's, like for instance, what I did today, I was at the hairdresser this morning, and then I had to go to get a new test because I have to go to my, like one of these body thing, physiotherapist thing on Wednesday. And I got the test Saturday and it doesn't last until Wednesday. So, I went back to the airport and -- but the problem was, it wasn't a problem, because I'm working from home all the time. So, going first, I'm living in [inaudible 00:20:29].

So, going into the city, and then going from the city to the airport just gave me the opportunity of moving my body. So, I was just thinking, okay, that's nice, then I get [inaudible 00:20:39] I go biking. And I think for a lot of people in these working from home situations, these things that was because I know it from a lot of people I talk to. So, these things that was previously a little bit annoying, oh, no, I have to go to that. And then I have to go back there and then I have to go this place again, now it's not that big of a problem because it's an opportunity to get out and move your body. And in that sense, I think it's actually -- because this is what happens when you work from home, that the moving even if you're taking a car, there are still some changing spaces or moving your body from one place to the other. And I think for a lot of people, this is actually one of the things that's the most difficult to handle. And I think that that will continue if people keep working from home, and if then the urban is designed with a lot of functions, I think in that sense, you could say there could end up being a momentum for actually getting people to bike and walk more. And there is research, for instance, that we have these old ideas about the station proximity principle --

[Speaking Danish]

Thorbjørn: Yes. Okay.

Prof: Yeah, that it's maximum 500 meters people don't want to walk to a station. But there's actually been research done that shows that you can get people walking up to one and a half kilometer if they walk through a nice area. And I think Copenhagen is a good example because there are more and more places where you can actually bike away from the street with the cars on and you can park on a bike pass somewhere. And by thinking about making the urban areas, both in small and big cities like 15 minutes city principle, putting the functions together, I think it could actually change cityscapes quite a lot.

Thorbjørn: Great. Would it also extend to like, recreational areas maybe?

Prof: Like recreational areas in the city?

Thorbjørn: Yeah. Like if you were to build on top of that, so the 15 minutes city, that will also mean that recreations like parks or outdoor gym areas or like water or anything similar. [crosstalk]

Prof: Yes. Absolutely. And I think dwelling in all sorts of things that could and I think that -- my --

Thorbjørn: Suspicion.

Prof: Suspicion, thank you. I couldn't remember that word. My suspicion would be that they will put that together if they do it with the mitigation of climate change. So, like rainwater surfaces and stuff like that. And a lot of these areas are just really nice to dwell in. So, I think that's actually -- I think absolutely going to happen. And I think making the 15 minutes city is many places also about putting up trees or grass or pocket parks or flower pots or something like that. So, I think the 15 minutes city also have much more space for dwelling. And this is also what makes them work.

Thorbjørn: So, in a sense, Corona could be a catalyst towards 15 minutes city in a let's say two 300 year span.

Prof: Yeah. And I think but maybe also starting to experiment, I think Corona could be the catalyst for more flexibility in experimenting with well, how can we actually do that? Because I also think -- that is what I said in an article I wrote in the first part of Corona, now I'm not so sure it's true anymore. Things change really fast these days. But the thing that in the beginning, the soundscape was totally different. And now a lot more people started getting out in their cars but what a difference it made with the city that it was suddenly and it made you realize how much you know that but how much noise these cars are actually making how much they actually dominate what you can hear in the city. So, I think some of these experiences that people have during this episode might be part of pushing some things in a new way, also on the short term.

Thorbjørn: All right. So, I -- [crosstalk]

Prof: And also maybe to experiment because I don't think you should underestimate experiments in urban planning. And we realize now that there is actually things we can do without the world falling apart.

Thorbjørn: Yeah, that's also -- I think COVID has been an eye-opener for a lot of people that we are able to change things quite significantly without really having an impact on personal life that much. So, yeah. Okay. Well, I won't take too much more of your time. But I would like to ask you if there's something you feel is important in this discussion that I might want to look into?

Prof: No, I think we basically talked about a lot of it. I think there is something about fear and I think there's something about politics that we should never forget, because it did put new directions into how things are working. I think that one of the things that could happen, and right now I'm writing an article because we, in one of the research projects I'm doing, we did this stakeholder workshop with public transport providers. And it's the first time I heard them so clearly talk about that public transport has to be like the backbone in mobility as a service, but also that they needed to open up and think about doing different products and thinking about what they are offering in a new way. Because Corona actually could change a lot of things.

For instance, with home work, if you are a commuter, and you're working from home half of the time, a normal commuter card [inaudible 00:27:00] doesn't make any sense. So, there's a lot of things that they actually talked about having to rethink. And I think there are some things that are a little bit not that good with the increase in cars, but there was also an openness to actually start experimenting with alternative solutions and getting a little bit out of this, the way we've always done things and the way things work. And I think that's going to be interesting to see how that's going to end up.

Thorbjørn: Great. So, I think that's a closing remark because you have a meeting coming up so --

Prof: That I actually haven't prepared for yet so I have to do that.

Thorbjørn: That's why I won't take too much of your time.