A techno-anthropological investigation:

- *The being of the craftsmen in the Medieval City*

Figure 1: The Medieval City. Credit: The Municipality of Copenhagen

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Standard page: 82,5

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Submission date: 04.06.2020

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Resume

Formålet med dette kandidatspeciale er at undersøge hvilke værdier og udfordringer der er tilstede for de håndværkere der arbejder i middelalderbyen, hvis der sker en reduktion på biltrafikken der får en effekt på deres daglige praksis og arbejde. Kandidatspecialet er udarbejdet af to studerende fra Aalborg Universitet København på uddannelsen Techno-Anthropology, i samarbejde med Teknik- og Miljøforvaltningen i Københavns Kommune. Kandidatspecialet har ved hjælp af de valgte teoretiske- og metodiskerammer undersøgt hvilke værdier og normer håndværkerne italesætter, så det har været muligt at udarbejde nogle anbefalinger og konkrete forslag til hvordan man teknologisk og infrastrukturelt kan inddrage håndværkernes unikke praksis i middelalderbyen. Ved hjælp af postfænomenologiens teoretiske ramme, har det været muligt at undersøge hvilken relation den givne håndværker har til middelalderbyen og de teknologier, som påvirker og konstituerer deres praksis. Håndværkerens værktøjskasse og tilhørsforhold til bilen er nogle faktorer som er så kropsligt indlejret at det vil få en afgørende betydning for deres praksis som til en vis grad vil blive ændret. Ved hjælp af etnografiske metoder, value-sensitive design, koncepter fra Jan Gehl og Slow City bevægelsen både som teorietisk- og metodiskramme, har det været muligt at italesætte nogle værdier og normer som håndværkeren har indlejret i sin praksis og dermed meget specifikke for dette erhverv. Det kan dermed konkluderes at håndværkernes unikke ekspertise og viden omkring håndværk og faglig dygtighed, har en speciel rolle i middelalderbyen grundet dens historiske og æstetiske lokation, hvorfor vi finder det nødvendigt at inddrage håndværkerne i fremtidige byforandringsprocesser og dertilhørende designmæssige løsninger. Håndværkeren er samtidig med til at opretholde den daglige trivsel i byen både for private kunder såvel som offentlige virksomheder, der bidrager til at middelalderbyen forbliver et område der er repræsenteret af liv og diversitet. Det kan ydermere konkluderes at en måde hvorpå at få håndværkeren og erhvervslivet inkluderet som en integreret del af middelalderbyen, vil være ved hjælp af teknologiske løsninger og tjenester som Nethire og Fastbox. Den enkelte håndværkers værdier og væren i middelalderbyen vil derfor blive anerkendt, hvor deres behov, såvel som den gængse borgers eller brugers behov, vil blive en integreret i byen.

Nøgleord: Postfænomenologi · Value-sensitive design · Jan Gehl · Slow City bevægelsen · By forandring · Etnografiske metoder

Table of content

Chapter one - introduction

1.1 Introduction to master thesis

At the heart of this thesis, the investigation will take its starting point on the craftsman. The craftsman, as always, is present in the townscape, in his car, on the construction site, or at a customer to solve a problem. Why the craftsman? In the Medieval City, the inner part of Copenhagen, the craftsman's practices are as present as in all other parts of Denmark, but here are some infrastructural circumstances that might play a role. During the internship, in the Technical and Environmental Administration in the Municipality of Copenhagen from August 2019 to November 2019, we were introduced to a project about "less car traffic and a better everyday life" in the Medieval City, which is an area in Copenhagen that consists of old paved roads, shopping roads, squares, restaurants, etc. and is home for 8500 residents (Kommune 2019). The Municipality of Copenhagen had, in collaboration with an external company We Do Democracy, established a citizens' assembly consisting of 36 citizens who got assigned to create recommendations for the politicians on how to reduce the car traffic and create a better everyday life in the Medieval City (VIA TRAFIK 2019).

When talking about the craftsman's presence in the townscape, it can be traced back to the Middle Ages. The craftsmen possessed a specific form of practical knowledge, had the skills to build, repair and maintain buildings, houses, roads, etc. as the following citation exemplifies. *"(...) they [the craftsmen] all contributed to the well-being of late-medieval life and sustained their communities by meeting a variety of ordinary needs on a daily basis."* (Albrecht Classen 2016: 29). The craftsman in the Middle Ages was an important factor for the functionality of the city and to assure the well-being of the city-dwellers. The Medieval City's traditional appearance and historic preservation value implicitly tells the craftsman's necessity to the city. It is important to create an urban space that accommodates the craftsmen and their practices, so that this part of the city also maintains the status it has. If you look at the craftsman's role and contribution to the city's infrastructure and the general well-being in the city, a link to a "better everyday life" in the former project is closely related. This resemblance is one of the reasons why we choose to consider the craftsmen as a central part of this investigation. We discovered that the previous project lacked a broader perspective of the general population and its stakeholders where we based on this neglection, the craftsmen, and their practical influence on the townscape, wanted to lay our focus on this issue them. We have chosen to include Georg V. Davis in order to understand the role of the craftsmen and their role in the townscape. Davis

is interested in political constructions and participatory action, which might be an important perspective to enlighten the craftsmen and what they represent to society (University 2020). *"What the craftsman expresses, and what we are lacking, is an implicit understanding of self- determination, interdependence, and community. We refuse to see the connection to the material world of non-human nature that can only come from practical activity."*(Davis 2010: 138). As shown with the citation, Davis argues that craftsmen's ability to understand how the material world and how it is connected to non-humans, which humans are missing. In continuation of our choice of focus on the craftsmen, it is worth acknowledging their necessity in the townscape, and to include them in these urban planning processes. The interdependence of the city and the craftsmen has been a key factor in our study, because they complement and depend on each other in most aspects of the urban structure. By the use of post-phenomenology, value-sensitive design, and concepts from Jan Gehl and the Slow City movement (which will be further explained in chapter two), we intend to create recommendations for the Municipality of Copenhagen on how to include the craftsmen and their needs in future urban design planning processes.

1.2 Problem statement

The field of investigation takes place in the Medieval City that contains a lot of different interests, both cultural, economic and professional, all of which help maintain value and attractiveness to this part of the city. As a continuation of the former project, presented in section 1.1, we were drawn by the possible change of urban spaces happening in the Medieval City, and how different kinds of groups or interests would get affected by a reduction of car traffic. But especially how craftsmen would be affected by this type of change and how it would affect their daily workspace. By this scope, we have the opportunity to investigate how craftsmen might get neglected in a new city change, or how the change of urban space might make their daily work easier. Our focus on the craftsmen is based on their unique expertise and knowledge within their field. The uniqueness of the craftsmen is their individual professional and technical knowledge on tools and materials, but also how their expertise is bodily embedded in their daily work. The craftsmen, itself, has a deep value in city planning but is not immediately obvious or articulated when discussing such planning processes. This statement is clearly described in the recommendations the citizens' assembly has formulated because they did not take the craftsmen into account, as one of the recommendations, in general, is to reduce car traffic and parking spots within the Medieval City. We argue that their perspective in the urban

design of the Medieval City is missing, which is why we have chosen to formulate recommendations that incorporates the daily practices and the value of the profession that the craftsmen carry. This focus and related issues have resulted in the following problem formulation:

"How can we, by the use of post-phenomenology and value-sensitive design, identify urban values and how can craftsmen through their craft, experiences, and practices contribute to the change of urban space in the Medieval City?"

1.3. Field of inquiry

This investigation touches the field of urban development, a qualitative study in a field that aims to highlight social actions, the perception of urban changes, and the inclusion of human values as a design suggestion for new urban space. This project is based on the thinking of society as a modern, diverse, and fast way of living, but takes it starting point by looking at humans and their interaction with technologies. By integrating the concepts of slow living and the value of experiencing the city, we enlighten this contrary tendency that complements the recommendations and values that the citizens formulated in the citizen's assembly. Modernity is implied by the technological progression, dataflows, transportation flows, and overall the change of social phenomena and relationships. We have included Manfred Garhammer because his research area is centered around urbanism, city planning, and urban development, which complements our field of research (ResearchGate 2020). *"This growing pace of everyday life is likely to effect our experience of time: People feel that time passes faster and they complain that everything goes too fast. They express worries that they may not be able to keep up with the high pace of social life."*(Garhammer 2002: 14). This fast way of living as Garhammer mentions creates the frame we operate within and intend to engage in by creating a phenomenological framework and take a human-oriented standpoint. A human-oriented standpoint could be the craftsmen and how their daily work might get affected by the fast way of living. From a historical perspective, the craftsmen have always been and worked in the city, which is why they are an integral part of modern society. The craftsmen have gone from the medieval goldsmith to the contemporary modern engineer with a set of modern skills and expertise, which is important to have in mind when thinking about the contribution that the craftsmen have in the city (Davis 2010: 137). To place a title on the society we operate within, we were inspired by Hartmut Rosa's concepts of "alienation" and "acceleration" to outline how society can be characterized, and by his point of view

as a society in acceleration. Rosa is engaged in sociology and critical theory and thereby has a critical perspective on society (Jerusalem 2020). As society is being shaped by the fast way of living, stakeholders and social groups follow such a flow, possibly without noticing it. However, the Medieval City stands out, both because this part contains areas of significant history, and consists of liberal professions, department stores, tourists, inhabitants, users, etc., and is a part of Copenhagen that consists of all the phenomenon supported by the acceleration of society. "*It requires the practitioner to understand the relationship of hand to head, of body to mind. (...). It is to grab onto the material world in order to finally know something about it*." (Davis 2010: 138). The citation exemplifies that the craftsmen are the practitioner who understands the materials through his or her own body but at the same time understands the material world due to their expertise. The craftsmen are an integral part of Medieval City and a social group that might be one of the drivers that make the society accelerate.

As a consequence of the structural changes in urban design, social interactions, routines, and, tendencies might be challenged. Following the technological progress in society, it might be obvious to think of the craftsmen's social processes, in their change in habits, routines, and mobility difficulties. The consequence of technological progress or changes entails at the same time social changes, not only for the craftsmen but in all aspects of the community. Rosa argues that technological acceleration has a colossal impact on social identity (Rosa 2013: 21). These technological changes do not directly cause an increase in societal pace, but can be a catalyst for a rapid changeover, an adaptation to new structures, or lead to a forced change of practice. As we approach this project with a phenomenological standpoint, we are inspired by the opposite trends for the current accelerating society. "*Even if there are counter-movements towards "down-speeding" (such as the slow-food-movement) the prevailing tendency is acceleration."*(Garhammer 2002: 14). It is these contradictory tendencies that indicate a slower way, which supports our scope of the investigation. However, it can be argued if this slow way of understanding the society as Rosa does, can be understood in a post-phenomenological context it can to some extent be argued that our bodies are slow and the surrounding technologies are fast, as Rosa also indicates. Even though the human body is slow by nature, we are used to interacting with technologies that increase the acceleration of human nature e.g. the city and its infrastructure, cars, etc. We are, therefore, human bodies moving

in a society that is accelerating, and at the same time, exalts to slow down even though the technologies are fast by nature.

A trend that arises from the accelerating society is New Urbanism, an approach that should frame our theoretical scope and which presents Jan Gehl's and the Slow City's concepts and values for urban life. *"New Urbanism which came as a vision of urban design in the 1980s, developed on the principles of town planning and tradition of mixed urban densities, calls for a completeness in terms of well-connected neighborhoods, walkability, mixed use and diversity, increased density, quality architecture and quality of life."*(Varma 2017: 250). The foundation in this thinking of urban development is who or what we design for; a city for people that accommodate all kinds of transportation possibilities but embrace the interaction and the experience that happens through a human-oriented urban space and design. The movement of New Urbanism was obvious to include mostly because it complements our overall post-phenomenological way of looking at the field of investigation. New Urbanism might touch some of the considerations that have created the basis for the initiation of this project, a countermovement to the fast life and a car filled society. *"Fast cities are killing our qualitative and social rhythms. We are almost objects; humans are being made for cities, not cities for humans. Fast changes in material and social conditions in fast cities do not allow material and social dialectics to work on each other thoroughly; one quantitative change after another overwhelms social space and time and causes the "thingification" of everyday life."* (Abdul 2019: 41). This citation exemplifies some of the consequences that might relate to fast cities, the loss of interaction, perception, and the neglect of human perspective in the townscape.

1.4 Technology clarification

Because of our techno-anthropological background, we have the privilege of understanding technologies in a broader sense. We have the advantage to build bridges (metaphor) between people with in-depth knowledge about the relationship between humans and technologies and articulate it in a theoretical framework that suits a specific technological context. This way of understanding certain technologies might, hopefully, lead to solving problems that arise in the field caused by the influence of technologies. As introduced in the above sections, our meta-theoretical approach is post-phenomenology which we combine with concepts from Gehl and the Slow City movement (will be explained further in chapter two). The inclusion of value-sensitive design helps us to identify certain

human values and sociological movements, related to the craftsmen in the Medieval City within this technological context. We define the technology as the Medieval City, and as the technological measurements in the practice of the craftsmen, which is based on the thoughts and visions that post-phenomenology prescribes. Concepts from Gehl and the Slow City movement are identified to support the inclusion of humans into the investigation by their respective views on humans as the core of the urban landscape. All types of craftsmen are a necessity in the functioning of the city, and their availability and expertise might be an important factor for other interests as restaurants, cafes, and diverse businesses, and for the well-being of inhabitants, which might exemplify their significance and functionality of the townscape. *"In a post-phenomenological perspective artifacts mediate human-world relations (...)."*(Verbeek and Crease 2005: 13). A change of perception and actions by the craftsmen might be affected by the technological changes in the urban landscape, their use of the urban infrastructure where their daily presence in the townscape underpins our phenomenological view of a constant influence and interaction between craftsman and city. We have furthermore included the craftsmen because of the Medieval City can be applied, lived, and understood differently by its users, which the craftsmen belong under. The inclusion of the concepts by Gehl and the Slow City movement is to involve their scope in the urban design in the public favor, and their human values related to public urban space. The Slow City movement and Gehl provides a more human-oriented perspective, a perspective that views the city and its infrastructure as a space with people in the center. As we characterize the city as a combination of different technologies, we consider the city as divergent and different in the way the craftsmen perceive, commit, and act to it. This type of understanding technologies is not entrenched to do something specific but contains multiple options and possibilities dependent on the scope of the investigation. Such a broad understanding of technologies has to be limited to a certain scope of investigation or field of specific actors. The way in which this understanding of technologies will be expressed, as previously mentioned, be through post-phenomenology, and how the craftsmen perceive their own practice as the city's infrastructure changes. When we choose to incorporate the post-phenomenological approach, technologies and the subject are a fused entity, an entity in which the reality appears in the interaction, or in the interaction between the subject and the given technologies. In modern society, we are seeing more and more technologies affecting human reality and technologies interfering with human social ties. The availability of people has never been so clear before, and the distance between people has taken on a completely different meaning. Technologies and its rapid evolution and

influence are also a part of the modern and fast-paced society, that in relation to the changing society, technologies become more and more familiar with human reality. This societal and technological development may therefore also call for an abstract interpretation of the technologies, an interpretation that contains the technologies many facets and its relations to society and the craftsmen.

1.5 Reading guidance

We start by introducing our argument for our theoretical framework based on the use of post-phenomenology, value-sensitive design, and the concepts from Jan Gehl and the Slow City movement, which is the overall framework for the thesis, that will be explained further in chapter two. Chapter three introduces our methodological approach and the methods we have used in order to conduct the empirical data and the processing of the designated. Chapter four is the analysis and is based on phase one, the conceptual phase, in value-sensitive design that uses concepts from Gehl and the Slow City movement, to analyze what values and concepts that are important for our informants. Chapter four is furthermore based on the post-phenomenological approach, where we analyze how the Medieval City is categorized as a technology and how the craftsmen's relation to the city is being shaped. Chapter five is a further analysis and assessment of the craftsmen's values and is based on phase two in value-sensitive design, the empirical phase, where we uncover our findings from phase one, and by that consider what possible technical and infrastructural suggestions that could benefit the craftsmen. Chapter six is our recommendations and suggestions that illustrate how it can be possible to incorporate the craftsmen and their practices in the townscape. The thesis is being rounded up by a conclusion that connects the overall research question through the thesis. In order to create a simple reading guidance, we have created figure 2 to illustrate the progression of the thesis.

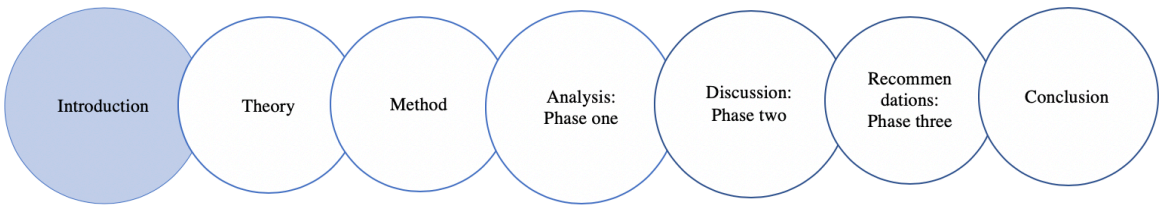


Figure 2: An illustration of the progression of the master thesis and the following chapters.

Chapter two: Theoretical framework

2.1 Introduction to the theory section

Chapter two will give an overview of the chosen theoretical framework which this thesis will draw on. It will, furthermore, give an explanation of why we intend to use post-phenomenology, value-sensitive design, concepts from the Danish architect Jan Gehl and the Slow City movement, which figure 3 illustrates. We intend to use post-phenomenology as a meta-theory in our thesis to create a fundamental standpoint, where value-sensitive design and concepts from the Slow City movement and Gehl are used to support and complement the meta-theory. As figure 3 illustrates we aim to formulate recommendations and suggestions for the Municipality of Copenhagen, on how to include the craftsmen and their profession in the future urban design and planning of the Medieval City. In order to create these recommendations, we aim to analyze what kind of needs, values, and challenges craftsmen are facing in their daily work in and outside the Medieval City.

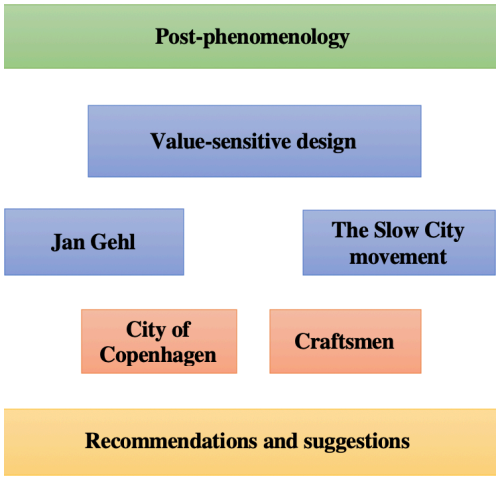


Figure 3: Illustrates how we intend to use post-phenomenology as a metatheory, which is complemented by value-sensitive design and concepts from the Slow City movement and Jan Gehl.

2.2 The concepts of post-phenomenology

Post-phenomenology has its origins from phenomenology which is a theory that is characterized by living experience and practices and is often described as a first-person account of experience (Howell 2019: 1). Phenomenology originates from Edmund Husserl's pure-consciousness and Martin Heidegger's way of thinking, "being-in-the-world", where human and world relations occur (Bantwal Rao et al. 2015: 454). Don Ihde has since Husserl's and Heidegger's thoughts on phenomenology investigating how intentional human experience can embody a technology, which according to Ihde is the first step towards post-phenomenology

(Ihde 2011: 217). Ihde has focused on visual technologies in order to show how humans embody technologies (Ihde 2011: 111). Since Heidegger and Husserl's thought, Ihde has added a more technological perspective where the relations that now occur in the world are *human-technology-world* relations instead of a human and world relation which figure 3 illustrates (Ibid).

Human – technology – world

Figure 4: Illustrates how humans, technologies and the world are related.

According to Ihde, there exist four different human-technology-world relations which each have a specific focus and purpose: embodiment relations, hermeneutic relations, alterity relations, and background relations. The relations have a focus where either human affect the relationship between the world and the technology, or vice versa in all the four relations which is being explained in figure 5. Peter-Paul Verbeek has been inspired by Ihde's thoughts and is also interested in the post-phenomenological approach which he explains is: "*interested not so much in the networks of relations on the basis of which the mediating artifacts and the experiencing humans are present, but in the nature of the relations that human beings— thanks to these artifacts—can have to other humans and things*." (Bantwal Rao et al. 2015: 455).

Embodiment relation
(Human – technology) → world

Hermeneutic relation
Human → (technology – world)

Alterity relation
Human → technology (world)

Background relation
Human (technology / world)

Figure 5: All four human-technology-relations.

Verbeek argues that interpretation in human-technology relations is significant, because of the way each individual relates to the given technology and most importantly why each individual produces different associations with the technology. Some of the interpretations between humans and non-humans are

characterized by factors as politics, values, authority, power, trust, care, and responsibility, which can lead to different associations with technologies (Botin 2015: 217). Verbeek states to things that adds an ethical point of view, to justify the role of the technologies. The first thing is that humans and objects cannot exist in isolation, which means that they always exist in relation to each other. The second thing is Verbeek's term intentionalities and freedom, which means that moral agencies (how interpretations of technologies occur between humans/non-humans (Ibid) have the ability to form intentions and at the same time the freedom to do so (Selinger 2014: 298). This means that every technology according to Verbeek has intentionality and that is situated through moral agencies between humans and non-humans (Botin 2015: 218). It also means that moral agencies should be seen as a hybrid phenomenon involving elements from humans and non-humans (Kroes and Verbeek 2014: 6).

The inclusion of post-phenomenology in our thesis is substantiated by the technological perspective that the theory possesses. According to Ihde's four human-technology-world relations, we argue that the Medieval City is most relatable to the embodiment relation and the background relation. We argue that these two relations fit most when describing why we categorize the Medieval City as a phenomenon consisting of many technologies. The first relation is embodiment, where the Medieval City is an integrated and invisible part of the embodied perception of the world. This means that it is through and with the Medieval City the craftsmen's senses and experiences are enhanced. The craftsmen experience the Medieval City through their eyes, which defines their world and understanding. The Medieval City is deeply integrated into the craftsmen embodied perception of the world. The background relation is where the Medieval City takes shape as a background relation and will become visible when it breaks down. This means that the technological artifacts in the Medieval City will become visible for the craftsmen when they, for instance, gets challenged by the city's infrastructure. On the other hand, when technologies are not decomposed, the relationship to the technologies is maintained, and thereby help to shape and create a smooth everyday life for the craftsman.

Verbeek has by the inspiration of Ihde created some world-human-technology relations himself. The idea behind these relations for Verbeek is to expand the mediation theory which Ihde has with his four relations as previously mentioned. However, according to Verbeek, there are some configurations that are missing, which is why he has developed new relations inspired by Ihde, that he calls "intentional relations." (Learn 2020). "*In all of the human-technology-world relations Don Ihde analyses, technologies mediate this intentionality. In the new human-technology relations identified above, the technologically mediated character of intentionality takes on a different shape*." (Ibid). The purpose of the relations is to acknowledge how technologies help shape human experiences and practices, which the theoretical thoughts behind post-phenomenology are concerned about (Ibid). The intentional relations expand from fusion relations, immersion

relations, to augmentation relations. The intentions of these new relations are to notice how the world and humans come into being, which means how they might merge into one entity. The immersion relation is based on the background relation as mentioned above, but the difference is that it has a more environmental and ambient focus, where the technological background interacts actively with humans (Ibid). This should be understood as the relation humans interact or merge with the environment.

Figure 6: Illustrates Verbeek's new intentional relation.

Figure 6 illustrates how immersion relation is constructed. The arrows indicate that humans can be pulled towards technologies, but it also shows that technologies can be pulled towards humans. This relationship shows how the focus shifts from the body to the environment, which complements our thoughts behind the inclusion of this relation in order to understand the Medieval City as an overall technology. The world in this relation becomes fused, which is how we consider the three relations (the two from Ihde and the one from Verbeek) and classify the Medieval City as the main technology in our thesis. Based on this we have the opportunity to interpret the relations as fused, based on how the craftsmen interpret the city and the technological components present in their practice.

2.2.1 Mediation

Post-phenomenology defines two important terms in order to understand the technical aspect of the theory: mediation and multistability. Verbeek explains: "*mediation does not simply take place between a subject and an object, but rather coshapes subjectivity and objectivity. (...) Humans and the world they experience are the products of technological mediation*." (Bantwal Rao et al. 2015: 455). The important thing to notice is how the division between subject and object in phenomenology has gone through a change, into a co-shaping and merged relation of each other. In order to explain mediation more thoroughly, we have created figure 7.

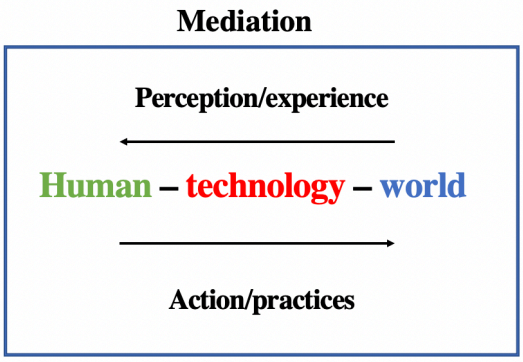


Figure 7: Illustrates the concept of mediation.

Figure 7 shows how mediation should be understood, that is centered around Ihde's human-technology-world relations. The arrow that goes from human to world indicates that human practices or actions through technology affect the world. The other arrow that goes from the world to humans indicates that perception and experience through technology affect humans (Ibid).

Post-phenomenology embraces many factors that each are important in order to create a better understanding of the theory in general but also how objects, things, technology, ethical thoughts, etc. are important in order to understand the world from a human and non-human perspective. We, therefore, intend to use mediation in our thesis in order to get a better understanding of how the Medieval City gets mediated by humans and non-humans through their actions/practices, but also the other way around. By post-phenomenology and the concept of mediation, we intend to investigate how the craftsmen work and what needs, values and possible challenges they have to the city itself but also what might happen if they get a limitation on their daily work. We, furthermore, want to investigate how the Medieval City can affect the craftsmen's practices if the Municipality of Copenhagen's initiative gets implemented.

2.2.2 Multistability

Another central term in post-phenomenology is multistability that according to Ihde, is defined as: "*any kind of technology is characterized by a non-essential and contextual becoming, where the actual use of the technology in a given context co-constitute the embodied individual and the technology*." (Botin 2015: 218). This means that at any given technology is multistable, which indicates that a technology can be many things depending on who and with what purpose it is being used. An example on how to understand multistability could be to understand the Medieval City and the many purposes people use it for. For instance, that could be in a social, cultural, economic, or political context where the Medieval City would be multistable because the citizens living in it or visiting it will have different purposes and needs to do so. This way of interpreting the

technology is a bit more abstract than technologies that are more straightforward as Heidegger argues about. He argues that a hammer is multistable because it can be a tool to use for building something or hanging up a picture, but it can also be a murder weapon to kill someone. The embodiment of the technologies is important to have in mind as a techno-anthropologist, due to technologies can be many things and is not fully defined, which is linked to the embodied experiences (both human/non-human) (Ibid). We wish to be a part of this changing process in the Medieval City, where humans and non-humans use and interact with the technologies differently according to their individual perceptions of the given technologies and on their reality of the world. It is therefore important for us to understand technologies in order to enlighten the problems the craftsmen are facing, which in our thesis is the need to implicate their work in future urban design decisions. Both terms, mediation and multistability, complement each other because the mediation of technologies can be multistable due to the experiences, actions, perceptions, and practices that are linked to the individual use of the given technology. We intend to use the term multistability in order to understand that the Medieval City can be multistable, because of the power of mediation that is linked to the individual human being that has different purposes for being and using the city.

2.3 Value-sensitive design

The integration of the theoretical framework of value-sensitive design is considered beneficial in order to investigate and discover certain values related to craftsmanship and the design and structure of the Medieval City. *"In the 1990s value sensitive design emerged with the aim to offer a theoretically grounded approach to the design of technology that accounts for human values in a principled and comprehensive manner throughout the design process."* (Yoo et al. 2013: 419). As the citation shows, value-sensitive design emerged in 1990 with the aim of offering a theoretical approach to the design of technologies. In this section, we aim to highlight the ethical scope that value-sensitive design provides in a design process. This theoretical framework exemplifies how we are able to integrate specific values for the craftsmen into the investigation following a forthcoming urban design process, which is being exemplified in the following citation. *"The primary goal of VSD is to influence the design of technology by explicitly attending to which human values are taken into consideration and integrated into and throughout the design process."* (Cummings 2006: 702). By the use of value-sensitive design, we create a thorough foundation in the understanding of the craftsmen and their values, needs, and terms of change in this specific scenario, in an attempt to provide our investigation with an outcome considering ethical character. When considering ethical character, we aim to adopt the strategic approach provided by value-sensitive design to end up with criteria that meet the craftsmen's values and needs. We characterized the strategic approach by: "*the formalized VSD methodology consists of a three-pronged iterative approach, which includes investigation of conceptual, empirical, and technical issues specific to a particular design*." (Ibid). By this approach expressed by Mary L. Cummings, we are able to integrate our empirical data

into the investigation and by that compare or relate to the traditional human values provided by this theoretical framework, and at last, enlighten the technological factors that might support or undermine embedded values related to our specific scope of the investigation.

2.3.1 The three phases in value-sensitive design

The integration of value-sensitive design into the thesis is to combine the values of craftsmen with the technical change in the urban structure of the Medieval City. At the same time, this approach aims to: *"(...) to bridge the gap between technical design considerations and ethical concerns expressed through human values."* (Ibid). As mentioned in the section above, the theoretical framework of value-sensitive design provides a schematic and strategic procedure to investigate human values related to a given technology, and by that enlighten the craftsmanship in the Medieval City. The approach is a *three-pronged* iterative process, which means that the researcher works through three phases where each one relates and is dependent on each other: the conceptual, the empirical, and the technical phase. The first phase, conceptual investigation, consist of 12 human values that have to be taken into consideration for the present design process: *human welfare, ownership and property, privacy, freedom from bias, universal usability, trust, autonomy, informed consent, accountability, calmness, identity, and environmental sustainability* (Cummings 2006: 702). By including these human values in our thesis, we create a foundation when considering the change of urban infrastructure and design and explore if these are supported or undermined by the change of urban space. These 12 human values are predetermined, which conflicts with the understanding and interaction between humans and technology that post-phenomenology embraces. As a part of our research, we intend to distance ourselves from a predetermined collection of values and enlighten the possibility for other values to arise, both from the concepts of Gehl, the Slow City movement and by the empirical research, which will be explained further in this chapter.

Furthermore, the values formulated by value-sensitive design creates a foundation for inspiration and search of presence in our field of research. "*The conceptual investigation phase not only identifies those basic human values that could be both supported and diminished by technology, but also considers how the technology could both socially benefit and negatively impact stakeholders."* (Cummings 2006: 703). We intend to use the three phases to structure our thesis, where the focus in each phase will be the main goal spread between chapter four (conceptual phase), chapter five (empirical phase), and chapter six (technical phase) as explained in section 1.5. In order to visualize how we intend to use the three phases from value-sensitive design, we have created figure 8.

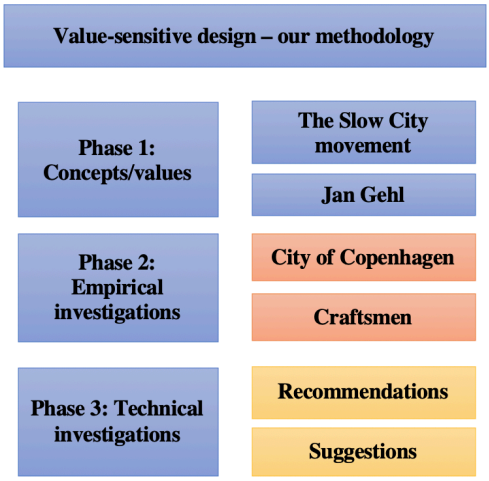


Figure 8: Illustrates the concepts of value-sensitive design and our interpretation in relation to our scope of research.

As figure 8 above illustrates, each phase exemplifies how we intend to benefit from this approach. By the inclusion of post-phenomenology, Jan Gehl and the Slow City movement we intend to create a foundation of certain values that fits the characteristics of the Medieval City. In phase one, the conceptual phase, the primary objective is to identify present values in the process, where we intend to use the concepts from Gehl and the Slow City movement. In phase two, the empirical phase, it is important to assess the change of design by investigating the implicated stakeholders: "*(...) perceptions, behaviors, and prioritization of competing values, and furthermore, how the designer can support or detract from value conflict.*" (Ibid). In phase two we are able to present the temporary findings for the informants and compare it to the present urban space, in order to identify how it will affect their perceptions for future urban changes and which values that might be at stake. Phase two will furthermore consider the findings in the conceptual phases in order to uncover what technical and infrastructural suggestions that might be beneficial for the craftsmen if their practices get limited. The last phase, is the technical phase where: "*technical designs are analyzed to assess how they support particular values, and how values identified in the conceptual investigation could be best supported by different design possibilities.*" (Ibid). In phase three it is important to focus on the specific technologies involved, which is why we intend to formulate recommendations that are surrounded by technical and infrastructural suggestions. The intention in phase three is to unify the findings from phase one and two, that are based on our informants and the concepts from Gehl, the Slow City movement. The overall goal and intention are to create a thorough basis for formulating recommendations explaining the craftsman's functionality, requirements, routines and relationship to the infrastructure and the technologies placed in this specific setting (the Medieval City).

2.4 Supporting theoretical concepts and approaches

The post-phenomenological framework prescribes a human perspective into the field of investigation, a perspective that serves an experienced and perceptual context. In order for us to create an adjacent and related theoretical standpoint, we will present concepts from Gehl and the Slow City movement, that is being presented in the following sections. To ensure the presence of post-phenomenology we choice to include Juhani Pallasmaa and Steen Eiler Rasmussen as an entrance into the bodily experienced city, because they both address the value of human experience in architecture (Dahlin 2002: 1). To explore urban space as a divergent and constantly changing environment, these supporting theories and approaches from Pallasmaa and Rasmussen's thoughts on the bodily experienced city is, complementary to the post-phenomenological approach, that may help us enlighten the difficulties or opportunities in a changing urban space. The inclusion of Gehl and the Slow City movement provides a contextual setting in relation to the location as the Medieval City, but it also provides a set of values that supports the phenomenological approach in the investigation.

2.5 Concepts from the Slow City movement

The Slow City movement is inspired and originates from terms of the "slow food movement" which has become an integrated part and flow of many cities around the globe. "*Inspired by this movement [slow food movement], the Cittaslow (which literally means slow city) movement was formed in 1999, also in Italy. The two movements and concepts are so interlinked that to achieve the status of slow city; a city must agree to accept the guidelines of slow food and work to improve conviviality and conserve the local environment.*" (Donaldson 2018: 88). As the citation exemplifies there are different guidelines that a city has to achieve to be characterized as a slow city and the movement originates primarily as an opposing movement to the fast life. One significant criterion for a city to be entitled as a slow city is that it cannot have more than 50.000 inhabitants and has to promote the local distinctiveness (Knox 2005: 6). The point is to preserve the *'slowness'* and the traditional culture in the city, and hereby different requirements to achieve the status of a slow city. These are; *environmental policies and planning; use of infrastructure; integration of technology; promotion of local produce and ways of life; hospitality and the rhythm of life; and sense of place* (Ibid), that table 1 illustrates.

Table 1: Illustration of the six requirements a city should contain to achieve the status of a slow city.

	Requirements to achieve the status of a slow city
1	Environmental policies and planning
2	Use of infrastructure
3	Integration of technology
4	Promotion of local produce and ways of life
5	Hospitality and the rhythm of life
6	Sense of place

The Slow City movement embraces the "rhythm of life" and the slow way to interact and behave in the city. Even though the Medieval City in Copenhagen has not applied to join the movement, the characteristics of the Medieval City is relatable to the Slow City movement. Both following the certain amount of people living in the city, (beneath 50.000 inhabitants) the aesthetic and medieval architecture that fills the townscape and the increased interest in reducing the car traffic and parking spots from this area, which is contradictory to the 'fast life' movement. The "sense of place" that the movement is prescribing is relatable to the post-phenomenological approach, as well as Rasmussen is considering the architecture, which creates the space for interaction and engagement. By experiencing the architecture or embrace architecture that creates a space for experience and perception, it is supporting the way the Slow City movement embraces the traditional architecture, which the following citation indicates. *"You must observe how it was designed for a special purpose and how it was attuned to the entire concept and rhythm of a specific era."*(Rasmussen 1964: 33). In some way, we see the embracement of traditional architecture where the slow rhythm of life fits into society. Another requirement, such as, "environmental policies and planning", intend to verify the use of alternative resources and quality of the soil, air and water. The requirement "use of infrastructure" refers to the conservation of and improvement of historic and traditional values which comprehends a sustainable transition to improve family life and green spaces. The "integration of technology" relates to the use of infrastructure, the integration of technologies that might support a reorganization of the infrastructure and improve the green spaces that are peculiar to the place of change. At last the "promotion of local produce and ways of life" refers to the improvements of local production and embracing cultural activities, such as food courts, marketplaces and local shopping opportunities, where local products are being sold (Dogrusoy and Dalgakiran 2011: 132).

The Slow City movement is a movement that embraces the old-fashioned way of behaving in the city and increase good living and well-being among the citizens and other related interests in the city. To be characterized as a slow city or engage in the "Citta'Slow" environment, the cities have to apply and fulfill certain requirements to become a part of the movement. *"Enrolment in the Citta`Slow movement is carefully evaluated and progress towards its compliance is monitored and verified periodically in a standard fashion."* (Miele 2008: 140). To maintain the title as a "Citta`Slow" the overall requirements, mentioned above, needs to be fulfilled or self-assessed by the city. This Slow City movement is in opposition to the fast life of living the globalization has brought, where time is money and where people and society consists of producers and consumers. To this fast-living society, the Slow City concepts arise as a countermovement and embrace relaxed conviviality and traditional cultures. The inclusion of the Slow City movement entails concepts and a way of thinking that relates to our specific location of research, the Medieval City, and it's worth-preserving character. At the same time, it relates to our overall theoretical framework, post-phenomenology: *"people are constantly*

modifying and reshaping places, and places are constantly coping with change and influencing their inhabitants." (Knox 2005: 3) because humans and non-humans are being shaped by places in the city. The post-phenomenological approach do relate to the Slow City movement, they prescribe to preserve the old-fashioned way of living and embrace traditional cultures and human values, but at the same time include modern characteristics such as to overcome environmental issues and the integration of technology as the following citation illustrates: "*Additionally, "Slow City" movement does not exclude the current technological developments; in fact, it uses technology as a tool in protecting and improving the existing values."*(Miele 2008: 141). The technological inclusion in the characteristics of the Slow City movement makes it both eligible and beneficial in our thesis, that modern movement incorporated in a movement where tradition, the curiosity of old times, and the *'slowness'* as an opposition to the fast life might be considered paramount. "*The Slow City is not a purely conservation movement, but rather asks the question of how cities can make progress without losing their spirit in their journey towards modernization and globalization."*(Miele 2008: 132). As the citation exemplifies, the modernization and globalization should not be rejected, but instead be embraced to promote social spaces in a new urban design for the Medieval City.

2.5.1 Slow City requirements and its relation to the Medieval City

As an already ongoing agenda in many big cities, cities in the Slow City movement must commit themselves to create green spaces, plant trees and prioritize cyclists and pedestrians. The whole *'slowness'* approach comprehends, in addition to the above, a reduction of noise, light and air pollution, keep public squares free of advertisement, enhance public transportation and promote the energy sources in a sustainable way (Donaldson 2018: 89). One of the objectives is, as already mentioned, this sustainable transition, it is cities that implement and environmental scope to maintain and develop the aesthetic surroundings in the urban landscape and promote technologies to enhance the quality of the environment in the city (Miele 2008: 140). These requirements or values that the Slow City movement provides do we intend to relate to our specific field of research and investigate if the Medieval City meets the given criteria that are formulated. By drawing inspiration from the Slow City movement, we might have the possibility to create a connection between the human values, and the promotion of new and different ways to structure and design the Medieval City. *"Human beings create architecture for human beings. This is the simple fact why architecture is a question about the presence of human centrality, and not the absence of it."*(Dahlin 2002: 89). The importance of humans as the central point of the investigation, is one of the main characteristics in some architectural literature, the human and bodily experienced city correlates to the post-phenomenological framework. There are certainly some of the requirements, in the concepts of the Slow City movement, that is much harder to achieve or fulfill, but the overall thinking of the Medieval City as a local community surrounded by ancient architecture that is highly important to preserve. The number of inhabitants that lives within the Medieval city

and most of all an increased interest in transforming this part of the city to a place without cars and recreational and green spaces, gives us the opportunity to include the slow city as a theory that both complement Gehl's concepts and human values from value-sensitive design. With the craftsmen working in the Medieval City as our scope of research, we aim to use the concepts and requirements from the Slow City movement as an inspiration and analytical tool, to identify how certain values from the craftsmen fit or relate to the concepts of slow city.

2.6 Concepts from Jan Gehl

This section will focus on the Danish architect Jan Gehl and his way of designing cities that benefit the pedestrians and cyclists in the townscape, where he uses Copenhagen as an inspiration for other capital cities or large cities around the world. We will furthermore introduce some main concepts which Gehl uses for future cities and urban designs. As mentioned in section 2.0 we have included Gehl's concepts because we see a connection to value-sensitive design due to Gehl's concepts fits under the conceptual phase in value-sensitive design (phase 1). "*"A good city is like a good party," Gehl wrote in his most recent book, Cities for People. "The guests stay because they're enjoying themselves."*." (Law 2012: 36). Cities for People or the Danish title "Byer for mennesker" is one of Gehl's most-read books. Since his revolutionary book Life Between Buildings from 1971, Gehl has remained an important voice of the sensitive design of urban space (Law 2012: 37).

2.6.1 Values for an urban city

Gehl introduces four objectives or "wishes", that according to him characterize a good city. The four objectives/wishes are based on what Gehl calls the human dimension, which means that primarily focus on city planning has been on the fast-growing car traffic in the cities. Looking at the human dimension that Gehl wants to include in future cities complements Rasmussen's thoughts on how "*architecture has to serve the need of the experiencing human being*" (Dahlin 2002: 83), where he argues that the value of architecture is depending on the interaction between the experiencing human and the architectural object (Ibid). Gehl thereby introduces the four objectives that he wishes a city should contain to become a city for people: *lively, safety, sustainable and healthy* (Gehl 2010: 16). In order to get a better understanding of the four objectives, we have created figure 9.

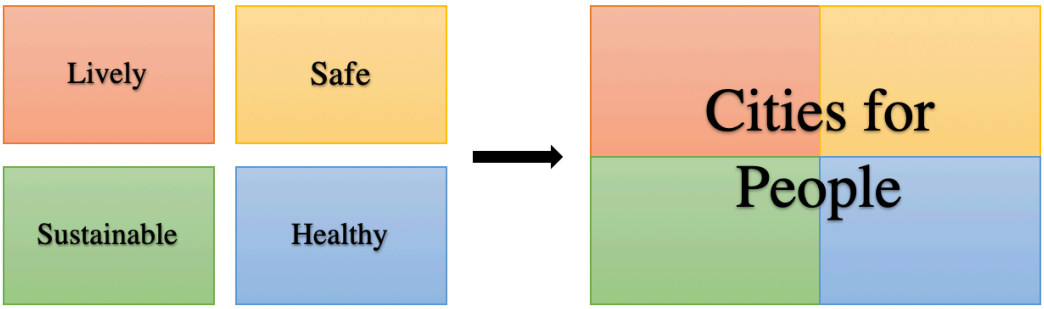


Figure 9: Illustrates the four objects and what it leads to when they are mixed.

Figure 9 illuminates the four objectives individually and as a unity. Gehl is trying to show that the four objectives should be seen as a unity, that will be the center of rotation in creating a city for people. We, therefore, intend to account for each objective in order to argue why they fit under phase one in value-sensitive design, which together with our meta-theory is the foundation for our thesis.

Lively

The first objective that Gehl argues about is *lively* and that a city should be "livable". A livable city contains different factors that should be taken into consideration when designing future urban spaces. A living city indicates kindness, courtesy, and social opportunities (Gehl 2010: 73). An important factor is that a city should be reinforcing, that according to Gehl should contain spaces or activities that attract people. Gehl additionally wishes for short, rational routes, small spaces and a clear hierarchy in the city. A clear hierarchy means to consider which spaces are important in an urban city, which could be streets, boulevards, narrow streets, gardens, squares, parks, etc. (Gehl 2010: 77). Pallasmaa argues that buildings and cities are essential in order to understand and confront the human existential condition. "*Instead of creating mere objects of visual seduction, architecture relates, mediates and projects meaning*." (Pallasma 2007: 11). Both Gehl and Pallasmaa are focusing on how buildings and streets are mediated and how they are full of meaning to humans. We argue that in order to create a city for people, the architecture in the city should be inviting for the citizens and users to use and be a part of. Lastly, Gehl argues that a livable city should favor the slow traffic because of slow movement or activities there naturally arise spontaneous staying zones and exchange zone (Gehl 2010: 81-85).

Safety

The second objective safe is essential in a good city because different people are moving around it, and thereby should secure a safe environment. The last 50 years since car traffic has invaded the city, it had caused more fear amongst the vulnerable road users. This has caused a restriction for pedestrians, cyclists and many other

vulnerable groups (Gehl 2010: 101). Shared streets should be implemented where cars, pedestrians, cyclists, trucks, etc. can share the streets instead of specific road users constantly gets favored by the city planners (Gehl 2010: 103). The discussion about safety is to sustain the vision of an open community, where citizens from different groups can feel free and safe to move around the city (Gehl 2010: 107-109). Pallasmaa agrees and says that every city has its echo that depends on the pattern and scale of its streets and the prevailing architectural styles and materials (Pallasma 2007: 51). He continues to argue that "*I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other. I dwell in the city and the city dwells in me*." (Pallasma 2007: 40). Pallasmaa has a bodily relation to the city, where both his body and the city supplement and define each other.

Sustainable

The third objective sustainability refers to climate, resources and green city planning. Sustainability in a city embraces the building's energy levels and emissions. A step towards sustainability in the cities is to create a city that benefits pedestrians and cyclists because these two groups use fewer resources and do not put a burden on the environment (Gehl 2010: 115). Gehl argues that a good and human-based landscape has a good transport system, where the trip from your house to the given destination, should be understood as a unity. Social sustainability is a term that wants to guide the awareness equally to the different groups in the society, that in the end gives them the same access to the city's common spaces (Gehl 2010: 117-119). However, Rasmussen argues that "*architects have to account for that human beings are naturally part of their environment, and never excluded*." (Dahlin 2002: 86), where we with the inspiration of Gehl, argue that the responsibility lies between different actors of the city and not just the architects as Rasmussen defines. Social sustainability includes a democratic dimension, that requires that everyone has the same access to the city.

Healthy

Last, the fourth objective healthy refers to good urban spaces, that are highly valued in health politics. There have been many different initiatives to change the structure of the society, that has caused new challenges for the health sector and politic in the Western world (Gehl 2010: 121). In the past, their focus has been to convert manual labor to sedentary labor, where the focus now is to implement exercise and motion. Exercise and motion should be seen as a matter of course, where the city planners should design a city that invites the citizens to walk and cycle as much as possible, which at the end will ensure that the citizens will get more exercise during the day. However, this requires innovation and redistribution of city planning processes(Gehl 2010: 123-124).

We have now argued and accounted for the four objectives individually, where the next step is to understand them as a unity, that altogether characterize a city for people. Table 2 illustrates some of the many initiatives that Gehl wishes for in a city for people.

Table 2: Illustrates the four objectives and what they each characterize. These four areas should be understood as a foundation for what a good city and a city for people should contain.

Lively	Safety	Sustainability	Healthy
Courtesy	Safer streets	Climate	Exercise
Reinforcing	Open city	Resources	Motion
Social opportunities	People moving around	Human based landscape	Health politics
Visited by people	Safe environment	Good transport system	Structure
Staying zones	Balance	Social sustainability	Innovation
Spaces and activities	Shared streets	Benefits pedestrians/cyclist	Redistribution
Kindness	Open communities	CO_2 emission	
Slow traffic	Slow traffic	Green city planning	
Exchange zones			

The two objectives lively and healthy clash due to the given situation we are in with the outbreak of the coronavirus (COVID-19) (Wu et al. 2020: 1) that has caused an international crisis (Liu, Zheng, and Wang 2020: 1) which forced the Danish Prime Minister to shut down the country (Jensen 2020). A livable city consists of people who visits the city which opens up for social opportunities and activities, however, that is not possible because the inhabitants are living in a quarantine mode that does not allow them to be in the city and fulfill their social needs. The objective healthy is also affected by the quarantine mode because the health sector is under massive pressure due to the COVID-19 situation. The health politic is being constantly upgraded on a daily level due to the given situation that emerges and forced by the uncertainty of the extent of the virus. This shows that due to the current situation there are some discrepancies between lively and healthy because there are no people present in the townscape.

According to safety and sustainability, they actually benefit from this given situation. Since people are in quarantine there are fewer people on the streets, less traffic, safer environment and at the same time according to the sustainability the virus seems to have a positive effect on the climate. This might seem like a naive and abstract interpretation of the consequences, but it seems to open up for reflection on how much humans affect the climate in general. Even though there are some clashes and discrepancies between the objectives, it is important to notice and remember that they do complement each other. Or in other words, there is some kind of causal link between them that intensifies their relations to one another and should be categorized as the needed foundation of creating a city for people which Gehl argues about. Each objective has some factors that are linked to others. An example could be social opportunities from lively, which is closely linked to people

moving around, safer environment, balance (safety), that is linked to social sustainability and prioritizing the pedestrians and cyclists (sustainability) which is linked to exercise and motion.

2.6.2 The four objectives and the craftsmen

We have now introduced the four objectives or wishes that a city should contain according to Gehl. However, we are aware that these four objectives that Gehl presents do not directly take other interest groups of the city into account, which the craftsmen fit under. However, Pallasmaa argues that the: "*craftsman are directly engaged with the bodies and their existential experiences rather than focused on an external and objectified problem*." (Pallasma 2007: 12), which clarifies that the four objectives do nevertheless implicit take the craftsmen into account. The four objectives do individually and together point to a better city for people, better spaces for the urban life to grow and how to include a 5 km perspective (Gehl 2010: 53). It is important to understand that we intend to use the different concepts from Gehl and the Slow City movement, in order to guide our investigation and in creating recommendations on how to include the craftsmen in future urban planning processes.

2.6.3 The cities senses

Even though we have accounted for the four objectives and shown that they are important wishes in urban planning, Gehl points that working on a city for people must be based on the human senses that constitute the biological basis for experiences, behavior, and communication. This way of understanding the senses the human body contains, complements what Rasmussen defines as the architectural value. "*It is not enough to see architecture; you must experience it. You must observe how it was designed for a special purpose and how it was attuned to the entire concept and rhythm of a specific era*." (Dahlin 2002: 85). Rasmussen and Gehl share some of the same thoughts regarding senses. The rhythm of a specific era that Rasmussen explains, can be to explore, observe, and experience the streets, boulevards, parks etc. that the Medieval City contains. The 5 km perspective in the city that Gehl argues allows humans to see and explore what every specific area contains or to explore the city's wholeness.

2.7 Summary of the theory section

We intend to clarify why we perceive the Medieval City as the main technology in our thesis based on the thoughts behind the chosen theoretical framework. The intention in this section is to give an overview of the factors that helps identify the Medieval City. According to post-phenomenology, the main thing in the world is to be in it. It is about embodiment and how humans and non-humans relate to each other but also to the technologies that are around oneself. Humans and non-humans are not seen as a network or a system, but as

humans, which means that the nature of the relations that post-phenomenology is based on, can both be between one human to another but also between a human and a thing (non-human) (Bantwal Rao et al. 2015: 454).

This way of understanding how humans can relate to technologies and the other way around complements the theoretical thoughts behind the concepts from value-sensitive design. Value-sensitive design uses human values in a process that is influenced by the design of technologies, that humans, in the end, are the designers. This means that the values, thoughts, and needs that humans have are considered in a given design process, that might be influenced by technology or several technologies (Yoo et al. 2013: 419). This illustrates that post-phenomenology and value-sensitive design complement each other, because of their same understanding of interpreting the value of humans and their technological perspective. The Medieval City is therefore influenced by how humans design it, which in this context can be to consider human values in the design process and future urban planning processes. Or explained in another way, the future design of the Medieval City and how the infrastructure should be, is influenced by humans (politicians and citizens) and especially the needs and values they carry. This means that there should be some kind of criteria that meet the craftsmen, in which their needs and values are considered in the future design of the Medieval City.

Gehl's concept of including humans more in the city and his wishes to keep creating cities for people can be linked to the two other theoretical thoughts (post-phenomenology and value-sensitive design). The need to include humans more in the city and remembering the human dimension is just as important as noticing the technological aspect of the city (Gehl 2010: 13). The drivers of the city are the people and how they perceive the city and its facets with all their senses. This explains why Gehl argues that the city should complement people because they can embody the technologies around them. The human dimension of the city is significant because humans use the city's many facets with different purposes, which links Gehl's concepts to the thoughts behind post-phenomenology. The Medieval City and the surrounding technologies the city contain (traffic lights, streets, squares, stores, parks, etc.) complement the different ways technology can be understood and interpreted by humans and non-humans (multistability).

Gehl's understanding of creating a city for people can be related to the thoughts behind the Slow City movement that is a movement that embraces the city and wants to increase the good living and well-being among its citizens, which also has the people's need in consideration (Miele 2008: 140). The Slow City movement focuses on people and how they use the city and its many technological facets complement all three sections (post-phenomenology, value-sensitive design, and the concepts from Gehl). That is why we argue that concepts from Gehl, Slow City movement and the theoretical inclusion of humans and technologies from post-

phenomenology and value-sensitive design, that the Medieval City can be defined as many technologies based on the thoughts behind the four theories in this thesis. They all complement each other because of their individual focus on humans and technologies, that combined enhance the relations and interpretation on how to design a city for people. In order to illustrate how they complement each other, we have created figure 10 illustrates that illustrates important concepts and terms the theories focus on, which we argue shows how they can be linked together.

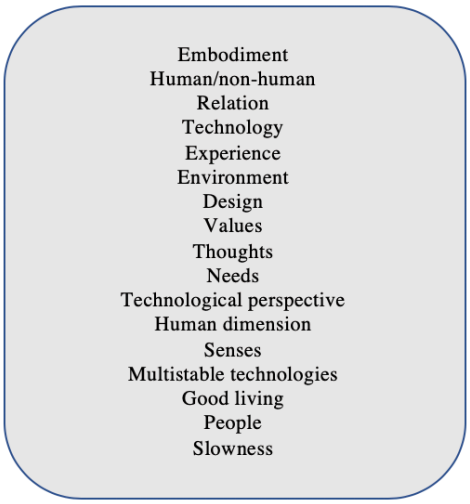
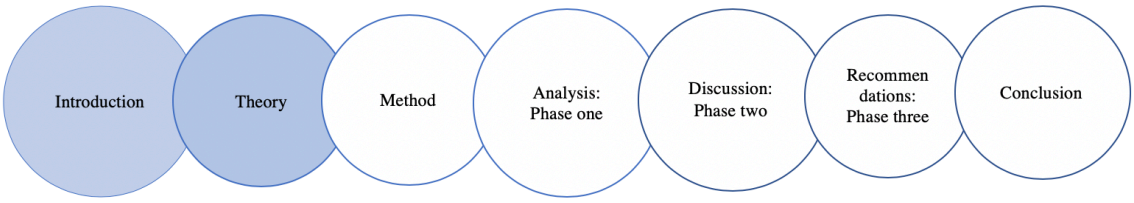


Figure 10: Illustrates concepts, terms, and things that each theory values. It starts from post-phenomenology to value-sensitive design, to Jan Gehl, and ends with the Slow City movement. The figure should furthermore illustrate how they all can be linked and use.



Chapter three: Methodology

3.1 Introduction to methodology

The following sections are an overview of our methodological framework that this thesis is based on. We will start by explaining the paradigm we operate within which is based on our theoretical framework. The first sections in chapter three will exemplify, how we have gathered qualitative data existing of interviews with the craftsmen and the coding and beginning of the analysis. The current

situation in Denmark about COVID-19 and the restrictions about gatherings have affected our access to various guilds we had created a dialogue with. When Håndværkerforeningen Kbh (our translation: The Craftsmen's Association Copenhagen) had to withdraw from a possible collaboration, we choose to search for substantial and empirical evidence elsewhere. Following these restrictions, we were urged to reach out to our own network and perform interviews with people we had an individual affiliation with through family and friends. These challenges will be elaborated in the section about methodological challenges in section 3.4. This section will also contain reflections on our own role and presence in relation to getting access to the field, creating collaborations, and gathering empirical data.

3.2 Mapping the field of research

Based on out theoretical framework we intend to illustrate the overall frame where we have uncovered different trends and theories that can complement the use of post-phenomenology in our thesis. We intend to show how New Urbanism, and the concepts from Gehl and the Slow City movement belong to the paradigm of urban planning that our field of investigation is taking part in. *"The tenets of good city-making, as outlined in the Charter of New Urbanism, include compact forms with defined edges, a pedestrian scale, mixed uses, traditional streetscapes, and, ostensibly, rich stylistic references to the local built heritage."* (Hirt 2009: 251). As the citation explain, the inclusion of New Urbanism supports our post-phenomenological framework and complements the concepts of Gehl and the Slow City movement which operates within the same field of expertise. This theoretical standpoint might advocate for the qualitative investigation, that embraces the human perspective in the construction of urban space in favor of a car-filled society. This standpoint is to clarify our field of investigation and theoretical inspiration, and this coarse distinction between the 'fast' and 'slow' way of designing urban space and living in urban spaces might call for a combination and not a rejection. *"We argue for a city with a rhythmic balance of economy, society, and ecology, which leads to more equal, healthy, pleasurable and sustainable outcomes."*(Abdul 2019: 41). As our investigation is based on the craftsmen and their practices, their values, and perceptions of a changing city, the use of post-phenomenology will support this human-oriented scope of investigation. The techno-anthropological approach embraces a qualitative investigation and how we as individuals, citizens/inhabitants connect, interact, or perceive the city. New Urbanism, Gehl, and the Slow City Movement belongs within the frame of urban development and embrace the necessity of a qualitative investigation of a

possible change of the urban space, where the human perspective is in the center of this qualitative investigation.

3.3 Qualitative methods

The following section is an explanation of the methods we have used in order to gather empirical data in our thesis. It consists of six semi-structured interviews with different craftsmen and one interview with one craftsman using the method serendipity. We argue that these individual interviews have benefited our overall empirical data collection, which we have coded in order to make a foundation for the analysis. The qualitative research methods, for instance, interviews or fieldwork, and the qualitative methods as phenomenology has been developed with the purpose of enlightening human experiences and social life. The phenomenological research method is about understanding how humans think, feel, act, and come into being in different contexts (Brinkmann and Tanggard 2015: 13-14).

3.3.1 Interviews

As a part of our empirical research, the interview is an integral part of the techno-anthropological toolbox, the opportunity to be invited into the informants' perceived worlds or situated complications and controversies according to the field of research.
When interviewing, the location can be subordinated, even though a traditional interview is face-to-face between two people, that does not mean that a sufficient interview cannot be conducted by email, over different chat rooms, in surveys, over the telephone, etc. (Brinkmann and Tanggard 2015: 30). The intention is to uncover humans different experiences in their lifeworld (Brinkmann and Tanggard 2015: 31), which complements what phenomenology wants to uncover: how humans and non-humans see and understand the lifeworld their experiences help take part in.

There are many ways and strategies on how to conduct interviews, which is why we have chosen to perform semi-structured interviews with six out of seven of our informants. According to Svend Brinkmann and Lene Tanggaard, in a semi-structured interview, it is an advantage of starting with a "what-question" and then follows with a "why-question" (Brinkmann and Tanggard 2015: 37). Brinkmann and Tanggaard furthermore argue that in order to ask the what-question, the interviewer should investigate the field as much as they can in order to ask the most relevant what-questions at

the beginning of the interview. In order to get the interviewee to reflect more open-minded about the questions, it could be to use some kind of naivety that allows the interviewee to express themselves with their own words and by that have a more open-minded approach to the given question (Ibid). The advantage of a semi-structured interview is that the interviewer can deviate from the interview guide and simply just follow where the conversation is going, which we in our interviews had made use of. Figure 11 is an overview of the six informants that we have performed semi-structured interviews with which has been telephone interviews.

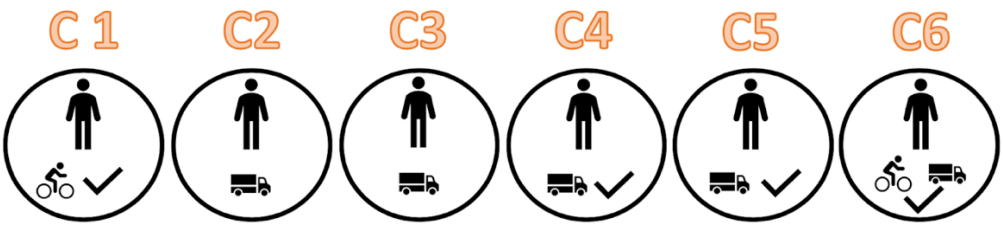


Figure 11: An illustration of the six semi-structured interviews.

We have chosen to anonymize our informants because we do not find it necessary to know their specific background, which is why we categorized each informant with a number. C stands for craftsman where the number indicates (in the order the interviews had been conducted) which one. As mentioned in the introduction our intention with the craftsmen is to try and understand their values and what challenges they might face in the Medieval City. This led us to ask one specific question in each interview: are you moving around by car or by bicycle? And are you working inside or outside the Medieval City? As seen in figure 11 the craftsmen have been given either a bike-symbol or a car-symbol, to illustrate how they are moving around inside or outside the city. We have furthermore given the craftsmen a checkmark if; they are working in the Medieval City, have been working in the Medieval City, or sometimes take tasks in the Medieval City. As both figure 11 and figure 12 (will be explained in the following section) shows four out of seven informants either works in the Medieval City or take tasks there from time to time.

3.3.2 The Medieval City as a self-generating system

This section will focus on the thoughts behind a theory about self-generating processes in systems. We want to include this theory and method in order to argue about how the Medieval City is a self-generating system that contains different technologies, that are being mediated by its actors, and how

the actors are being mediated by the technologies. Humberto Maturana and Francisco Varela are two biologists who introduced the term autopoiesis, which means self-generating (Danske 2020). Maturana and Varela have defined a system about reproduction and how these systems are maintaining themselves (Bishop and Al-Rifaie 2016: 1). Even though they investigated systems that were self-maintaining in living cells, their theory could be useful in order for us to argue about how the Medieval City is a self-generating system and how it as a method can be useful in order to uncover something powerful without noticing it. It is, furthermore, useful in order for us to characterize spontaneous interventions that are an important empirical tool in our thesis. Autopoiesis should be understood as a "*creative system (...) (red. whose) component producing processes and concomitant elements, bounded as an autonomous entity within its own artistic environment*." (Ibid). The bounded elements as an entity within its own artistic environment could be understood and interpreted as the craftsmen's own environment which is based on their skills and knowledge about their tools, materials, and their craft. We have clarified the concept autopoiesis and now intend to clarify the methodological approach behind it.

Serendipity is a method that is concerned about investigating things in their own environment, which is an instrument or intervention, that are based in fortuitous incidents that inspire insights or innovations (Ingraham 2019: 107). The use of this method arose because of the current situation with COVID-19, where we interviewed one craftsman we got in contact with from our own network. The fortuitous incident here was the meeting with the craftsmen which was not expected at the given time. The meeting was about a task the person in question had to perform, where the interview suddenly (with permission from the craftsmen) happened. The powerful insight was the unexpected discovery of getting the chance to interview this specific craftsman, while we were in the field and in his environment. Serendipity is furthermore described as a term for discoveries that are not made by design. "*Which is to say, it is typically held to involve discovering or realising something that is (a) favourable and (b) not found by searching for it*." (Ingraham 2019: 111). We argue that the fortuitous meeting with the craftsmen was not planned as the semi-structured interviews were, but it was something that became favorable and was not something that we originally search for, which made that meeting unique due to the circumstances. Frédéric Darbellay et al. argue that: "*In each case, the subtle blend of unexpectedness, chance, and sagacity is brought into play, leading to the successful discovery of things while in pursuit of something else*." (Darbellay et al. 2014: 5). Even though

serendipity can be used within different disciplines and areas as the citation shows, the one thing in common with the method is how to discover things when pursuing something else. It could, therefore, be argued that the craftsmen and their craft are a self-generating system that reproduces themselves, which makes them unique in their way of mediating with the technologies. It can, although, be discussed if this fortuitous insight with the craftsman was really fortuitous in regard to the implicit need and wish to interview the craftsman. As we interpret serendipity, it is to discover something without searching for it and then realize the value of it. "*Serendipity is first about the encounter and possibility of entering into a new relation, and only thereafter about discovery and fortuity*." (Ingraham 2019: 112). The possibility of entering a new relationship became possible because one member of the group needed the work of a craftsman which was used as an approach to get an interview.

The seventh interview, therefore, stands out and is unique in its own way because of several things. First, it is not recorded and transcribed as the other interviews, which could have led to that some things might have been missed in the interview. Second, it was a face-to-face interview which gave a more personal insight into this specific craftsman. Third, it was in the field of craftsman which gave us a better understanding of his practice. And fourth, the interview more diverged than the other interviews, because the conversation took another direction due to it was conducted in the field. As illustrated in figure 11 (section 3.3.1) with the semi-structured interviews, we have created figure 12 that indicates the one informant we have used the serendipity method on. Once again, has the informant been given a symbol of which he moves around by car or bicycle. This informant, as the figure illustrates moves around the car and does not work inside the Medieval City.

Figure 12: Illustrates the one craftsman we have interviewed using the serendipity method which moves around by car and does not work in the Medieval City.

As mentioned above the intention and use of qualitative research methods in the thesis, had been to open up the field and trying to get to know the field of research that we are a part of. The inclusion of semi-structured interviews and one interview using the serendipity method had given us the opportunity to try and understand the craftsmen's reality and challenges they might have due to their individual field. We argue that these interviews have given us a deeper understanding of their practices, which we intend to use in order to create recommendations that can be used in future urban designs of the Medieval City.

3.3.3 Coding and systematizing of the interviews

In order to systematize the empirical data, we have chosen to use the concepts from Gehl and the Slow City movement as a way of making a structure for the analysis, that will be explained further in chapter four. As mentioned above, we used the four objectives from Gehl (section 2.6.1) and the six requirements from the Slow City movement (section 2.5) to study if these concepts were present or missing in our empirical data. Furthermore, we used the human-world-technology relations from post-phenomenology in order to search for how the relationship between the craftsmen and the Medieval City is being expressed (section 2.2). We, therefore, chose to code the seven interviews one by one while searching for where the concepts were present or missing, where we did the same with post-phenomenology in order to get a more technical aspect of the craftsmen's relation to the city. After we have coded all seven interviews, we decided to systematize it in sub-categories, to get a narrower view of the things that our informants were articulating. It became clear that most of the concepts from Gehl and the Slow City movement were overlapping and surrounded by the different technologies in the Medieval City which the craftsmen were having a relation to. In order to combine the methodological and theoretical tools we furthermore chose to study if the 12 predetermined values from value-sensitive design (section 2.3.1) would overlap with the concepts from Gehl and the Slow City movement.

3.4 Methodological challenges

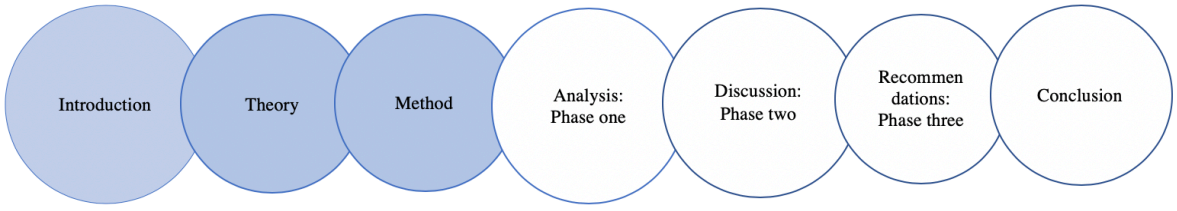
As mentioned in section 2.6.1 the COVID-19 virus has caused an international crisis at the beginning of 2020. Due to the current situation with the lockdown of Denmark, we have stumbled upon some methodological dilemmas and challenges in gaining access to our field. Based on our collaboration with the Technical and Environmental Administration, we got to approach The Craftsmen's

Association Copenhagen which is a union based in Copenhagen that consists of craftsmen within different guilds. Before the outburst of COVID-19, our plan was to interview the CEO of the union. However, those plans got canceled which is why we instead got in contact with one of the board members, that gave us contact information on craftsmen from their guild. The cancelation of the meeting with the CEO gave us the opportunity to search for different alternatives, which in the end had a positive impact on our empirical data collection. Fortunately, both of our networks are devised where we easily got in contact with the rest of our informants. One of the purposes of interviewing the CEO was at the same time to elucidate the overall thoughts of an urban change in relation to the practice of the craftsmen. The CEO could have given us a knowledge foundation of the dynamics that could be challenged as well as what considerations he would prioritize if the urban changes were to take place. It would perhaps have helped us to form a basis of comparison between the practicing craftsmen in the Medieval City and the more administrative thoughts and considerations from the CEO. The interview could possibly have provided us a more superficial insight from an administrative point of view, where his perspective might be more economic and long-termed. The positive point by missing this interview, could be to avoid being affected by his bias towards the new city planning and his favoritism of the craftsmen's presence by car in the Medieval City.

However, this new reality and the lockdown of the country, institutions, universities, etc. has been challenging because we have not been able to meet up and be present as we are used to. The distancing between each other and virtual discussions and planning procedures have created certain linguistic discrepancies. The strategic, analytical, methodological, and theoretical thoughts in the planning process made the opportunity to reach common consensus longer and were hampered by the circumstances of virtual meetings. The ability to visualize ideas as well as the physical presence in the various stages of the project structure might have forced us to intensify the workload earlier than usual and allocate more time in the planning and discussion processes. Furthermore, the opportunity to use the university's working areas had been much needed in terms of visualization on the boards, and the possibility to borrow relevant books in the library was suddenly another challenge to overcome. The most challenging part of this lockout has been the ability to discuss the project and its facets face to face. Although, we are aware of the many options on online platforms which instead was being used more often. We consequently argue that the current COVID-19 situation both had been an advantage and a barrier in order to gather empirical data to use in the thesis.

3.5 Our role

When entering the field with a techno-anthropological background we aim to perform a qualitative study, a study that involves social interaction and our own interpretation of the empirical data that we have collected. As a part of our techno-anthropological background, it is always necessary to reflect upon our own presence or possible intervening in the field of research. One main factor might be our entrance to the given field. At this point our presence, even though it is not physical presence, has created some sort of changing perspective for the craftsmen. Early interventions might already happen as we introduce the thesis and present the underlying agenda and overall purpose from a municipal point of view. Another interesting aspect of our role in this project is our personal objective, that aims to create a changing perspective and start a discussion about the urban structure of the Medieval City. Our intention is therefore to be a part of a changing process that helps to understand how it might be possible to change the urban structure in the Medieval City. As a result of the project's planned structure, we aim to create recommendations based on empirical research where our overall goal is to highlight the unique knowledge that the craftsmen carry which might contribute to our scope of research. We intend to illuminate the values, needs, and perceptions of the infrastructure related to the craftsmen and show how important they are in the city. When creating recommendations, we take on a changing perspective which is why our role is essential because we with our techno-anthropological background have the advantage of intervening with the craftsmen, instead of traditionally observing their practices. By intervening with the craftsmen, we intend to describe their perspective on the urban space and not as a part of the collective population. Even though the craftsmen might be considered as a minority, their presence in the society, their contribution to the Medieval City's functionality, and unique expertise and knowledge about the maintenance in the infrastructure of this ancient and historical part of Copenhagen, support our field investigation.



Chapter four: Phase one: The conceptual phase: Based on the concepts from Jan Gehl, the Slow City Movement, and value-sensitive design with a combination of post-phenomenology

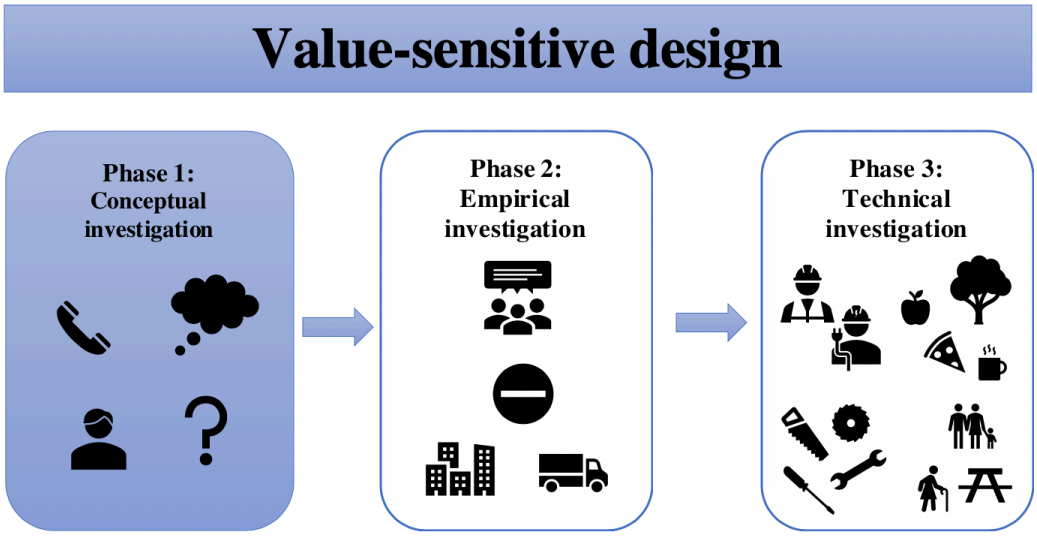


Figure 13: Illustration of the three phases and how we intend to use it. Phase one is about uncovering what values and challenges our informants are facing if the car traffic gets reduced in the Medieval City. Phase two is to present our findings for our informants and consider possible technical suggestions. Phase three is our recommendations that enlightens the technological components of the craftsmen's practices.

The approach in this chapter is inspired by phase one, the conceptual phase, and is included in the analysis to highlight the values embedded in the craftsman's practice. What values arise in the interaction between craftsmen and with the technologies present in their daily lives? As mentioned in chapter two, we have decided to use the concepts from Gehl and Slow City movement to support the conceptual phase where we by this inclusion aim to demonstrate how they fit into the craftsmen's practices. The objective is to identify how concepts from Gehl and the Slow City movement, fits into our field of research, both as individual concepts but also in a combination, to investigate their presence or lack of presence. Both Gehl and the Slow City movement are highlighting a set of values and concepts, that focus on creating a city for people that favors the slow living. They both have a sustainable objective in their concepts, which is of high prioritization for the design of future cities. Even though they embrace the slow way of living and accommodate vulnerable road-users, as pedestrians and cyclists, we still argue that their concepts and values can fit under some of the values our seven informants carry. We furthermore intend to use our main theory, post-phenomenology to analyze the relationship between the craftsman and the technologies within the Medieval City that affects or support

the craftsmen's daily rhythm. The intention is to analyze the technical components that are a part of the craftsmen's practice and investigate their experience with the Medieval City in the interaction with the technologies. We therefore want to investigate what technologies that are present for the craftsmen in order to uncover how they are being shaped through this interaction. We want to uncover how the craftsmen are being mediated by the many technologies in the Medieval City, for instance, the infrastructure, the craftsman's tools, etc. The inclusion of post-phenomenology and the concepts from Gehl and the Slow City movement is incorporated to analyze how the craftsmen experience and interpret the city, and furthermore to uncover what present values they have associated with their individual craft. "*Many different people lived in cities, as is the case today. But medieval cities were strongly determined by the craftsmen and the guilds, apart from the merchants*." (Classen 2016: 23). As the citation shows, medieval cities have been strongly determined by the craftsmen and their guilds. Even though cars and car traffic, in general, was not a problem in the Middle Ages, it still demonstrates an important point: the craftsmen have always been a part of the townscape and should still be considered as an integral part of the infrastructure, even though they (the craftsmen) based on the recommendations from the citizens' assembly might not be (section 1.1). The craftsman contributes to creating a livable city by maintaining the traditional building structures of the Medieval City. At the same time, the craftsman helps maintain social sustainability of public spaces, help renovate private homes and restore restaurants and cafes, all of which contribute to the quality of life for citizens and users of the Medieval City.

4.1 The craftsman's rhythm of life

In this section, we will examine what constitutes the craftsman. The craftsman is an important figure in the environment, and their identity as a craftsman is defined by their actual presence and ability to perform tasks. Post-phenomenology allows us to examine what is essential to the craftsman's identity. How tools, cars, the city, and its technological measures play a major role in the constitution of the craftsman. Concepts from the Slow City movement and Gehl will be included to show how they can be used to investigate how the craftsman's place in the Medieval City is challenged or supported.

> "*Everyone can grasp the fact that the gardener's success depends on whether or not the plants he selects for the garden thrive there. No matter how beautiful his conception of a garden may be it will, nevertheless, be a failure if it is not the right environment for the plants, if they cannot flourish in it*." (Rasmussen 1964: 12).

This metaphor exemplifies the importance of the environment, in which the environment can be crucial to the practice of the craftsman. A craftsman who do not thrive in the right environment can affect the quality of the work, and not at least reach out too many stakeholders who depend on their skills and presence. If the city does

not cater for them, they will not "flourish" because the craftsman play an important role in preserving and creating the environment that citizens, users, and stakeholders use. The environment in the city must ensure the craftsman maintain his/her daily rhythm. The concept of rhythm of life is inspired by the principles from the Slow City movement and includes the way the urban landscape opens up for meeting people.

To some extent, there will always be a difference in the way the city is experienced, and in this section, we will take a starting point to the craftsmen's working routines. In the characterization of a slow city, there are a brief description of the craftsman: *"(...) towns with untouched landscapes and charming craftsmen where people are still able to recognise the slow course of the seasons (...)."*(Donaldson 2018: 88). This characterization is a romanticized image of a craftsman strolling down the street with his/her tool, a thinking that is attractive but possibly far from reality. "*A challenge could be if there is not electricity or water*." (C3 transcription: 4). If the technology does not work which in this case is, electricity and water, it would cause the craftsmen issues with finishing their tasks. This is an example of how the technology breaks down and becomes visible which causes a problem. It might not be possible for the craftsmen to finish the work if his/hers needed materials are missing, which could cause delays or greater labor costs. The mediation process between the craftsmen and the given technologies will no longer be possible because the craftsman's reality would break down. On the contrary, this example is a picture of something that typically function in the craftsman's everyday life. Water and electricity are in some aspect a necessity for the craftsman to complete his work, where the opportunity to complete his work affects the city and its inhabitants. This connectedness that the craftsman has to the city, and more specific in the citation above, water and electricity, supports the flow that the craftsman has in his daily rhythm, and acts as an obstacle when the technologies are not present. Therefore, the mediation and the opportunity to create and build are maintained in cases where the technology is present, and he/she can again support the social sustainability, liveliness, and rhythm that must be present in a city. This is an example of a relationship that has a direct connection to the craftsman's practice. It is an example of the city's technological measures playing a huge role in the constitution of the craftsman's practice. The natural rhythm of the craftsman's daily work may be a description of the craftsman encountering as few limitations as possible during the day and that their routines runs according to the plan. The craftsman's daily rhythm is influenced by both the infrastructure of the Medieval City and the given tasks he/she is handed. The Medieval City still has to retain some attractiveness to the craftsman and maintain financial incentive to take on the tasks in this part of the city, which will help sustain the identity of the craftsman. In order to support the craftsman's daily rhythm, there are certain parts included to get a "positive sound" from the craftsman. The craftsman is created and present in the townscape, and the identity of the craftsman, is created in their professional work by means of their tools and to some extent their car. Their place in the Medieval City is significant for the creation of their identity, where the environment must open up for their skills to carry out their practice. If the

craftsman is not envisioned in a changed townscape without a car, their practice can be challenged, and the craftsman's identity might be re-created.

Summing up section 4.1 The craftsman's rhythm of life

The craftsmen's contribution to the city's structure is crucial to the life of the city, where his/her unique skills help maintain the traditional expression of the Medieval City. Gambling with the craftsman's daily rhythm can affect several of the tasks the craftsman performs, and the image of the craftsman strolling down the street with the toolbox may not be that romantic. Their identity is created by their performance in the field, and their practical work is, among other things, dependent on their tools. But not least, the environment is a crucial catalyst for the craftsman to flourish and carry out their craft.

4.1.2 The tools of the craftsmen as a catalyst in the constitution of practice and identity

One specific value from value-sensitive design we have attached to the craftsmen is the value identity. In our use of post-phenomenology, we have looked at the relationship between the technologies and the craftsman, and thus sought to clarify how technologies create the craftsman and their practice. In this section, we will examine the relationship between the craftsman and their materials and tools, and how they are connected to the craftsmen identity.

> *"Only by recognizing this interweaving of humans and technologies can we take responsibility for the ways in which technologies have an impact on society and on human existence – in practices of technology design, implementation, and use."*(Kroes and Verbeek 2014: 76)

As the citation shows, the relationship between technologies and humans can have an impact on society and is important to acknowledge, because it is through this interweaving with technologies, that shape human's impact on society, which in this context is surrounded by the relationship between the craftsman and their tools. When we choose to examine the tools and the craftsman's relationship to it, it is to elucidate what the tool represents to the craftsman, because one might automatically associate the craftsman with his/her tool. The tool is, to some extent, an overriding prerequisite for the craftsman to take on the role of a craftsman. The tool is not only the root for the craftsman to do his job, but the identity as a craftsman that has a touch in modern society where he/she becomes an indispensable factor in the constitution and progress of society. The tool thus function as a bodily relation to the craftsman, it is his/her way of seeing the craft becoming a reality. The tool thus plays a significant role in the craftsman's practice, which is made clear by the fact that it can break and enter the foreground, which the following citation shows.

> "*Heidegger makes the distinction between the ready-to-hand and the present-at-hand with one specific purpose: to show the conceptual priority of the readiness-to-hand over the present-at-hand, rejecting the traditional conception of the present-at-hand as the condition of possibility of any possible praxis."*(Hevilla 2010: 2)

In phenomenology it is well known that technologies break down, they break the connection the craftsman usually has with the tool and creates an inconvenient situation. The tool must be in constant presence to maintain this relationship, the practical context of the craftsman depends on the use of the tool that can be fundamental to the performance of the practice. The tool must in every scenario be "ready-at-hand" as stated in the abovementioned citation, which creates this fundamental context for the craftsman to be in. In such context, the tool will mediate the craftsman's reality, because his/her perception of the given task will change character and become transparent in the craftsman's practice. When we consider the tool as a bodily component of the craftsman's identity as a craftsman, the degradation of it, in certain respects, is crucial to the completion of the practice. So far, the tool is an embedded part of the craftsman's identity, but if it breaks, the reality suddenly looks completely different, and it becomes "present-at-hand". "*Or let's say my tool breaks and then I will be needing it during my workday*." (C2 transcription: 4). The broken tool will typically prevent him from doing his job, while his entire work as a craftsman will be put to a test. The citation above exemplifies the tools obstruction of the practice which requires awareness, because the tool suddenly becomes "present-at-hand". When the tool works and is present, the craftsmen can complete their work without giving much thought to it. The craftsman and the tool merge into each other in their practical work and becomes fused into on entity where their daily rhythm will be maintained smooth. The purpose of elucidating the breakdown or interaction between the craftsman and the tool is to think of the tool in the townscape as constantly "ready-at-hand". The craftsman needs the tool to construct and bring things to function which says something about the necessity of the tool. The ability to always have the tool "ready-to-hand" shapes the craftsman's daily rhythm where the tool becomes a precautionary measure for buildings being created, maintained, and that the identity of a craftsman come into being. The tool, on the other hand, is only needed if the person has the right skills to use them. This also shows the value as a craftsman, his expertise in using the right tool for the right task is crucial to the, e.g aesthetic expression in the Medieval City. This specific knowledge of the tool and its original function also allows the craftsman to use the tool in a way that goes beyond their original intention. For the craftsman, the technology is also multistable and the tool can be used for different things. A saw can also be used to mark a straight area, and a hammer does not lose its function without a nail. The craftsman's skills and knowledge about the tool also might make it possible to think more abstractly and creatively about the use of the tool, and to think beyond their original intentionality. As previously mentioned, we consider the tool as a bodily relation to the craftsman and to mediate the craftsman's reality. The tools "ready-at-hand" ensure this

connectedness that constitute the craftsman and maintain the performance of his craft. Such a valuable and traditional district as the Medieval City requires the craftsman's specific expertise to preserve and maintain it, knowledge of the use of the right tool for the medieval nature of construction.

Summation on section 4.1.2

This section has exemplified the importance of placing the tool as the central part and allowing the change to happen around it. It is therefore crucial that the tool and materials may be viewed as the key to change and furthermore as something that is constantly "ready-at-hand". To characterize the tools' technological impact on the craftsmen's daily routine, we see that the importance of the tools is characterized by the outcome the craftsman has in the interaction with the tools, and because of the connectedness they have to each other. The identity of the craftsman is important to maintain, and the tools might be a factor in maintaining it. By maintaining the craftsman's identity, it can be seen as a necessity for the practice to be performed and completed and to support the well-being of many interests in Medieval City. One can view the car as a co-creator of the craftsman's identity and practice and not a direct cause. It may be a means of achieving the goal, but not a direct cause for the craftsman to perform his craft. There are different identities in the craftsman's daily life, it can be both craftsmen, but also a father/mother or a football coach. But in the identity of a craftsman, the tool is a significant reason for the identity to happen in practice. The identity of the craftsman depends, on the tool, and the specific expertise the craftsmen each have, depends on their use of the tools.

4.2 The craftsmen bodily relation to the car and the bicycle

This section of the analysis will take part in the post-phenomenological approach and investigate what kind of relation the craftsmen have to the given technologies in the Medieval City, for instance, the car and the bicycle. It will furthermore investigate, by the use of Gehl and the Slow City movement, what given values and concepts that are present with the above-mentioned technologies that the craftsmen use in order to travel in and outside the Medieval City.

Modern cities are constructed by many different technologies, that can affect society. This section intends to elucidate how different technologies in the urban space might influence the everyday life of the craftsmen, how it might make their work difficult, or whether it affects their work in a positive direction. The understanding of the technologies present in the urban landscape is wide-ranging because there are innumerable technologies in the townscape, some more advanced and visible than others.

> *"Moving around in the city necessarily involves navigation amidst the technologies that comprise the landscape, such as: buildings, sidewalks, streets, bridges, traffic lights, streets signs, street lamps, telephone poles, electrical and telephone wiring, advertisements, TV screens, etc."*(Wasiak 2009: 357)

As the citation show, this is just a selection of infrastructural technologies, that fill the townscape that can affect not only the craftsman but also citizens and users of the city. Through this part of the analysis, we will address technologies, e.g. the car and the bicycle, that affect the craftsmen's workflow, as well as how the technological components of the infrastructure come into play. The car in this case becomes a part of the craftsmen's identity, as well as the tools as analyzed above, where the car is a part of the infrastructure of the city, just like the other actors and users of the city. The car's purpose, from the craftsman's perspective, is differently expressed and therefore multistable because it covers many other things than the original intention that is to transport the craftsman from one location to another.

> "*The pile of matter that we call an "automobile" can only exist as such in a context that included also gasoline, gas stations, pumps, refineries, highways, auto mechanics, automobile manufacturing plants, and so forth*." (Verbeek and Crease 2005: 7)

The citation above shows that automobiles cannot exist without including other materials or things that help define and constitute the car as a technology. Besides being a technical object to use for transportation, the car has more assets that help identify the relation between the car and the craftsman.

4.2.1 The car as an integral part of the craftsmen's practice

The car is a typical sight inside the Medieval City as well as bicycles and public transportation, etc. As a craftsman, the car has become a permanent inventory and will in some respect be a mobile warehouse, toolbox, and as means of transport. The car can furthermore be a place to take a break, eat lunch, be used to promotion, answer phone calls, plan the workday, socialize, or a place to take a breath during the fast-moving workday. Even though the car is multistable, there are still many conflicts when talking about the craftsman's relationship to it. Some of the conflicts could for instance be, the ability to switch to new solutions, major planning work, transport materials and tools, finding parking spots, etc. The relationship with the car, and more specifically the craftsman, has in many ways become an integral part of their daily routines, which makes it important to mention as a part of this section. In relation to the craftsman's routines and habits, one can point towards the bodily alignment the car has to the craftsman. The craftsman's connection to the car can be exemplified by a narrative that extends beyond the function of the car. Such an example can be produced by the bodily relationship the craftsmen also have to their car that is used as a residence or intimate space which is theirs

only, where the car becomes an extension of one's body in the room. This relationship the car can have is not explicit, but rather hidden, which underpins this narrative, a narrative that is created continuously and is constantly changing by craftsmen. In order to get a better understanding of the connectedness the craftsmen have to their car; we have created a narrative where intention is to show how the connectedness is present:

> "*The craftsman gets up early Monday morning and makes two cups of coffee, one for his colleague and one for himself. In this room they talk about the weekend or discuss the day's task. The trip to the Medieval City is characterized by a homely atmosphere, with room for them to be craftsmen and where there is time to call the customer quietly, away from the construction site. The tour is similar to most other trips to work and has the same starting point. When they arrive to the Medieval City they are not allowed to enter, because cars are not allowed."*

What happens when the two craftsmen are not allowed to drive into the construction site in the Medieval City? An exclusion of the car would change this narrative and not least the craftsman would lose the part of the identity embedded in the car, because their reality is being affected. This narration exemplifies the connection the craftsman has to the car and what is at stake in the exclusion of the cars in the Medieval City. The material function and the means of efficiency of the car is not the only thing the car contains, because there is a deeper connection that is expressed through the habits and routines of the craftsmen's everyday life. They connect to the car and express themselves through their bodily relationships with it but break as they arrive to the Medieval City. The craftsmen's habits and routines are deeply linked to their identity, to their car, and to their tools, and is important to address the well-being and peace of mind the car can create for each individual craftsman. The car and the craftsmen constitute each other, and the car has a bodily significance for the craftsman, which creates the space for, companionship, coziness, coffee, customer contact etc. The bodily relation is expressed through daily routines and habits and the actions and movements are invisible until it becomes "present-at-hand" by an exclusion of cars from the Medieval City.

Apart from the general traffic and the temporal complications that arise as a result of this, the city's infrastructure is also a component that affects the craftsman's daily workflow. *"It takes a long time to get from one place to another in Copenhagen. Once you have found the location, there may not be a parking spot for you, but only for those who live there."* (C4 transcription: 6). The time spent finding parking spaces and loading materials and tools undermine the efficiency of the craftsman's work, which is a clear technological measure that either makes work difficult or support the process. The possibility of parking in the Medieval City is a clear point among the craftsmen, and if you look at the concept of universal usability, in value-sensitive design, it can be challenged. If the car and the Medieval City is being categorized as multistable, then the surrounding

technologies, as parking spots, could also be rethought as more than just a parking spot for cars. One of the issues with the general intention with cities is that public places as parks, parking spots, squares, etc. are understood as one thing, instead of being acknowledged as many other things. For instance, a parking spot could also be a place to take a break during the day, as well as it could be to park the car, and a park could also be a gathering place for the craftsmen to take a break. These thoughts could be a way to meet the needs of craftsmen or to think of public spaces as abstract sizes and as more than just their original intentionality. A parking lot allow the craftsman to take his/her workshop and home space with them close to work. Thinking of parking spaces as a space for what is placed there is perhaps one way to combine parking spaces with other things in the townscape. One example could be a park combined with parking spaces that could be rented on a monthly basis for business. This would give the parking lots a new function depending on who rented the space for instance, coffee stalls, craftsmen, or food trucks.

Summation of section 4.2.1

We have now analyzed that the car is an integral part of the townscape, on the basis of a narrative that illustrates the necessity of the car, and furthermore how the craftsmen are bodily related to the car because of the connectedness. We have furthermore showed how the car is an integral part of the craftsmen's daily routines, and what possible challenges they can have with e.g. finding parking spots, where we have exemplified how they are multistable as well as with the car.

4.2.2 Infrastructural challenges and freedom

"As people live and work in places, they gradually impose themselves on their environment, modifying and adjusting it to suit their needs and express their values." (Knox 2005: 3). The citation shows that the ability to adapt to this fast-growing community and to align with the number of cars and lack of parking spots may prove the importance of the car. At least it exemplifies the importance the car can have because it is multistable, and even though mobility is challenged in the Medieval City, the warehouse and toolbox are still preferred, in most scenarios. One of our informants is a bricklayer and for him, limiting his accessibility in the Medieval City would not be possible. *"That would simply not be possible."* (C3 transcription: 5). The opportunities to adapt to a changing scenario with reduced car traffic and parking spaces can in many ways be seen as a challenge, especially to many of our informants as illustrated with the abovementioned citation. The craftsman's statement is about the car's necessity and the functionality the car represents. Not being able to have his car with him in the Medieval City would limit his work and to some extent have an impact on his identity, as analyzed in the section above. Gehl and the Slow City movement, with their individual concepts and recommendations for a sustainable and healthy city, do not give much attention to the cars and their challenges with the townscape. Especially Gehl, are arguing about the four objectives, lively, safety,

sustainability, and healthy, that should be present in a city that favors pedestrians and bicycles, as explained in chapter two. Social sustainability means that every actor and user of the city should have the same access to the city, which in some cases could be argued the craftsmen do not have. Even though the concepts from both Gehl and the Slow City movement do not consider the use of cars in cities, we still want to illustrate the craftsmen's challenges and how their reality is being mediated, dependent on what kind of relationship and connectedness the craftsmen have to and with the car.

Although the infrastructure can be difficult to move around in, the car can provide a sense of freedom. The convenience of getting into a car on a dark December morning, rather than getting up on your bike is a scenario where the rhythm of what the bike creates will be challenged. The freedom to choose and prefer convenient transport to work is something the car can bring. Another aspect of the car's presence is the freedom to structure the day, to use the car as a space for a daily break when tools or materials are needed at the construction site. *"It's a nice break of the day when you get to do something else."* (C3 transcription: 3). As the citation shows the car and the connectedness and freedom attached to it. can be maintain the craftsman's rhythm. At some point, it could be argued that the craftsmen's' rhythm of life is being supported by the use of the car, because his/her routines are based on the use of the car. The car can, therefore, be seen as a means of freedom for the craftsman, a value that the citizens of the Medieval City attach great importance to. That there must be room for people's needs in this part of the city, where the car can be characterized as a necessity and as a co-creator of the craftsmen's identity, the exclusion of the car can challenge the value of "space for all" and the craftsman's freedom.

Summation of section 4.2.2

We have now analyzed some of the challenges the craftsmen have with the infrastructure of the Medieval City, and now want to illustrate some advantages with having a car in the Medieval City, in order to uncover if the craftsmen could fulfill their work without the car. The intention is to uncover important values and challenges the craftsmen are facing, in order to illustrate that they are an integral part of the Medieval City. The craftsmen identity is being shaped through technologies and how they move around in the city, which is being expressed through the intimate relationship they have to the car. We have furthermore analyzed how freedom can be attached to the car, which to some extent can maintain the craftsmen's rhythm of life.

4.2.3 The bodily relationship between the craftsmen and the bicycle

This section will focus on how the bicycle is bodily related to the craftsmen who are using the bicycle as their primary transport form when working in and outside the Medieval City. It will further illustrate what concepts and values that are present when using the bicycle as an alternative transport within the Medieval City.

Out of seven informants, one of our informants uses the bicycle during his workday. "*You can park (red. the bicycle) close to the door*." (C1 transcription: 4-5). As the citation show, C1 travels around the city on a bicycle where he argues that one of the advantages is that he can park it everywhere. Again, the technology the craftsmen are using, e.g. the bicycle in this example, is more about the function the bicycle has to the craftsmen, as illustrated with the car as well. Our informants are articulating challenges and advantages attached to the given function the technologies carry, for instance the advantage to park the bicycle close to the door, as the citation shows. It could be argued that the expression about the function of the bicycle, is actually a way of expressing that there should be room for the craftsmen in the townscape, and especially the ones who are vulnerable road-users. The bicycle in this context is multistable, because it besides transportation, shows some sort of freedom contrary to the car, concerning parking because a bicycle can be parked legally almost everywhere. Using the bicycle to move around in the city fits under the concept of sustainability because a bicycle uses fewer resources and contaminates the environment less than any given transport form, e.g. a car. (Gehl 2010: 115). Traveling by bicycle do also support the green initiatives, even though the environment is not the main reason to travel by bicycle, it is worth mentioning the effect of the bicycle on the climate versus the car. The ability to move quickly and easily through the city is something our informant in the citation values and appreciates which complements the ethical value autonomy from value-sensitive design. Contemporary with the values that the citizens' assembly created and with a combination of the Slow City requirement, it can be argued that there is a focus on designing the infrastructure that complements the needs of the vulnerable road-users. The bicycle itself gets assigned an important role and is a technology that is necessary for our informant to have, otherwise his daily practice might not turn out the way it usually does. The bodily relation these particular craftsmen have to this given technology is first of all multistable, but important when it comes to how it helps shape his identity that is based on the tools he has in the box in front of the bicycle. Even though the bicycle also can be used as a storage for tools and materials, will the bicycle never completely replace the car and its many functions. One could argue that the mobility problem changes character when moving on a bicycle through the city instead of by car, but that the amount and size of the tool can be the primary problem.

Summation of section 4.2.3

Even though Gehl argues that the infrastructure should favor the bicycles, it is important to think about the differences the bicycle carries. There should be a safe environment and slow traffic, and the questions might be if the bicycle supports the slow traffic. Although the bicycle might not be characterized as a slow way of transportation in the city, it still supports a sustainable way of transportation. There is a lot of stress, insecurity,

danger, velocity, etc. attached to driving on the bicycle lanes, where the craftsman's relation to the bicycle lanes in this context gets broken because of the bodily feelings attached to be a part of this given situation.

4.2.4 Infrastructural issues for the cyclists

Architecture covers many elements and do not have to be limited to only art, but more about representing the city's buildings and physical structure. The Medieval City's physical structure is first and foremost based on their infrastructure and how well it suits the many different citizens and users of the city. However, one of our informants' states that: "*the bicycle lanes could be wider*." (C1 transcription: 4). This answer is one of the common issues that the bicyclists in Copenhagen are facing. Gehl is trying to gain more attention towards the vulnerable road-users because "*(...) Copenhagen is a model cycling city, whose approach should be duplicated throughout the world*." (Freudendal-Pedersen 2015: 599). Copenhagen is well-known for its many initiatives in creating a city that has a focus on cyclists as an integral part of the infrastructure. But somehow that is not enough, which could lead back to the examples of how the infrastructure could be poorly designed, even though the bicycle lanes are wide enough according to Gehl. A well-designed infrastructure should be concerned with social sustainability, shared streets, and a balance in the streets with room for everyone (C1 transcription: 8). The urban structure helps to make things go smoothly, where the bicycle gives rise to the opportunity to experience the city from this perspective, from a slower perspective than with the car, because it is possible to slow down and enjoy the many buildings and arts around the city. The concept lively is concerned with the social opportunities the bicycle represents in the townscape than with the car. The bicycle in this section is helping to maintain the craftsmen's rhythm of life because there is a different joy in using the bicycle instead of the car. The population density of the Medieval City, the small crooked roads and many cars can cause long transport time and this *"smoothness"* in daily routines might fade away. It is possible to argue that the bicycle may be a means of maintaining the rhythm of daily work, because it is much better adapted to city life. The Medieval City's infrastructure is important to take into account, affecting the argument that the bicycle may be a greater accessibility factor than the car because of the dense car traffic. That is not to say the car cannot maintain the rhythm of daily life, however, we will argue that infrastructural difficulties might arise more frequently by car than on a bicycle in the Medieval City.

Summation of section 4.2 and its sub-sections about the car and the bicycle

These sections has, with the analytical focus on post-phenomenology and the concepts from Gehl and the Slow

City movement, demonstrated how the two main technologies our informants use as their primary transport form, including the car and the bicycle, each is multistable because they are being interpreted and performed differently. The car has become a space to take a break, a storage room, a meeting room, etc. and basically a mobile warehouse that in some way makes the craftsman's workday run more smoothly because it contains such many facets. Even though the car is not favored in the city, for Gehl and Slow City, the intention was to try and understand how important the car is for the craftsmen as a part of their identity but also a part for them to fulfill their work, and lastly to investigate how the car is bodily connected to the craftsmen. The bicycle is also bodily connected to those craftsmen who use it as their primary transport, which we argue is dependent on the specific field the craftsmen belong under. The bicycle is an integral part of the townscape, but because of its technical size and how much less space it takes in the city, we argue that a bicycle is more helpful in maintaining the city's rhythm of life, and at the same time contribute to a safer, healthier, and livable city as analyzed in the above sections. The craftsmen are, therefore, whether they are driving around by a car, bicycle, or taking public transportation, a catalyst for sustaining the well-being of the city and its citizens by their expertise, skills, and knowledge. The next sections will analyze how it is possible to consider the craftsmen in an urban design context, that is surrounded by technological and infrastructural suggestions.

4.3 Possible technical suggestions on the how to integrate the craftsmen more in the townscape

We have now illustrated what values and challenges the craftsmen have to the Medieval City, and how they are bodily connected to their tools and car/bicycle. The intention with this part of the analysis is to illustrate what possible technical suggestions that might be beneficial for the craftsmen working in and outside the Medieval City. Furthermore, it is to uncover if it is possible to create recommendations or suggestions on how to accommodate the connectedness they have attached to their tools and cars. We furthermore intend to analyze what happens when the craftsmen's identity is being affected by the limitations the Municipality of Copenhagen is striving to implement, because their tools and the car is a part of their identity. The next sections are based on our informant's own articulated approaches that some of them are already using, and our own analysis of possible suggestions. It should be mentioned that the suggestions in this section are both considering the use of the car but also suggestions that do not need a car in order to be implemented in the Medieval City. The technical suggestions analyzed in these sections is mentioned in order to inspire us in creating recommendations and suggestions for the Municipality of Copenhagen. It should furthermore give an insight on how the connectedness the craftsmen have to their tools and the cars, to some extent can be expressed in other technologies. The analytical focus is how the concepts from the Slow City movement, value-sensitive design, and Gehl, and how technologies are multistable, can be helpful in order to investigate possible technical suggestions. Working in the Medieval City, as a craftsman, has its challenges and advantages, where one of

our informants argue: "*there is always a good reason why you (ref. the politicians) have done it (ref. the city) a certain way*." (C6 transcription: 11). The craftsmen are well aware of their challenges but also that "wise men", have designed the city with a purpose. Even though the infrastructure has been designed in a certain way it does not mean that it is the best possible way for all actors and users of the city. We are aware that it is not possible to design suggestions that complement all actors and users of the city, which we want to illustrate by designing possible suggestions and recommendations on how to consider the craftsmen.

4.3.1 Nethire as a supportive factor in the constitution of the craftsmen's practice

In these sections, we intend to uncover what technical opportunities that are attached to the craftsmen and how such technologies might support the daily rhythm of the craftsmen. By the use of post-phenomenology and multistability, we will analyze the technological components that are a part of the craftsmen's practice and how they might be considered as ambiguous. We furthermore intend to incorporate the craftsmen as an integral part of the townscape, to consider them as equal citizens, even though they have always been a part of it.

NetHire is a Danish company that consists of many things: users, landlords, service, transport, insurance, and business intelligence (Nethire 2020). Nethire is a platform that can support the company the craftsmen are working for on an administrative level, where e.g. the CEO of the company could get an overview of the purchasing of tools, increase the productivity of the craftsmen, make the workday more efficient, and take care of the administrative tasks. They can furthermore lend their own tools to other craftsmen and by that get a profit. NetHire do also provide insurance and can support the planning and structuring of different craft firms, this means that the craftsmen and the tools will always be covered and that the administrative part of the company can be relieved with help from Nethire (Ibid). It might be obvious to look into any of the value-sensitive design predetermined values when dealing with a defined technology as Nethire represents. This sharing scheme offered by Nethire can have a positive impact on both craftsmen and master.

Looking at the values from value-sensitive design, they appear specifically for the performing craftsman, whereas the master can immediately benefit from this performance. The idea of identity and that the tool may have a significant impact on the constitution of the individual craftsman can be influenced by a partial arrangement. One informant informed us about the idea of using Nethire: "*I am aware of the value (price) of the given tools I need. I will only use my own tools and I am not interested in using borrowed tools*." (C7 transcription: 2). This example shows that one's own tool can play a role for the individual craftsman. There is some professional pride in the choice of the brands, which might indicate that a scheme like this would challenge his professional pride and identity. Another value that could be debated are accountability. The executive craftsman is responsible for ensuring that the tool is in good condition and that it is returned to the

original owner. Exactly the responsibility may be affected by the fact that master have the opportunity to monitor the tools shared between them. This monitoring can affect the performing craftsman and limit the freedom that they themselves value, but at the same time increase the accountability. There is a responsibility between the craftsmen, which might have a positive tone, for instance, if they borrow something, they return it in as good a condition as you did when you received it. It is debatable whether monitoring the tool will increase the responsibility among the craftsmen who use the opportunity, but at the same time whether it will affect their personal freedom in their work. Since this opportunity is offered by the craftsmen in between, a question may arise as to whether it actually benefits all craftsmen and, in a way, differentiates between the craftsman professions.

Summation on section 4.3.1

This platform could structure and plan that things go smoothly and as planned that would lead to the working process might get optimized Nethire would be an opportunity for the master to be able to form an overview of tasks, tools, administrative work etc. that could lead to an increase in efficiency. On the other hand, if the master "monitor" his/her employees there would clearly be a breach of the freedom of the individual craftsman and the value of informed consent which is one of the predetermined values, would be debatable. For the performing craftsman, there will be challenges attached to the use of Nethire, for instance the craftsman's identity and the value of freedom due to monitoring and not being able to use his/her own tools, that could cause a problem when it comes to the craftsmen's identity. By contrast, this solution could remedy at the administrative level, lower spending on tools, and actually approximate an economic and sustainable measure by a partial scheme. Taking into account the Medieval City, Nethire could, remedy this area's dense infrastructure, be able to explore the possibilities of borrowing tools close to its own location, that might be a good alternative to save time on unforeseen complications during the craftsman's daily life.

4.3.2 Fastbox as a means to solve unforeseen complications

A technical suggestion close to Nethire, as analyzed above, is Solar Fastbox, which is an app that can deliver the right materials the craftsmen might need at the given moment (Solar 2020b). Solar is a green sourcing and service company that works with electricity, plumbing, industry, and climate and energy. The goal is to invest in green initiatives and provide solutions that secure sustainable and responsible use of resources (Solar 2020a). Unlike Nethire, this benefit might have more focus on performing craftsmen. One of our informants introduced us to Fastbox which he actively uses in his company. *"This Fastbox app can be on your phone. You can order the things you need and say you would like it delivered to X address. (...) then very soon a new pump will be delivered."* (C6 transcription: 4). The Fastbox app is complementing the relationship between the performing craftsman and his materials, by being a service the craftsman can make use of if he, as illustrated in the above

citation, in the middle of a task needs something that he does not have. Even though the company Solar manufacturer green materials and have a sustainable initiative, it could be argued how they might sustain their basis because they would need to use the car to deliver the materials for their customers. Especially in the Medieval City, parking spots can be in short supply where the dense traffic makes it time-consuming to drive back and forth. With Fastbox, you can have materials and tools delivered to the specific location for the exact job. Solar has a service, where they are delivering materials on a bicycle if the needed materials can be in the drivers specially made bags. An initiative that complements what Gehl is striving for: a focus on the vulnerable road-users and the integration of sustainable solutions in cities. At the same time, the value of environmental sustainability from value-sensitive design is present, due to their use of bicycles as a means of delivery. The distance for delivery is four kilometers, which supports their one-hour delivery time, which says something about the accountability Fastbox has towards their customers. To take advantage of this opportunity for the craftsmen to assume that they can expect things to be delivered within the hour, the craftsmen also have a time horizon and responsibility towards their customers.

Summation of section 4.3.2

We differentiate between Nethire and Fastbox, both because they have a different focus, with Fastbox being the focus of the executive craftsman, whereas Nethire has several administrative options that can benefit the master. We might argue that the use of Fastbox is a way of integrating the technologies and using the infrastructure to do so. At the same time, Fastbox addresses the challenges that can be faced with dense traffic in the Medieval City, as well as the lack of parking spaces. The fact that the craftsman can get tools or supplies delivered by bicycle means that the craftsman does not have to go out with his car and pick up something outside the Medieval City.

4.3.3 Smartphones and its multiple functions

As the above two sections exemplify, there are two technological functions that do two different things. Two functions that are or can be incorporated into a smartphone. This leads us to the smartphone and its features to solve some of the craftsmen's problems. This technological aspect of the smartphone s very obvious and is constantly at your fingertips at all times where its multiple features are clearly shown in the sections above. Planning and adjustment can be the keywords for creating a better and easier working environment, where technologies as the smartphone might be a supporting factor. *"You never know 100% what you meet. You have just been given the task that there is something to be done, then you have to evaluate from it."* (C4 transcription: 5). The uncertainty of not knowing what you are meeting is a good place to start and is a tangible problem the craftsmen with several customers in one day can meet In the example above, the smartphone allows the craftsman to map the day based on the pictures he has received from the customer. The car as the mobile

warehouse with screws and other tools can, to some extent, solve such problems. Thus, there may be technological suggestions that can solve the problems the city and its infrastructure can cause where these technological suggestions could function both as part of planning that can optimize efficiency and support the craftsman's freedom. *"So, what I've started to do is to get people to send me photos of what needs to be done."* (C5 transcription: 4). The relation between the smartphone and craftsman is considered as a bodily relation, a tool that is incorporated and fused into the individual reality. In the citation, the craftsman sees reality through the smartphone and acts according to the given reality on the picture.

In a hypothetical scenario where the cars were reduced, the opportunities to adapt to a change is important, which can possibly lead to freedom in one's own work and for one's employees. The example above, do also support the optimization and efficiency process we mentioned above. An adaptive maneuver rectified with technologies as a means to solve unforeseen problems and to increase the efficiency of the daily workflow. As mentioned above, the smartphone cannot support all the facets that form the craftsman's practice. The unforeseen complications that can occur if something is missing, planning, streamlining, or optimizing the daily rhythm of the day are supported by the incorporation of these technologies, that the smartphone carries. In a general sense, the smartphone and its features cannot replace the practical work of the craftsman, the car as a multistable measure and the tool that is crucial to the craftsman's performance and identity is something that can be supported and smoothen by the integration of the smartphone and optimize the craftsman's practice for the sake of efficiency.

Summation of section 4.3.3

The advanced role of technologies in our daily lives shows that the smartphone can be an important technological tool. Its multiple functions allow it to remedy many situations, as the example mentioned above, and the video feature of the smartphone would be another example. Smartphones are a platform where the opportunities to meet people's needs can be incredibly appealing where there exist applications that might make it easier for people or craftsmen, to respond quickly to a given task. In the above examples, the camera acts as a prerequisite for the craftsman to structure his time as best as possible, but as mentioned above applications can make it possible to create new and easier working conditions for the craftsmen.

4.3.4 Guild stations and parking

In the next sections, we intend to investigate what possibilities there is present with the infrastructure, in order for the craftsmen's practices to run smoothly, with or without the car. We intend to use post-phenomenology to uncover how the infrastructure is multistable to analyze the relationship it has with the craftsmen. We furthermore intend to use the concepts from Gehl and the Slow City movement, in order to investigate if it is

possible to incorporate their concepts in these suggestions, that would benefit the craftsmen's daily rhythm and practice.

If the Medieval City and its technologies and spaces are multistable, as we analyzed in the above sections, it could be argued that green spaces, like parks, squares, etc. are also multistable, because it embraces many users that each have different purposes with the given space. An example of that could be to design and build some sort of guild stations that would solve some of the things the car represents, for instance, a place to take a break, a meeting place, lunch place, a place to socialize, etc. We are not arguing that there should be specific buildings or houses designed for the craftsmen to use for storing their tools and materials. The idea could be a station where the craftsman's' tools and materials are already integrated into the townscape, where they are to leave the Medieval City to gather materials or tools, as their current situation is. "*If you first leave your parking spot in here, you would not get the same one again and not even a better one. That is impossible*." (C6 transcription: 6). What if it is possible to combine guild stations with specific parking spots for the craftsmen, that both would strengthen the relationship between the different fields and guilds, and at the same time secure parking spots for the craftsmen in the Medieval City?

ViaTrafik, who was one of the consultants on the project about "less car traffic in the Medieval City made an analysis of the car traffic in the city. The analysis showed that out of 542 drivers 23 % of them were driving in a delivery van inside the Medieval City. It can be discussed if these numbers are representative or not, but it might give us an indication of the number of craftsmen that are working in the Medieval City (VIA TRAFIK 2019: 7). Even though it can be discussed if these numbers are representative, it could be a justification of that there would not be needed that many parking spots for the craftsmen, and by that not take more space in the infrastructure. It is a matter of whether to 'preserve' the craftsman's experience of being a craftsman, that they have the opportunity to fulfill their role as a craftsman through interaction with technologies. The personal aspects that are embedded in the bodily relationship between the craftsman and the car are important to have implemented as an integral part of the townscape if the car is denied access. Furthermore, the Municipality of Copenhagen suggested implementing some sort of a license system that would allow e.g. craftsmen, the business community, to enter the city in a limited time zone. The license system, in this case, would be an integrated technology and solution that would be beneficial in order to control the car traffic in and out of the Medieval City. The implementation of such a license system could benefit the balance of the road users because "unnecessary" car traffic could be reduced. The craftsmen would in this context be certified from different sustainable and healthy factors that e.g. the entrance to Medieval City by electric cars, sharing schemes of tools, and delivery services as a collaboration between the different professions. In such a scenario, the entrance by car would still be a possibility for the craftsmen, but with restrictions for the type of car. The

sharing schemes would be a way to convert into a changed scenario, where the different types of craftsmen gathered in the same cars, could minimize the driveway to the city. This could possibly serve as financial support in conversion from gasoline-powered car to electric powered car.

"*The craftsmen want to be a member of the same union. We stick together against our chief fitter. We are together on this specific task and if the carpenters say we have not made it right, we still stick together*." (C4 transcription: 9). Even though the citation indicates that there might arise clashes between the craftsmen, if they, in this situation are working at the same construction site, the intention is to show that it could strengthen the relationship between the different fields and guilds, if they might have a common place to strengthen their unity. A guild station with access to tools, which could be borrowed internally, would invite the craftsmen to get to know more about the different fields and guilds, and avoid clashes as shown in the citation. In order for different professions (the different fields of the craftsmen) to cooperate and plan their daily tasks more accurately, the guild stations could be a good way to technologically mediate that through an app or platform that would be available at the stations, whose purpose was to update the current tasks. We argue that such a platform or system, would be beneficial at a construction site, where many fields and guilds are cooperating on a given task.

Summation of section 4.3.4

A combination of guild stations, parking spots, and a license system would help solve some of the problems the craftsmen have with the current infrastructure of the Medieval City. The guilds stations would integrate the craftsmen more in the townscape, because they would have access to their tools at these stations. The stations would furthermore be used as a place to take a break, eat lunch, etc. where the intention is to transfer what the car symbolizes, and by that implement that in these guild stations, as analyzed above. The specific parking spots and appertaining license system would not solve the car problem the Municipality of Copenhagen is striving for but would be a good solution for the craftsmen community to get access to the city and have the same starting point as the citizens of the city.

4.3.5 Shared green spaces

Is it possible to apply the social things (lunch break, a place to take a break, meeting place, etc.) attached to the car to a physical territory for the craftsmen to use and be a part of? When entering a construction site, the most typical thing to notice is the containers that the craftsmen can use as a place to take a break, while being close to the workplace where all their tools and materials are. We do not argue that the guild stations should cover the same thing as the containers at the construction site does but instead symbolize and represent a commonplace to engage in other craftsmen or construction site employees and enjoy the shared space that

contains fellowship. Gehl, with his four objectives (lively, safety, sustainability, and healthy), represent sustainable initiatives, where green spaces and shared spaces are available and accessible for every citizen and user of the city. If the craftsmen are an integral part of the city, and should continue to be, these green spaces with a combination of the guild stations, should be an integral part of the Medieval City's infrastructure. Social sustainability invites the users of the city to have the same starting point, which should include the craftsmen by the use of the city's shared spaces. We suggest that that guild stations and what it represents, as analyzed above, should be combined with green staying zones, that have an inviting environment for the craftsmen. When combining social places and technologies in this context, both Gehl and the Slow City movement would get some of their concepts implemented, and by that appeal to green spaces and initiatives, that would benefit a city for people. The craftsmen's rhythm of life would also be maintained because they would be acknowledged more in the townscape and have the same starting point as other citizens of the city have.

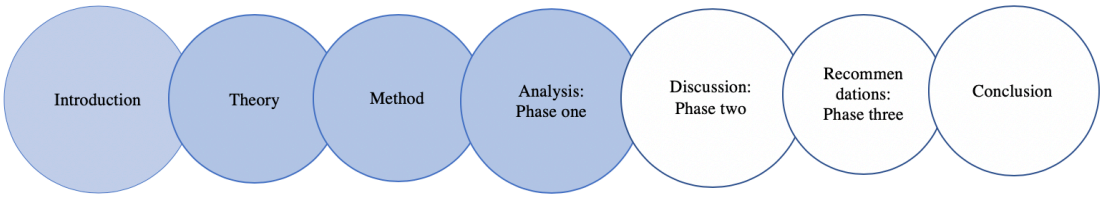
Summation of the section 4.3 and its sub-sections about possible technical suggestions

We have now analyzed some infrastructural solutions that would solve some of the challenges the craftsmen are facing with the current infrastructure and what they might be facing with the future infrastructure. Independent of their field and guilds, the craftsmen's practice would be affected and to some point changed completely, if the car traffic gets reduced by, e.g. a license system. We have suggested that in order to maintain and strengthen the relationship between the guilds and to come up with a solution that does not involve the car directly, guild stations and shared green spaces would be a good innovative suggestion. If we assume the license system would be implemented in the Medieval City and thereby allow the craftsmen to get access to the city, it should be complemented with e.g. parking spots, close to the guild stations, so that the craftsmen would not have to deal with the issues attached to parking spots.

4.4 Summation of chapter four: phase one

We have now analyzed the first phase in value-sensitive design, which is the conceptual phase, with help from Gehl, the Slow City movement and our main theory, post-phenomenology. We have analyzed some main factors and technologies that helps identify the craftsman, as his tools and at some point, the car or the bicycle that he/she is deeply connected to. Regarding the creation of the craftsmen's identity, it had been analyzed, that the craftsmen tools are a huge factor when it comes to defining the craftsmen's identity. The environment that the craftsman operates within plays a significant factor in the constitution of the practice. The environment should create a space for the craftsman's practice to "flourish" and support their daily rhythm. The car or the bicycle can to some extent be seen as a means to fulfill a given task. When identifying the craftsmen's car or bicycle as technologies, there arises some challenges attached to these technologies, that might have an effect on the way they use and experience the infrastructure of the Medieval City. The car and the bicycle are both

each multistable, because they feature many other things besides being a transport form or as a storage, where they each contribute to the constitution of the craftsman's practice and supports their daily rhythm. Lastly, we analyzed what possible technical and infrastructural suggestions that might be important to consider in order to make the craftsmen's workday and practice easier in the Medieval City. These suggestions and propositions should both cover the use of car, but also suggest how to integrate the craftsmen more if the comes a restriction on the use of the car in the Medieval City. The next chapter will take basis in the second phase in value-sensitive design which we have categorized as the empirical phase, that will be further introduced in chapter five.



Chapter five: Phase two: The empirical phase: Further analysis and assessment of the craftsmen's practices

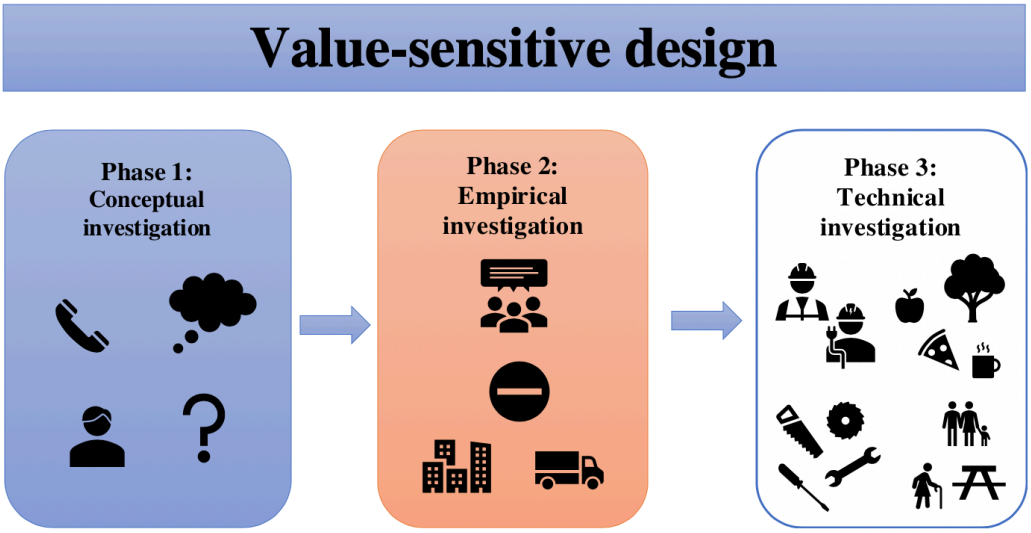


Figure 13: Illustration of the three phases and how we intend to use it. Phase one is about uncovering what values and challenges our informants are facing if the car traffic gets reduced in the Medieval City. Phase two is to present our findings for our informants and consider possible technical suggestions. Phase three is our recommendations that enlightens the technological components of the craftsmen's practice.

We are now in phase two, the empirical phase, where we intend to uncover our craftsmen's challenges, values, and needs based on our seven informants. We intend to enlighten if the identified values, analyzed by the concepts from Gehl, the Slow City movement, and our informants, are representative for the craftsmen and

how they fit into the given townscape. The empirical phase according to Cummings as mentioned in section 2.3 focuses on: "(...) *the human interaction with the technology.*"(Cummings 2006: 703). We intend to uncover how this infrastructural change affects the craftsmen's practice, perception, and routines, and how we as techno-anthropologists support this interaction between craftsmen and the city. The technologies embedded in the craftsmen's practices, expose the values of freedom, efficiency, socializing, and identity, and by these identifications, we aim to assess how these values become present in the constitution of the craftsman in the Medieval City. The interaction between the craftsmen and the technologies is fundamental in the creation of the craftsman and their practice, in which we intend to assess how the technologies become an obstacle or support the craftsman's presence and craft. At this point and in this phase, we went back in the field and presented our findings for the craftsmen, in order to investigate if we have managed to uncover the challenges they are facing with the technologies in the Medieval City and if the present values we have uncovered is familiar to the craftsmen.

We, therefore, went through our main findings and selected five areas or questions we wanted to present for the craftsmen who would like to help us once again. The five areas were covering questions about: the different fields and guilds, tools and materials, the car, the Medieval City and its surrounding technologies, and lastly about some of the craftsmen's own articulated values. Even though we only got to present our five questions to two of our informants (C2 and C3), due to given situation we are in (COVID-19) we argue that it has given us the opportunity to use these two interviews as a validation to discuss if we have managed to uncover their main values and challenges with the Medieval City. The goal is to create recommendations and suggestions for the Municipality of Copenhagen, which includes the craftsmen and appreciates their craft, expertise, and knowledge to and in the city. We furthermore intend to uncover if the technical suggestions we have analyzed would be beneficial for our informants or in general the craftsmen who are and would be working in and outside the Medieval City.

5.1 Creating a better everyday life for the citizens in the Medieval City

Throughout our study, we have tried to form a thorough basis for formulating recommendations based on our empirical data and through our analysis focused on the essential factors that play a role in the constitution of the craftsman's identity and their practice. The craftsman's identity is a mixture of different values as well as a technological affiliation with the material measures that form the craftsman's practice and identity. The project "less car traffic and better everyday life" where users and citizens of the city were invited to formulate recommendations that had a different reality than the craftsman, a different daily rhythm, which the recommendations illustrated. The inclusion of the craftsmen and their practices in these recommendations was not a requirement, yet the craftsman is implicitly enrolled in them. A selection of the recommendations reads

thus: "*Up to 70% reduction of the car traffic, 80 to 90% reduction of parking spots, and better conditions for vulnerable road users.*"(Kommune 2020: 5). If you reduce the parking spaces, will the craftsman be able to contribute to the city and its functionality? There may be a mutual dependency between, citizens, city, and craftsmen, a dependency that is not directly considered in a 70% reduction in car traffic and an 80-90% reduction in parking spaces. At this percentage, 900 out of 1050 parking spaces in the Medieval City will be removed, and release both large and small areas for new urban opportunities (VIA TRAFIK 2019: 22). The craftsmen's opportunities will be limited by this reduction, but the new opportunities can arise and should also open up for suggestions that cater to the craftsmen. In a scenario with an 80-90% reduction of the parking spots in the Medieval City, it would affect not only the craftsmen's daily lives but the business and private residents as well. The closed parking spots could create spaces for green areas, where it is important to consider the presence of craftsmen in such changes. The idea of a guild station arises on the basis of one our informants, who talks about "staying zones", as a response to the lack space in the Medieval City. *"You may block some of the bike lanes or sidewalks if you have to deliver materials."* (C2 transcription 2: 2). This citation led to the idea of favorized "staying zones" to create a space for the craftsmen, to minimize the interference to pedestrians or cyclists in the Medieval City, such as pedestrians and cyclists. A guild station could therefore enhance the opportunity to socialize across professions and workplaces, as a drop-off spot for materials and tools, and thus create an environment that is inviting and attractive for the craftsman still to work in. In this way, one can make the craftsman an integral part of the townscape and not exclude them as an outside entity. The craftsmen's influence supports the inclusion of craftsmen and their practices in a changed scenario. Some of the craftsmen's task is, among others, construction, and maintenance, to help maintain the functionality of other interest housed in the Medieval City, and the skills of the craftsmen support the business's survival and functionality. Their craft is a key factor for the craftsmen to be able to provide a service and contribute to the city's many professions and social groups. The craft has created the Medieval City and is, in today's society, still a worth preserving area, dependent on the craftsman's practice and unique skills. But how does this combine the intentions with creating "a better everyday life"*?* The working environment of the craftsmen play a major role in their daily rhythm, and the city must be welcoming and accommodate their practice, as to other users of the Medieval City. Some of the craftsmen's daily routines may be embedded in the car and in their daily rhythm, which is lost when parking spaces are reduced, and driveways restricted. The car can offer socializing and breathing space for the craftsman, a general factor that can create the desire to go to work, which supports the idea of the craftsmen as an integral part of the population in the Medieval City on equal terms.

Summation of section 5.1

The above example about guild stations shows the need for specific conditions for the craftsman, as an integral part of the townscape. To maintain their influence in the Medieval City, the city should be an environment

where they will be able to maintain their rhythm of life. Specific guild stations for the craftsmen might be a solution that accommodates not least the citizens, the users, and the craftsmen, but also the daily rhythm they each practice. The craftsmen's influence in the Medieval City is wide-ranging in the townscape, with the unique competencies they make the Medieval City maintain their traditional expression and medieval look. Prioritizing the craftsman with the citizens and users of the city, and creating an environment that invites all social groups, might be necessary to give them a foundation to perform their craft and maintain their influence for the Medieval City.

5.2 The presence of the car in the craftsmen's practice

The craftsmen's bodily experience of the city might be considered as a bodily experience through technological components, such as the car, city, and tools. We highlight these three because they all contribute to or challenge the constitution of the craftsman's practice in their own way and because they are connected to the craftsmen's identity. The focus of the car has been intensified and the car has therefore been characterized as an important component in the light of the changing infrastructure in the Medieval City. One of the informants has changed his relationship to the use of the car in his daily work. "*I would say that it [ref. the car] can be missed four out of five days in a workweek (...) despite you planned it correctly*." (C3 transcription 2: 2-3). In the first interview, this craftsman did not have the opportunity to fulfill his job without his car but changed his opinion when interviewed him the second time. The craftsman in this situation may be able to do his tasks without his car but at the same time articulate that planning for it is important for it to become a reality. But is the car just a means to an end? The necessity of the tool might depend on transportation by car, and as illustrated in the analysis, the car is a multistable technology, both as a means of transport, tools, and workshop, etc. This may support the importance of the car, both its many facets, it is comfortable and convenient and can make the job easier in most respects. There are several cases where the car has a bodily relation with the craftsman through our analysis, and it may explain its importance. The craftsman views the city through the windscreen of the car and his presence in the city is conditioned by the presence of the car. The size of the tasks depends on the craftsman's mobility in the Medieval City, which substantiates that the craftsman's daily rhythm is viewed through the car and their reality merges in combination with the car because of the connectedness they have. A reality that may not be the "real" reality as a craftsman. The question is whether if the craftsman should view his own mobility as an isolated *self*? This understanding of the craftsman and the car as a unit shows the city's infrastructure in a specific light where the craftsman's reality is mediated by the car's presence. As mentioned in the analysis, a licensing system provides an opportunity to reduce unnecessary driveway. This could create more freedom of movement for the craftsmen in the car, and possibly make the working day more efficient. The part of the identity and practice embedded in the car would be retained in a scenario where unnecessary traffic was removed, leaving drivers with an errand to enter the Medieval City.

Summation of section 5.2

The craftsman and the car can in some cases be regarded as a total package because of their connectedness, almost as a necessity for the execution of the work. It could be questioned if they are undermined in this urban change due to their own notion of the car as an integral part of themselves and their practice as a craftsman. At the same time, the car helps maintain their daily rhythm, where the multistability of the car is important to maintain the rhythm as it forms parts of their practice. This does not mean that the exclusion of the car is impossible, but in many cases, the presence of the craftsman is determined by the opportunities the car has created and still creates. Although the car is not directly the reason why the craftsman can perform his craft, there are still some social conditions embedded in the car's presence, for instance, break rooms, coffee rooms, customer calls, and socialization in between the craftsmen. The challenge of removing the car from the townscape is that the craftsman's daily rhythm is challenged, despite the importance of their presence.

5.3 The value of the tool and the use of Nethire

If, as mentioned above, one regards the craftsmen as an isolated *self*, the tool will be conspicuous. The tool helps to define the craftsman where his competencies are expressed through his bodily connectedness with the tool. One of our informants exemplified the tool as a fundamental categorization of the different types of craftsmen. "*Tools are clearly what defines the various craftsmen, a brush is a painter, a hammer and a folding rule is a carpenter, a trowel is a mason, it is very categorized.*" (C2 transcription 2: 1). The foundation of the craftsman can therefore well be characterized as their relation to their tools, where each type of craftsmen is defined and categorized by their specific tool. The car may be a necessity for the tool to be transported and for the craftsman to arrive at the task, but the tool is necessary for the task to be solved. The relationship between the craftsman and the tool can in many cases be regarded as two parallel entities, but when fused and connected, it creates the craftsman as a performing craftsman. As mentioned in the analysis, Nethire is an innovative service that makes it possible to hire out the tools of the craftsmen in between. But does this service make it easier for the craftsman to practice his craft? In a general sense, the tool for the craftsman can complete his tasks, but in a partial arrangement, some of the individual identity can be lost. There may be a clearly defined identity in the use of their own personal tools, which is more than just a hammer and carpenter. In the analysis, we saw examples of craftsmen who had a very personal relationship with their own tools and the specific brand. Precisely this could indicate that the identity as a craftsman has a deeper layer, which in this case would limit the use of Nethire. The professional pride in using their own tools may indicate that Nethire is not a universal solution for all craftsmen, but to some extent can be a solution that can maintain the connectedness the craftsmen have to his/her tools. Disregarding professional pride, this service could possibly support unforeseen complications associated with a task. In the Medieval City, this solution would allow tools to be

found close to the workplace by having depots or lockers with loan tools in various places in the Medieval City. The craftsmen's personal relationship to their own tools, could be challenged by such rental services, but the idea of lockers or deposits are open for interpretation. The lockers or deposits could also function as a personal locker for the craftsman who have a deeper connection to his own tools, and the establishment of the lockers and deposits could be combined with the idea of guild stations. In such combination, it could increase the safety of the tools not being destroyed or broken, and at the same time sustain the "present-at-hand" and the connectedness between craftsman and his/her tool. The space for locker or deposits could be released by closing down the parking lots and instead be used for establishing depots or lockers in the Medieval City. Our proposal about the use of Nethire and the reinterpretation of the service, could to some extent maintain the craftsman's identity and opportunity to practice his craft in the event of unforeseen complications. This suggestion might challenge the universal usability for the individual craftsman who has a professional pride, following a brand or profession, but might accommodate the craftsmen's maintenance of their practice and identity, based on the connectedness between tool and craftsman.

Summation of section 5.3

The craftsman is dependent on the tool, and the tool is a necessity for something to be created and become a reality. The necessity of the tool in the constitution of the craftsman and their practice is decisive for their influence and contribution to the city. Looking solely at the tool as the direct reason for the craftsman being created, reasoned the connectedness, and having the opportunity to carry out his practice, the tool is what should be weighted as a key factor in a changed scenario in the Medieval City. The need for the tool is a necessity for the craftsman, and a sharing arrangement with lockers and deposits for the tool inside the Medieval City would to some extent support the craftsman's presence as an integral part. At the same time, this suggestion could maintain the daily rhythm of unforeseen complications and sustain the "present-at-hand". The tool is perhaps what should be attributed as the central key element in the craftsman's practice and constitution of the craftsman *self*.

5.4 The craftsmen's own articulated values

When studying our informant's challenges and issues with the Medieval City and its infrastructure according to their work, we run across some values that they articulated themselves, which figure 14 illustrates.

Figure 14: This is an illustration of the nine articulated values that our interviewed craftsmen consider as valuable.

Figure 14 should be understood as nine values that are connected and present in most of the seven interviews we have performed as mentioned in chapter three. We noticed that our informants were all at some point articulating these nine values that should be read in random order: *planning, freedom, time, money, efficiency, unity, accessibility, to be happy*, and *to behave well*. The nine values can either be understood together, separately or in a mix. The Slow City movement has a goal which is to promote sustainability and conviviality (Mayer and Knox 2006: 321-322). Conviviality fits under Gehl's concept, lively, which is why we argue that the Slow City movement and Gehl also have similar aims and target groups.

> "*The Slow Food movement created the ideological platform for a city-based spin-off that constitutes the grassroots local implementation of the principles associated with livability and quality of life*." (Mayer and Knox 2006: 321)

The citation is describing the Slow Food movement, which has created an ideological platform for cities to implement local things that are associated with livability and quality of life. The craftsmen, based on their expertise and knowledge about their craft, are helping to maintain the Medieval City which in the end is taking part in the well-being of the citizens and help to maintain their quality of life. We, therefore, in the next sections, intend to discuss if the craftsmen's own articulated values will fit under the concepts from Gehl and the Slow City movement.

5.4.1 Uncovering what freedom means to the craftsmen

Just to mention a few of the articulated values as figure 12 shows; freedom, efficiency, unity, to be happy, and to behave, could at some point fit under the overall goal that Gehl and the Slow City movement strives for. These are values that are embedded in the craftsmen's practices, it is values that creates their rhythm of life, and actions in the Medieval City. The values should be supported by the infrastructure and the Medieval City

has assure presence of these values, as a space of diversity. We are aware that the articulated values are based on the craftsmen's reality and on their craft, but is it possible to challenge their values? Could freedom for instance, just be a term they use because it is convenient and easy for them to interpret because of their practice?

When we went back to the field and presented our findings, one informant argued that he had the freedom to: "*Plan my day. I have the freedom to do what I like, as long as I take care of my work, and as long as there is money in it*." (C3 transcription 2: 1). Freedom here is mixed with the ability to plan the day and have the freedom to do so and basically do it in their way. Before presenting our findings to some of our informants, we analyzed that the way freedom is being interpreted is individual to the given craftsman and is therefore difficult to argue that the value covers the same things. If freedom is characterized as our informant in the citation above argue, to have the car to drive to different hardware stores or drive home earlier than anticipated because it's not worth sitting in traffic during the afternoon, why is the car so important to the craftsmen? Some of the freedom that the craftsman describes is embedded in the presence of the car, and the city provides a framework for that freedom to happen. The city has to offer, a space that accommodates the diversity of the townscape. The car is, to some extent, a luxurious thing that the craftsmen can use because it is multistable, where they have the opportunity and freedom to use it the way it was intended to. The self-determination to structure their everyday life is expressed through this freedom in their practice. This self-determination has a clear relation to the car, both because freedom is expressed through interaction with the car but also because the car provides space for freedom. This indicates that freedom in this context can be many things, but it also shows that the craftsmen are contradictory in their way of defining what freedom really means to them and on what purposes they value freedom.

The same informant furthermore said: "*We have been on this construction site for almost three months now. We could have planned it better and used two or three days to drive all the tools and materials to the construction site and then travel by bicycle or by public transportation*." (C3 transcription 2: 3). The citation illustrates that the craftsmen would actually plan their workday differently in order to be more sustainable and leave the car at home and instead use the bicycle or take public transportation back and forth to the construction site. Looking at the articulated values, the bicycle would be more efficient for the craftsmen to use because of the accessibility in the townscape, where they furthermore would save money on gas because they would not be using the car every day. It could be argued that their quality of life would be better and that it would ensure a happier workday because they would not have to think about finding parking spots for half an hour and not sit in traffic for an hour in the afternoon. However, if the craftsmen are characterizing freedom equal to their planning skills, which is shown in the above citation, as the freedom to plan their workday better, does the car then not become more unnecessary or just as a luxury? And what happens to the craftsmen's self-determination

when the car is excluded from the Medieval City? For the craftsman who uses their car, this might be a deprivation of liberty. The sovereignty of the craftsman is being challenged by the Medieval City's "new social framework". The city should in most respects form the basis for the residents and users' self-determination and freedom to self-determinate. The opportunities to “flourish” as a craftsman and support of the infrastructural maintenance and creation, is dependent of the practice of the craftsmen and their sovereign self-determination to structure and work within the framework agreed upon. Freedom appear in the routines that constitute the practice, and especially by car, there is, as mentioned above, a room for freedom. When the Medieval City wants to exclude cars, the craftsman would lose their right to self-determination, in relation to the use of car within this specific location. But how is it possible to maintain the craftsman's self-determination in this new context? The freedom or self-determination to structure one's day is what we include in this proposal. The way in which the craftsmen's freedom could be taken into account in their daily rhythm could be the way to structure the given tasks. If the length of the tasks was designed for a new infrastructure in the Medieval City, it could retain the freedom to structure their own day, while maintaining a financial incentive due to the length of the task. The freedom and self-determination that is deprived must in some way be found elsewhere. The proposal to rethink the tasks could be a way to give the craftsmen the opportunity and freedom to plan for themselves.

Summation of section 5.4.1

Freedom is a value that covers many things according to individual craftsmen. It can both cover the freedom to choose the primary transport form, the freedom to solve the tasks in a certain way and timeframe, etc. Although, when challenging their freedom, the cars presence is implicitly challenged to. The possibility to accommodate the value of freedom in the craftsmen’s practice, could be to reconsider the structuring of the tasks. The value of freedom is expressed in many of aspects of the craftsmen’s daily rhythm, but the freedom of self-determination might be the central part of their freedom in practice. The self-determination could for instance be, to choose their own means of transport, insert breaks dependent on the tasks, or buy materials in hardware stores. These above examples of freedom have a deep relation to the car’s presence, which is why it is considered as a means of freedom in their practice and constitution of their identity.

5.5 The integration of technologies in a slow city

The Slow City movement is concerned about technologies and how humans can adjust to technologies, but also the other way around, which complements the post-phenomenological framework. The Slow City movement is based on creating sustainable cities on an international level, where the cities there is a part of this movement have things in common concerning 60 criteria, they have to fulfill in order to get a membership (Dogrusoy and Dalgakiran 2011: 132). 60 criteria categorized under environmental policies, infrastructure, technologies, urban quality, production (Ibid), which we argue are more long-termed and more concerned

about creating some values and guidelines for the members of the movement to follow. It could be discussed if the Slow City movement and their understanding of integrating technologies in cities would benefit the craftsmen, whose main technologies are categorized as fast, like the car or the bicycle. Both post-phenomenology and the Slow City movement are interested in integrating technologies but differentiate in how technologies should be understood. On the one hand, the Slow City movement argues that in order for a city to be slow and sustainable, there should be technologies that help to do so. On the other hand, if these technologies should support the slow movement in the city, does the movement then intend to eliminate all technologies that are categorized as fast, for instance, the car traffic and the bicycles? Fastbox is a service that is focusing on being sustainable and at the same time help its customers who are in need of material. The Slow City movement is as well as Gehl, focusing on creating a slow city, where the slow approach is concerned about reducing noise, light, air pollution, enhance public transportation, as mentioned in chapter two. The "slowness" could then be understood as reducing the car traffic, because they are a part of the fast movement and at the same time polluting the air with their cars. Even though we do not categorize bicycles as a slow traffic in the Medieval City, we still argue that the bicycle as a technology that Fastbox are using should be allowed to be in the city, even though the Slow City movement is not directly mentioning the role of the bicycle in the city. On the other hand, the movements are focusing on increasing the good living and well-being of the citizens, where the Medieval City that is a city containing cyclists should be included. The integration of Fastbox in the Medieval City as one of the main technologies and services the craftsmen can benefit from would support the local community and the challenges there are in the city if the car traffic gets reduced.

Summation of section 5.5

If we assume that the Municipality of Copenhagen gets through with their many initiatives and by that reducing the car traffic in the Medieval City, some of our craftsmen would be willing to adjust to the many new possibilities the city opens up for if their boundaries are pushed enough. The relation the craftsmen would have to the technologies would also force them to think differently about their practices, and not just take the easy and convenient choice, as the car represents. Technologies as Fastbox would be a good suggestion, because it both supports the local community, and are green by nature because they are using bicycles as their main transport system. We are aware that there are many other disciplines, as engineers, architects, politicians, etc. that are deciding which initiatives the city needs, but in the end, it is the craftsmen who are building it and ensuring that it is built professionally and that the end product is satisfactory.

5.6 A city for "people"

The concepts from Gehl, have shown to be useful when investigating the craftsmen's values and needs as an actor working in the Medieval City. On the other hand, the concepts from Gehl on how to create a city for

people seem to be on a general level and are more long-termed. Gehl argues that the four concepts; livable, sustainable, safe, and healthy cities, emphasizes the problems in the city but also on the opportunities, where the focus is on the vulnerable road-users. If Gehl wishes for a city for "people" that are both livable, sustainable, safe, and healthy it can be argued that he with his concepts would be able to. The interesting thing is what people cover, where people in this context also covers the craftsmen. Most of Gehl's argumentation is based on the vulnerable road-users, which he characterizes as people and what cities should focus on. Gehl's concept about social sustainability is narrow-minded to revolve around pedestrians and cyclists and are not dividing between what kind of pedestrians and cyclists they are representing. Creating "a city for people" is therefore not specific enough and is missing a focus on the diversity in a society that will include more people and the different groups in society. Diversity understood as not only pedestrians and cyclists, but the different kinds of pedestrians and actors who use the pavements and bicycle lanes that for instance could be, the disabled, the once with baby carriages, skateboarders, roller skaters, etc. Furthermore, diversity is also understood as the different socials groups, for instance, the business community (e.g. the craftsmen), different districts and neighborhoods, food and cultural communities, shopping communities, etc. that all are maintaining the Medieval City's identity as a city and more importantly sustaining a city for "people". We are well aware that it is not possible to design a city that covers all actors, but still find it important to include the business community as the craftsmen belong under, because their expertise and contribution to the city is important to sustain the rhythm of life (Gehl 2010: 125), and in creating a better everyday life for the citizens and users of the city. We also know that Gehl's overall goal is to create a city that favors people but in order for a city to function it needs to include the economic factors as well as the societal and environmental, and having the city's diversity in mind. The values and challenges the craftsmen are facing with the Medieval City are much more field-specific due to their craft and in general their way of experiencing the city and its many technologies. We, therefore, argue that Gehl's concepts should be more specific when it comes to defining who the city should favor, and not just "people" which we understand on the basis of Gehl's focus on pedestrians and cyclists. As well as for social sustainability as mentioned above, the goal according to Gehl is to create a livable city that can support social sustainability and planning that creates room and space for every actor (Gehl 2010: 119). Livable cities, where the streets and squares are inviting people to use them, but also the architecture of the city for instance buildings and arts. "*We shape cities, and they shape us*." (Gehl 2010: 7). Gehl argues that we shape cities and that cities shape us, where well-designed neighborhoods inspire people to live in them, as argued above. A livable city that helps shape the people living in it, should, therefore, include the craftsmen because they with their expertise and craft are shaping the city and provide the users and the citizen's rhythm of life to be sustained.

Even though Gehl wishes to create a room for every actor in the city, our interpretation with his four goals is that he wants to create a slow living that would allow most of the car traffic to be reduced. Gehl argues that there is a health problem with many cars in the city, and how they are releasing CO_2 emission which is affecting the environment in a not healthy direction. However, how can it be health-related to remove the car out of the city, without considering the business community, tourists, public transportation as busses, who all are helping to balance the transport system in the city? As for the business community and the craftsmen who carry heavy materials and tools removal of their primary transport system would make their practice and workday much harder. We have argued that a bicycle to some extent can cover some of the things that a car can too but would not completely replace the car's function. "*If you have to go back and forth five times and carry your tools and materials that weight around 30 kilos per sack it would be hard*." (C3 transcription 2: 5). As the citation illustrates removing the car out the townscape in this situation would not be a healthy solution for this specific craftsman who works as a bricklayer. On the other hand, a plumber would be able to carry his/her materials and tools in the box in front of him/her, it would to some extent need to go back and forth twice, which might be something they could cope with, that differentiates the plumber versus the bricklayer.

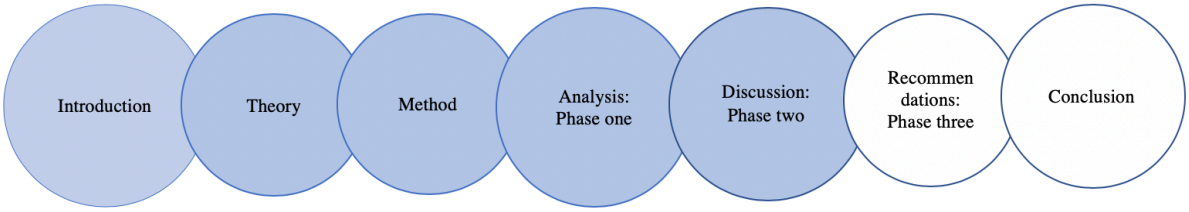
Summation of section 5.6

Creating a city for people according to Gehl's four objectives, could to some extent be implemented when it comes to including the pedestrians and cyclists. However, as discussed above, Gehl is missing some important factors that need to be included as the diversity in society, which will include the craftsmen and their practice more, but also other social groups as discussed above. It is important to mention that Gehl is an architect by nature and is, therefore, focusing on creating livable cities, that contains buildings, squares, streets, etc. that invites people to be in the city. Although, we argue that in order for that to happen Gehl needs to think more about the business community, as the craftsmen, in society that are constructing these things so that the city remains livable.

5.7 Summing up chapter five: phase two

In these sections we have enlighten the craftsmen's practices in the Medieval City, and their relation to their tools and car. We have investigated how it is possible to create a better everyday life for the citizens, which also includes the craftsmen and their craft. The integration of green spaces and guild stations would to some extent solve some of the challenges the craftsmen are facing with the new infrastructure, where it at the same time would allow the craftsmen to strengthen their relationship to other fields and guilds and by that enjoy the many spaces of the city. Regarding technologies as Nethire and Fastbox that provide a service for the craftsmen, it would not be a universal solution because the usability would depend on the inclusion of the craftsmen as a group. There are advantages and disadvantages by both services, they support the practice of

the craftsmen under unforeseen circumstances and by that supports the daily rhythm and efficiency. We have assessed the value of freedom as one of the main values, affected by the presence of car in the practice of the craftsman. The value of freedom has furthermore been enlightened, to investigate how it is expressed and what it will take for the craftsmen to adjust to the new infrastructural changes that might be implemented in the Medieval City. Lastly, we have described why it is important to acknowledge the craftsmen in the townscape when the intention is to create a city for people. A livable city is a city that embraces diversity in a society and is expressed by a flourishing social sustainability. The next chapter will take a basis in the third phase in value-sensitive design, that is the technical phase, where we intend to present our recommendations and suggestions on how to include the craftsmen in the Medieval City, and give a suggestion on what technical and infrastructural challenges that could be a solution to this problem the craftsmen are facing.



Chapter six: Phase three: Recommendations and technical suggestions: The technical phase: Exemplifies our recommendations and solutions to the Municipality of Copenhagen

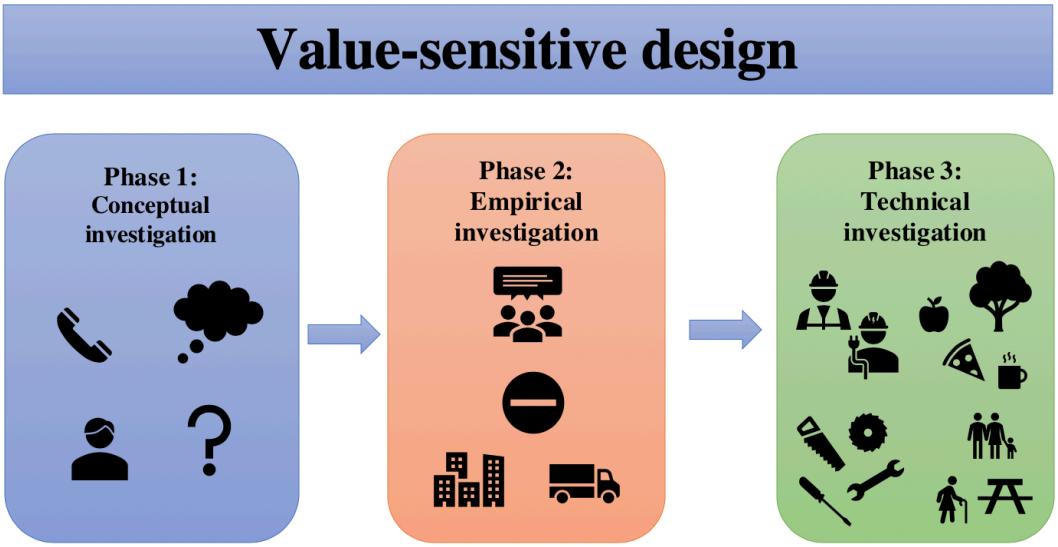


Figure 13: Illustration of the three phases and how we intend to use it. Phase one is about uncovering what values and challenges our informants are facing if the car traffic gets reduced in the Medieval City. Phase two is to present our findings for our informants and consider possible technical suggestions. Phase three is our recommendations that enlightens the social constitution and technological components of the craftsmen's practices.

We are now in the last phase in value-sensitive design, the technical phase where we will present our findings analyzed and assessed in chapter four and five, and by that present our recommendations and appertaining suggestions on how to include the craftsmen in future urban design processes. The intention in the technical phase according to Cummings is to, consider and assess how the craftsmen can use a given technological suggestion and uncover if they are capable of it. Our intention is therefore to present two overall recommendations that the Municipality of Copenhagen can use in their future work in creating a sustainable city that accommodates the values and practice of the craftsmen operating in the Medieval City. The two recommendations have different purposes and thereby different focus areas. The first recommendations cover the social level which is centered around the craftsmen's role in the city. The second recommendation is based on a technical level and thereby suggests what technical initiatives that could accommodate and optimize the craftsmen's practices in a changing townscape. The thoughts behind these recommendations are based on our techno-anthropological framework (including our theoretical and methodological framework), empirical findings, our seven informants, and the relevant literature used in this thesis. Our techno-anthropological approach has enabled us to create recommendations and appertaining suggestions that can support the inclusion of the craftsmen in the townscape. These are created on the basis of a changing perspective by enlightening the needs, values, and routines of the craftsmen combined with the infrastructural setting in the Medieval City.

In order to create these recommendations, we have used the three phases from value-sensitive design as a foundational guideline for our investigation, and furthermore used our meta-theory post-phenomenology and the concepts from Gehl and the Slow City movement. The craftsmen's craft plays a significant factor in the townscape because they help maintain the historical and aesthetic value of the Medieval City, where they at the same time help increase the citizen's quality of life. With our techno-anthropological skills and knowledge, we want to be a part of this changing perspective and show that it is possible to include the craftsmen in the townscape when designing future cities. The recommendations and appertaining suggestions show the importance of maintaining the craftsmen's identity to preserve their presence and their place in the Medieval City, but also show the possibility to accommodate the connectedness the craftsmen have to their tools and to some extent the car.

6.1 Recommendation one: The craftsmen's role in the Medieval City

This recommendation is based on the role the craftsmen have in the Medieval City and contains a more social perspective of their role. The craftsmen's daily rhythm creates a foundation for other healthy everyday lives where their contribution in several respects cannot be neglected in an urban change. Their contribution to the city creates an incentive for inclusion in the townscape, to create an environment that accommodates their needs and values and enables the craftsmen to flourish. We recommend that the craftsmen should be considered equally as citizens and users of the Medieval City, and thereby have the same starting point. *"Freedom exists in the possibilities that are opened up for human beings so that they might have a relationship with the environment in which they live and to which they are bound."* (Verbeek 2011: 60). The value of freedom should be considered as a universal and inevitable factor, not only for the craftsmen. The city is a social space for self-determination in any aspect of everyday life, and the value of freedom should be sustained in the practice of the craftsmen.

6.1.1 Suggestion one: The craftsmen's role in the Medieval City

We suggest that in order to create a better everyday life for the craftsmen they should be considered as a part of the townscape in the first place. They are users of the city's public squares and places which is why their needs should be included. We furthermore suggest that in order to differentiate between different actors in the city the craftsmen's interests must be accommodated and seen as a necessity in future urban planning. We suggest that the craftsmen's practices and daily rhythm could be a special case, inside the Medieval City borders. A reconsideration of the craftsmen's daily routines and structure of their given tasks could lead to an extension of the how many hours they use in order to accomplish the given task. If there is a general consensus in the Medieval City, that the craftsmen should have more time to accomplish their tasks, it might support their individual freedom to plan and schedule their daily practice. This could for instance accommodate the freedom embedded in their use of car, which would be removed by a change of the urban structure in the Medieval City. We therefore suggest that there should be allocated more time in the planning process in order to approach the same amount of freedom in their practical work, without the car.

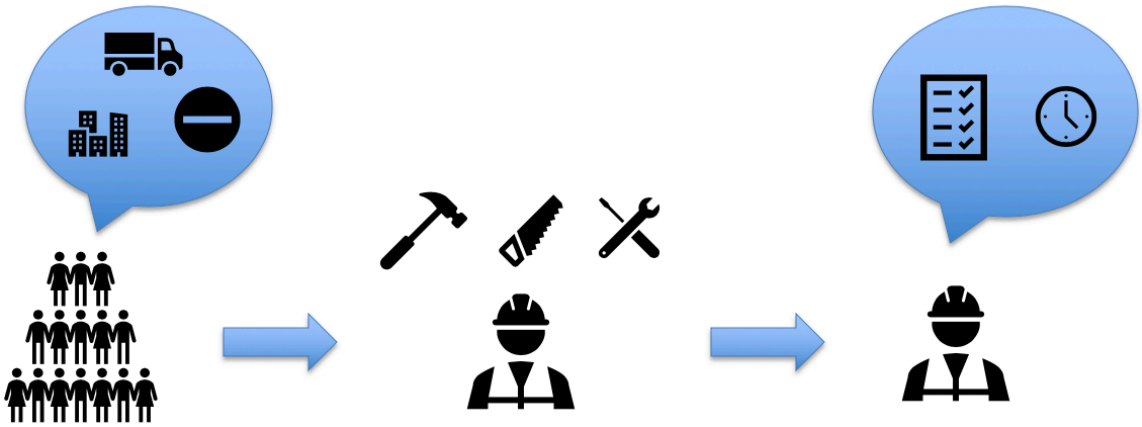


Figure 15: This figure is illustrating a process between a customer and a craftsman if the craftsmen are not allowed to enter the Medieval City with car. If the craftsmen's access to the Medieval City gets limited, the citizens should accommodate their "new" premises to fulfill the given task for the customer. There should be a general consensus in the population of the Medieval City that the craftsmen would need more days to perform the given task. If the craftsmen should adjust to the new infrastructure of the Medieval City, the city should accommodate the craftsmen's new practice without a car.

6.2 Recommendation two: The craftsmen's identify and maintenance of it

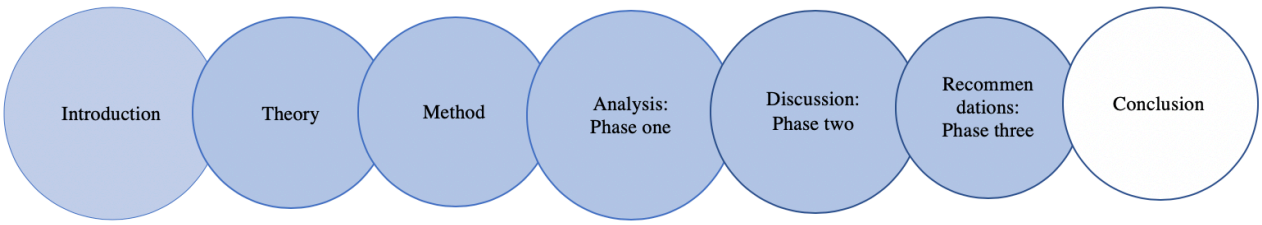
This recommendation is based on the craftsman's tools and cars as significant factors in the constitution of the craftsmen and their practice because of the connectedness they have to their tools and car. The tool is a key element for the craftsmen to perform their craft and maintain their identity as a craftsman. Seen in isolation, the tool is the direct reason in the creation of the craftsman, and we recommend that the tool should be constantly "ready-at-hand", also in an urban change. The identity of the craftsman manifest itself in the performance of their practices, and in such performance the tool is the essential element for a construction to become a reality. In the creation of the craftsman's identity, the car is an important component and should be considered as a co-creator of the practice because it is essential for the social and practical values to be fulfilled. The values of freedom, efficiency, and socialization etc. are embedded in the car's presence and must be taken into account and incorporated into the city as an integral part.

6.2.1 Suggestion two: The craftsmen's identify and maintenance of it

These suggestions are formulated on the basis of the values embedded in the tools and car. In relation to the tools, we suggest that the implementation of lockers and deposits with tools within the Medieval City could support the opportunity to maintain the tools "present-at-hand" and sustain an efficient daily rhythm. Fastbox and Nethire are two technological suggestions that could help manage unforeseen circumstances smoothly by a sustainable approach and support the tools presence and as an integrated part of the Medieval City. The social aspects of the craftsmen's practice are affiliated

by the use of the car, where guild stations could be a suggestion to integrate these social aspects of the craftsmen's practice into the urban space. To integrate a stationary and physical space for breaks, socialization, lunch, etc. on behalf of the reduction of parking spots could be a way to maintain the embedded relationship between craftsmen and their cars.

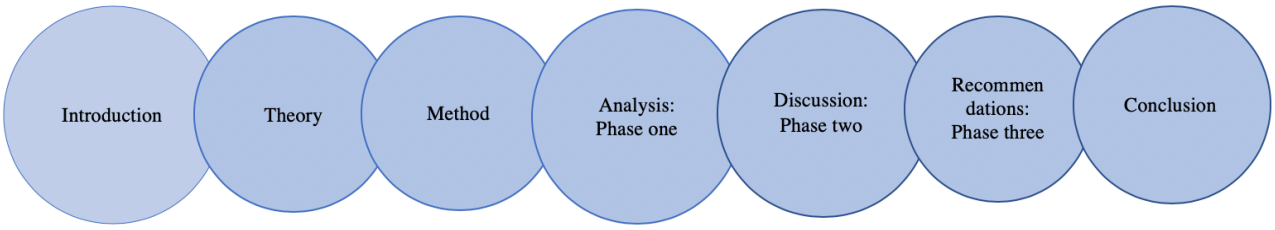
Figure 16: This figure illustrates a suggestion on how to incorporate the craftsmen's practices in the Medieval City. It could be, as the illustration indicates, to design guild stations and lockers where the craftsmen would have the opportunity to lock their own tools in the lockers or borrow tools from other craftsmen. It furthermore shows how the green areas should be used by the different citizens and users of the city, where the craftsmen would be an integral part of that.



Chapter seven: Conclusion

In this master's thesis, we have collaborated with the Municipality of Copenhagen in the Technical and Environmental Administration. Throughout this collaboration and with the use of our theoretical

and methodological framework we have investigated and identified specific values and challenges attached to the craftsman. We have by the use of post-phenomenology analyzed specific technologies and factors that create the craftsmen's identity which is attached to the connectedness of their tools, the Medieval City, and cars or to some extent the bicycle. By the use of concepts from Gehl and the Slow City movement, we have uncovered how the environment of the craftsmen plays a significant factor in the constitution of their practice and place in the Medieval City. Besides concepts from Gehl and the Slow City movement, the craftsmen have articulated important values attached to their specific field and place in the Medieval City. We have furthermore investigated how the technologies in the practice of the craftsmen are multistable and cover more than the original intention, for instance, how the value of freedom arise in the interaction with the car. Regarding the car and the freedom embedded in it, the new infrastructural changes in the future Medieval City can challenge this specific value. We suggest that there should be implemented guild stations or green spaces where the craftsmen will have the opportunity to get their needed tools and use the areas to take a break, eat lunch, socialize, etc. Guild stations could be an alternative suggestion to accommodate the craftsmen's routines and habits embedded in their use of cars. The importance of the craftsman's relationship with the car goes deeper than efficiency and transport because the car forms the foundation for a better everyday life which should be a universal prioritization for everyone involved in the Medieval City. Other technical suggestions that might be important to consider, is the integration and use of technologies as Nethire and Fastbox that would support the craftsmen's workday and practice in case of unforeseen complications. The craftsmen's unique expertise and knowledge should be considered as a foundation in the constitution and maintenance of the Medieval City. The craftsmen's presence in the townscape would secure the maintenance of a livable city that embraces the diversity in society and thereby includes every citizen and user.



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