

Empowering Craftsmanship in Makerspaces

Managers' Perception and Enabling of Craftsmanship

in Utrecht's Creative Cluster

Makers van Merwede

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Abstract

Place-specific, small-scale craft manufacturing is experiencing a renewed interest in urban cultural policy as it addresses issues associated with consumption-oriented city development. Under this potential craft revival, the extent to which urban manufacturing centres such as makerspaces facilitate craft is not clear. While prior literature often relates makerspaces to digitalization, less academic interest has been shown in the relationship between makerspaces and the wider revival of craftsmanship in the urban context. In order to respond to such a knowledge gap, we must look to the managers of such spaces, those facilitate crafts and making within their makerspace in response to urban policy challenges. Hence, this research investigates managers' perception and facilitation of values of craftsmanship in the makerspaces of Makers van Merwede, a creative district in Utrecht. The research method contains in-depth interviews with managers from three of the makerspaces, accompanied by observation of public events and document analysis of Merwede's redevelopment plan. The main findings of this research indicate that managers perceive and facilitate values of craftsmanship in ways that foster a better collective making environment. They reinforce the cultural, social and economic values of craftsmanship within a excellence-driven, trust-based community and strengthening the societal values of craft externally, in the broader urban area. The redevelopment agenda of Merwede requires makerspaces to incorporate a mixed-use future neighbourhood and, while creativity is sought to be retained, urban policy still requires some makerspaces give way to residential plans. Hence, managers tend to facilitate craft towards the needs of the neighbourhood to define their involvement in future redevelopment plans. In conclusion, craft is experiencing a revival in Makers van Merwede because the dimensions of craftsmanship are actively practiced there. Nevertheless, a more progressive policy should be advocated to harness crafts and making.

Keywords: Craftsmanship, Makerspace, Manager, Makers van Merwede, Urban Cultural Policy

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1. Introduction

Merwede is a canal area of the Dutch city Utrecht. It is the home of the creative cluster Makers van Merwede, where a number of makerspaces are located. These makerspaces are communities that give makers access to space, knowledge and tools (Anderson, 2012). Their presence is part of an increasing number of such spaces that have been appearing in cities throughout the past decade.¹ As creative co-working spaces, makerspaces facilitate people's increased passion for making something by one's self (Dougherty, 2012). Their emergence is intrinsically related to the liberating power of the internet and digital technologies that democratise making as part of a movement known as the *Maker Movement* (Dougherty, 2012; Burke, 2014; Hatch, 2013). However, many makerspaces also host craft-based making that are not necessarily high-tech. In Makers van Merwede, this type of making includes ceramic homeware, jewellery, furniture and more.²

Makerspaces, in the current urban development focus, are further shown to be emerging in the context of a perceived wider revival of craftsmanship. But how craftsmanship is adopted in such spaces has not been discussed in detail. Craftsmanship is essentially inherited, in a broad sense, from making (Adamson, 2007). This is showcased by applying skills and treating materials that involve manual work, a learning by doing process and a goal towards a sense of self-fulfilment (Adamson, 2007; Sennett, 2008; Laginder & Stenoein, 2010). Craftsmanship is experiencing a revival in contemporary urban discourse due to its small-scale, haptic and culturally embedded method of production contrasts the issues that mass production and consumption have brought to society (Jakob, 2013; Ocejo, 2017). For instance, many scholars have noted that place-specific and flexible manufacturing such as crafts provide more accessible and stable employment than that provided by consumption-oriented economic development (e.g. Bryson et al., 2008; Grodach et al., 2017). Makerspaces such as those in Merwede are embodying many of the characteristics of flexible manufacturing that crafts stand for. Yet do those working in makerspaces themselves feel part of a craft revival? Or do they consider themselves to be facilitating those individual and societal added values of craftsmanship?

¹ Their growth in Dutch cities is tracked by the website www.makerscene.io, showing 93 such spaces registered as of September 2019, up from 74 in 2018.

² A variety of making in Makers van Merwede see: www.makersvanmerwede.nl

To address a deeper understanding of craftsmanship's added values as an inclusive and integrating force in social and urban development, the managers of Makers van Merwede are chosen as the studied social group. They provide a window into the response of their makerspaces to the changing social context; they enable the activities that happen in the space and facilitate the presence of the space in the Merwede development agenda.

Therefore, the goal of this research is to look at how managers of makerspaces – as a growing setting for manual and maker activities in urban context – understand and perceive their role in enabling, stimulating and facilitating craftsmanship in the spaces they manage. Additionally, in order to break down the concept of 'craftsmanship' into answerable topics in the research design, the research focuses on the values of craftsmanship to account for the multifaceted dimensions of craftsmanship in practice. The research question is stated as such: ***How are the values of craftsmanship understood and facilitated by managers of makerspaces in Utrecht's creative cluster Makers van Merwede?*** Since urban cultural policy regarding the revival of craft is a fundamental factor to this research, Merwede's local agenda is connected to managers' perspectives towards their makerspace. In order to better answer the central question, this research also gathers insights by answering a sub-question: *how are the makerspaces' managers enabled in their role by the local policy agenda (Agenda Merwede)?*

The research into craftsmanship in makerspaces sees further societal urgency due to the renewed interest in making and crafts connected to a change in how creativity in cities is perceived. In Florida's (2002) influential creative class notion that has focused on highly skilled jobs and their lifestyle preferences, a simplified creativity is applied to attract investment and a certain profile of residents. This often results in gentrification and rising inequalities (Grodach, 2017). More critical perspectives suggest a more just and inclusive approach to creativity paying attention to manual work and making locally (Grodach et al., 2016; Peck, 2005).

Reflecting such a proposition, craft revival is portrayed in policies which seek the redevelopment of post-industrial cities (Jakob & Thomas, 2017; Grodach & Gibson, 2019). A Merwede redevelopment plan was initiated in the past few years to

revitalize what was previously an industrial centre.³ The creative force of its local makerspaces is considered an important subject aiming towards a more diverse future neighbourhood. In contrast to mass production, which often makes use of global sourcing and supply chains, makers in Merwede turn locally sourced materials into creative consumer products. Their making is embedded in the history of the neighbourhood, indicating a cultural practice of local resource (Banks, 2010; Grodach, 2017; Sennett, 2008). Makers often directly sell crafts to local residents, for example, during Makers van Merwede's annually organized winter craft market. Furthermore, makers are enabled to practice their manual work skills together and share facilities with each other in the same space. Their gathering for the similar interests blurs the boundary between colleagues and like-minded friends. This provides a greater sense of community compared to traditional corporate settings (Anderson, 2012). Craft manufacturing potentially leads to a more community-oriented local development (Grodach, 2017). As craft experiences increased relevance to urban agendas, it is a good opportunity to study the presence of makerspaces in their broader urban settings.

By exploring managers' perception and facilitation of craftsmanship in makerspaces, this research seeks to expand the academic discussion of makerspaces beyond digitalization. It contributes to the following academic gaps: First, prior research mostly focuses on the making activities enabled by digital tools (Burke, 2014; Hatch, 2013; Niaros et al., 2017), but in a broader definition of making, Hackney (2013) emphasises the return of making to the fundamentals of craftsmanship. Other scholars also acknowledge making as a combination of manual and machinal work (e.g. Gauntlett, 2011; Luckman, 2013). Secondly, previous studies lack knowledge gathered in the management of such spaces beyond digitally empowered governance. In previous studies, some scholars explored governance strategies such as online community building (Kostakis et al., 2015), however, this still falls within a technological perspective. Some scholars have already started looking at makerspaces as incubators in the creative industry, because they support makers' business generation and promotion (Van Holm, 2015), but this mediating force has not been fully examined, especially under the revival of craftsmanship. In

³ The historical account of Merwede area: <https://merwede.nl/toekomst/merwedekanaalzone-een-kansrijk-stuk-utrecht/>

general, this research is an alternative contribution to the studied fields since the nature of craft is the inheritance of traditional manual techniques (Sennett, 2008), whilst makerspaces are often seen as establishing via the liberating power of digitalization (Dougherty, 2012).

The methodology of this research applies three qualitative research methods, including 9 semi-structured in-depth interviews; documentary analysis of policy documents and makerspaces' websites; and participant observation of makerspaces during cultural activities such as studio open days, workshops, craft fairs, etc. This data collection gives multiple perspectives on the operation of makerspaces.

Following this introduction, the structure of this thesis consists of the following sections: a theory section that discuss the dimensions of craftsmanship related to practices in makerspaces; a methodology section that establishes research design; a results section which provides analysis of the data collection and a conclusion that demonstrates the main findings, reflection to the theories and a discussion of research limitations. Finally, I will provide a self-reflection on the research and share a final remark for the readers.

2. Literature Review

The literature review begins with a definition of craftsmanship. This provides the foundation for this research, which considers craft as a renewed policy interest. This section gives an outline of which values of craftsmanship are specifically referred to in the case study of this research. In the next section, the current status of craft will be explored, with a particular focus on its relation to urban policy. This section explores in what ways craft could potentially be a key ingredient to urban economic and social development and how it can be embodied in makerspaces. Next, the emergence of makerspaces will be introduced in line to the *Maker Movement*, highlighting their fundamental objectives, managerial characteristics and their role in the development of creative urban clusters. The fourth section examines the intersection of craft and makerspace: as in how dimensions of craftsmanship are correlated to the characteristics of makerspace's context. At the end, knowledge gaps will be provided, indicating further research on managers' enabling power of craft in such spaces.

2.1 Craftsmanship

2.1.1 Specification of the term Craftsmanship

Before beginning to understand the managerial enabling of craftsmanship in makerspaces, it is fundamental to understand what is considered as craft and what values of craftsmanship are discussed in this research. Craft is equivalent to 'making' in a broad sense (Wagner, 2008, 1) and the dimensions of craftsmanship are inherited in making practices. These dimensions are the application of materials, skills and the involvement of manual work (Adamson, 2007; Sennett, 2008). In its standard use of the term, craft refers to specific occupations tied to the use of particular materials, including (but not limited to) ceramics, goldsmith, textiles, glass art, weaving and woodwork (UK Craft Council, 2009). In those works, making is the process of producing craft. It engages work that employs traditional techniques, tools and materials with hands (Sennett, 2008).

But craft is not only associated with artistic materials as those mentioned above, craft is also seen as a fluid concept that draws connections to a wider sense of activities. According to Adamson (2010, 2), small-scale production that applies skills and knowledge of materials could be identified as a broad sense of craft. The term

craft is implied in various types of cultural production that fit into this relative category. For example, digital rendering, cookery and gardening (Adamson, 2010, 3). Ocejo (2017, 25-49) recognizes bartenders and their craft cocktails as a form of craftsmanship, in which he argues such skills and products are authentic in a contemporary manner and are appealing in the new urban economy.

2.1.2 The Intrinsic Values of Craftsmanship

Craftsmanship is not only something mastered by the hands but also in the mind (Jakob, 2013), it appears as a process rather than a limited category of objects or institutions: craft is “an approach, an attitude, or a habit of action.” (Adamson, 2012, 4). In Sennett’s *the Craftsman*, craft is seen as a cultural practice and ‘craftsmanship’ as the desire or impulse to make things well (2008). He reaches this definition with two domains: in its objective standard, craftsmanship focuses on the skills of doing a job well; and in its social and economic domain, it stands for the makers’ commitment and aspiration to quality (2008, 9). In both domains, craft addresses quality-driven work. It draws on the intrinsic values that pursuing excellence entail for the individual craftsperson (Sennett, 2008, 245). There are several dimensions to these intrinsic values.

Firstly, this pursuit of excellence fosters emotional fulfilment. During the development of skills, making is a constantly (and often not linear) learning process (Sennett, 2008, 238; Adamson, 2007, 78). Fulfilment arises while witnessing the work being done. Sennett notes such fulfilment as emotional rewards when people take pride in their work (2008, 20). Developing skills with one’s hands is a simple formula that gives optimism to the participants (Wolf & McQuitty, 2011; Ocejo, 2017). Following this framework, Laginder and Stenoëin (2010) examines the aphorism ‘learning by doing’ by a set of learning stories and found a positive connection between personal meaning and the practicing of craft. It provides pride on one’s ability, confidence and spiritual calmness (Laginder & Stenoëin, 2010).

Secondly, Sennett (2008) suggests understanding the commitment of excellence as a marker of distinction. He argues in line with Bourdieu’s distinction theory of taste, that being a master of a type of craft implies a more aspirational social condition than others (2008, 245). Practicing one’s skill is in the process of making such distinction. Supporting this point, Wagner (2008, 1) suggests that craft is not

only a singular activity of ‘making’ but it also carries an ideology of the world that is the making of a political statement. Moreover, Jakob (2013) acknowledge such political statement as claiming of one’s lifestyle. He noticed that some crafters in the 1960s and 70s distanced themselves from the Hippie culture by instead embracing the fine arts attributes. More specifically, the value of craft is not simply commodifiable outcomes but an experience and an opportunity to self-express (Campbell, 2005; Gauntlett 2011; Jakob & Thomas 2017; Jakob 2013; Luckmann 2013; Oejo 2017). Crafting is materialised self-expression. Some craftsmen recognise themselves as artist-craftsmen instead of just as craftsmen, since they speak for certain aesthetics as a vital element of their creation (Becker, 1987). A need to express one’s personal character outside the corporate world is often sought in craft workshops where makers with aesthetic preference carve an alternative life without profit chasing (Gibson, 2016). For instance, Featherstone (1991) notes that through the transformation of old objects into new creations, repairing or repurposing of objects claims certain lifestyles (cited in Campbell, 2005). It indicates one’s rejection of consuming ‘new products’ in the consumption-based economy (Campbell, 2005). Additionally, amateur making speaks for ideals related to self-sufficiency. Such ideologies are fostered in informal groups such as the DIY (do-it-yourself) communities in Gauntlett’s (2011) *Making is Connecting*.

2.1.3 The Social Values of Craftsmanship

In addition to intrinsic values, the creative expressions of craft evoke social values as well (Gauntlett, 2011). In Klamer’s (2008) value-based economy, the value of craft is based on shared practices. During the mastering of skills, makers overcome problems together, talk about their creation to each other and exchange diverse ideas. This learning process is a shared memory among the participants that constructs their social circle (Klamer, 2008). One’s knowledge and skills of craft is acknowledged and recognised by others during social interactions. Klamer therefore argues that craft activities stimulate a sense of togetherness (2008, p.148). This is explicitly evidenced by home-based craft making activities. Craft such as knitting offers connection between makers through the time they spend producing and talking together (Luckman, 2013). Such social practices are also at the heart of craft communities and guilds (Thomas, 2018). Moreover, collective identities and capacities are developed

within making communities. Consequently, craft-based production stimulates collaboration (Hackney, 2013; Gauntlett, 2011).

Beyond home-based craft, craft products are sold in marketplaces. Interpersonal acknowledgement is evoked when craft is talked about between craftsmen and buyers (Von Busch, 2010). Being recognised for knowledge of crafts skills appears to be a kind of emotional benefit provided by presenting and selling craft, which are sometimes more appealing than economic benefits. Jakob (2012) sees craft markets as a network of like-minded crafters and consumers: half of the consumers come to the market for chitchatting with the crafters, and, the crafters talk with each other about sales opportunities and other promotion channels. The more familiarity the crafters have in such matters, the more recognition and respect they earn from others. Moreover, the social capital of craft is also shown by one's ideas behind crafted products. In Ocejo's (2017, 129) observation of gentrified neighbourhoods, some "cool" but low-status manual jobs appear to be more appealing to middle-class young people, because such occupations are attached to craftsmanship. They are recognised as "authentic" by selling ideas behind the products to stand out from the traditional segments. Such jobs create meaning through craft-based work, and, provide potential to shape taste and lead to higher social status.

The intrinsic and social values of craftsmanship are, in summary, the emotional fulfilment provided by the pursuit of excellence and the sense of togetherness. These two dimensions of craft could potentially provide an explanation for the growth of collective making environments such as makerspaces.

2.1.4 Spatial Configuration of Craftsmanship

With its social factors, craft making is also a process of transformation of spaces (Hawkins & Price, 2018). This is shown in the spatial configuration of different spheres when craftsmanship is involved. First, craft engage in the (re)definition of the domestic sphere (Carr et al, 2018; Luckman, 2013; Hackney, 2013). As briefly mention in the last section, knitting and many other home-based craft making connect women in their living settings. It does not only form craft communities in its social dimension but also in its practical dimension, for example, transforming leisure places into working spaces (Luckman, 2013; Carr et al., 2018). Luckman (ibid) further acknowledge such domestic workspaces become paid workplaces with the

empowering force of the internet (e.g. Etsy.com). Therefore, the physical arrangement of homes transforms into a combination of leisure and professional setting. Second, with the implementation of ‘making’ activities, educational institutions are transformed from a theoretically based educational setting into a practice setting (Grimmett & MacKinnon, 1992; Burney, 2004). Since it represents the mastering of skills and knowledge by a continuous learning process, craft is a metaphor of “know-how” (Kurshan, 1987). When teaching a craft, knowledge is delivered contextually and action based (Leinhardt, 1990). A classroom becomes an encompassing environment where experience is transformed between teachers and students, as well as practiced with a reflective approach towards problem solving and a playfulness towards interpersonal relationships (Tom, 1984; cited in Grimmett & MacKinnon, 1992). The above indicates the potential of craftsmanship in defining and transforming a space, which shed lights on how craft can affect the spatial settings of makerspaces.

2.2 The Societal value of Craftsmanship on a Macro Level

2.2.1 The Renaissance of Craft in an Urban Context

Aside from intrinsic and social values, craft generates societal values according to urban cultural policies. It is acknowledged as not only a hobby that provides personal rewards but also a desirable industry that engages in economic growth (Jakob, 2013). Jakob (2013) deciphers craft as an engine for economic recovery by relating it to self-employed production that increases domestic income in the recent recession of western societies, which sometimes transforms the forms of employment of the creative class (Florida, 2002). Many scholars further note that craft manufactures provide more accessible and stable employment than that is provided by consumption-oriented economic development, because craft manufacturing is small-scale, place-specific and flexible (e.g. Bryson et al., 2008; Grodach et al., 2017). However, Jakob (2013) also argues that the increase of craft employment does not necessarily mean that those jobs are ‘good’ jobs, nor it means that crafters therefore afford to engage in full-time crafting. As a cultural practice, craft focuses more on intrinsic fulfilment than commercial driven production, which often means that sufficient ways to generate profit are not very much established (Warren, 2014). Most

economic growth occurs in the business of the craft supports, such as suppliers, trainers, retailers and marketing companies (Jakob, 2013).

Nevertheless, the increased practices of craft are associated with a set of policy agendas towards environmental sustainability and ethical production achieved by clusters of individual making (Carr & Gibson, 2016; Grodach et al., 2017; Jakob & Thomas, 2017; Levine & Heimerl, 2008). These two themes are discussed respectively as follows. First, craft usually is seen as tackling environmental concerns by employing locally sourced materials, which addresses issues of linear and mass production (Ocejo, 2017). According to Wink et al., (2016), to maximise economic values, mass manufacturing is alien to local materials and local skills, and sourced globally for low-cost techniques, materials and labour force. This causes over-storage of raw materials and pollution during transportation. Whilst in craft production, the proximity of embodied skills and raw materials is essential, for that enables crafters to access the best quality of such (Gibson, 2016).

Second, recent economic policies of the creative industry in western societies has a shifted focus on the skills and employability empowered by the nature of craft (Jakob and Thomas, 2017). According to Jakob and Thomas (2017), craft and making are a practice of ethical production since they counter the emerging labour crisis of information economy. Craft celebrates haptic skills and local material legacies in manual labour process (Gibson, 2016). As opposed to outsourced production processes in the new and digital-based creative industry, the revival of craft draws on manual manufacturing enabled by skills development, which often is embedded in local traditions (Banks, 2010).

2.2.2 Craft in the Post-Creative City Discourse

Craft has further societal values on providing a renewed creativity that cities apply. According to Grodach (2017), craft-based urban manufacturing is a new approach in creative city discourse that has the potential to use creativity as an agent of change as opposed to an amenity. In previous creative city strategies, creative class is employed to attract investment and certain profile of residents (Florida, 2002). Their ‘creativity’ is used as an engine to revitalise neighbourhoods. The creative city theory experienced a main critique of using the simplistic notion of ‘creativity’ as an attraction, indicating a misplacement of resource that isolates local cultural

production, which, results in gentrification and inequalities (Borén & Young, 2013; Grodach et al., 2016; Peck, 2005; Zukin, 2016). More progressive perspectives suggest a new approach of creativity that is inclusive and just, highlighting manual work and locally embedded manufacturing (Grodach et al., 2016; Peck, 2005). Small scale manufacturing of craft is a potential agency of such advocated approach because it is a place-specific industry embedded in the history of local context, indicating a cultural practice of local resource (Banks, 2010; Grodach, 2017; Sennett, 2008).

Moreover, the renewed interest of craft often relates to the redevelopment of post-industrial cities (Jakob & Thomas, 2017; Grodach & Gibson, 2019). The previous consumption-oriented city development could lead to a loss of authenticity amongst local contexts (Grodach et al., 2016). Grodach (2017) relates craft to the practices of creative place-making for that craft manufacturing gathers like-minded people. Creative place-making aims beyond economic values and seeks to celebrate and be inspired by the clustering of diverse people (Markusen & Gadwa, 2010; cited in Grodach, 2017). It uses creative approaches to address distinct characteristics and challenges embedded in the community (National Endowment for the Arts; cited in Grodach, 2017), fostering urban communities as well as local community ties (Adams, 2003). Therefore, craft is receiving a renewed attention for its potential role in stimulating urban economic and social development. It moves the creative city discourse towards a community-oriented city development (Grodach, 2017; Collins, 2018),

2.3 Makerspaces

In order to draw lines between values of craftsmanship and the managerial practices in makerspaces, this section of the literature review seeks to understand the characteristics of such spaces, including their internal work and the management.

2.3.1 The *Maker Movement* and Fundamental Objectives of Makerspaces

The *Maker Movement* was founded in 2005 by Dougherty (2012), indicating people's need to passionately and principally engage with objects that can make them not only consumers but producers, hence, resulting in the emergence of makerspaces. It advocates a basic philosophy that everyone can be a maker and is able to make

something themselves (Anderson, 2012). Contributing to the *Maker Movement* is the liberating power of digitalisation. New and digital technologies expanded the possibilities and capabilities of both professional and amateur makers in their development of one's creation (Hatch, 2013).

Despite that, scholars such as Hackney (2013) emphasise the return of 'making' to the fundamentals of craftsmanship. Brooks (2009) argues that the *Maker Movement* should be considered as far beyond a hobby of making, but an urgent need for a more meaningful and social configuration of work. It echoes craft's pursuit of internal reward on doing a job well, as well as connection of like-minded people to develop skills. Additionally, making is acknowledged as a combination of manual and machinal work (e.g. Gauntlett, 2011; Luckman, 2013). Individuals who engage in a crafts and making economy are provided with alternative models of practice and engagement of knowledge, meanings and networks. They will open up new channels for value exchange (Hackney, 2013). With an increased focus on craftsmanship, it is expected that the *Maker Movement* will lead to new forms of education and perhaps employment (Dougherty, 2013; Martin, 2015).

For both manual and machinal work, makerspaces are communities that give access to the space, knowledge and tools to support various types of small-scale production activities in a social context (Anderson (2012). Niaros et al. (2017) generalise makerspaces' basic features as spaces that are inclusive (Smith et al, 2015). They facilitate like-minded people to exchange knowledge and develop making skills through shared resource. In general, they seek to provide the infrastructure and equipment required to realise an individuals' making practices (Rosa et al., 2017).

In order to host a number of makers in one open space and with shared facilities, makerspaces are embedded in the idea of collaboration with others. Niaros et al. (2017) highlight the collaborative commons in the construction of makerspaces. A collaborative environment is achieved by open source software/hardware and community-oriented governance. It is argued that the shared recourse provides a context to communicate and experiment alongside peer collaboration (Niaros et al., 2017; Moilanen, 2012). Consequently, individual makers are provided the access to prototyping tools and opportunities to control cost over collaboration to realise small-scale solutions for everyday need (Kohtala & Hyysalo, 2015; cited in Niaros et al., 2017).

2.3.2 Managing Makerspaces

Since making is seen as having the potential to redefine the nature of work, makerspaces are expected to facilitate new conditions of working and enable hobbies to come into paid professionalism. It results in managerial objectives in such spaces. The first managerial objective in such spaces address the concept of collective working. According to Adler & Hechscher (2006) and Banks (2010), makerspaces are new forms of collaborative organisations that host and foster trust-oriented collaborative activities. In the of construction of trust, managers are *storytellers*, they are required to create a sense of the work environment and generate collective identities around the stories (Cunliffe, 2014; Weick, 1995). In this framework, some researchers note the most important task of co-working managers is to create a sense of community, including the promotion of internal interaction amongst co-workers and external relationships with other co-located organisations (Gerdenitsch et al., 2016). Ivaldi et al. (2018), in their study of co-working spaces in general, summarise the management of a sense of community as the promotion of relationships and sharing knowledge. According to the authors, managerial work in such spaces, therefore, experiences a shift from an established labour division and standardised work procedures to a more complex profile that ought to facilitate social interactions. This objective is relevant in makerspaces also because simply co-locating professionals will not necessarily be sufficient to promote collaboration (Spinuzzi, 2012) or to establish communities (Rus & Orel, 2015).

The second managerial objective focuses on enabling the economic values of craft, indicating managers' role as incubators (Štefko & Steffek, 2017; Maxwell and Levesque, 2011). Considering that makerspaces are embedded in social interactions, managers apply interpersonal acquaintance to stimulate business opportunities amongst makers (Van Holm, 2015). Co-working managers are not only 'service providers' who focus on physical and work aspects but also 'visionaries' that concentrate on the reinforcement of connections (Merkel, 2015; cited in Ivaldi et al., 2018). This is demonstrated by their network to new business opportunities, thus harnessing creative professionals' career trajectory. More specifically, managerial incubation is often practiced through marketing and promotion, such as transforming physical makerspaces into social events and cultural venues, open to the public

(Capdevila, 2014; Štefko & Steffek, 2017).

Lastly, in relation to recent cultural policies, some managerial practices of makerspaces design their infrastructure in response to specific social issues. Ivaldi et al., (2018, 229) give one example namely “welfare coworking”, which seek to involve their operation in ethical cultures, for instance, social integration and environmental sustainability. Following this aim, managers focus on the fostering of conditions for individual development in the space and their partnership with internal or external others. They take an active role in the collaboration and social/cultural projects as coordinators and consultants, who often remain front of stage together with the participants (Ivaldi et al., 2018).

2.4 Craftsmanship in Makerspaces: Knowledge Gaps and Research Question

Enlightened by the literature, this section will conclude the intersection of craftsmanship and makerspace, meanwhile, propose knowledge gaps in their mutual fields. A research question and a sub-question are raised accordingly in order to tackle these gaps.

Craft and the makerspace collide in their related response to urban policy challenges. They both indicate an alternative type of urban manufacturing that tackles emerging urban issues. In this research, their intersection can be concluded in two aspects. First, both craft and the makerspace aim at boosting urban economy from consumption-oriented economy to the economy of making (Grodach, 2017). Although craftsmanship pursues the mastering of one’s crafting skills and often focuses on the application of certain materials, the contemporary practices of making in makerspaces have increased attention on the fundamentals of craftsmanship and have explored innovative possibilities of a combined manual and digital work. Second, craftsmanship brings more social factors into the context of makerspaces, highlighting the community-led values that are provided beyond the shared tangible tools but by social ties. Besides internal rewards, craftsmanship emphasises the expression of one’s lifestyle and their response to ethical cultures, from which crafting activities often construct communities and foster a sense of belonging (Gauntlett, 2011). Such objectives above are embedded in shared practices, which are also seen in makerspaces. Although, makerspaces are required to further provide societal support in order to facilitate and proliferate the social implications of craft in their context

(Collins, 2008). In general, craft sheds light on new forms of production and collaboration practices that could potentially occur in makerspaces. These practices are understood and made able by managerial strategies as a direct representative of the space. However, this angle is still beyond the discussion of previous studies of makerspaces, because they often focus on digital technology-orientated makerspaces (e.g. Kostakis et al., 2015).

The case study of this research is located in policy harnessed creative clusters, which focus on solving urban issues in relation to urban manufacturing. Much of the literature has collected the experience of makers (e.g. Stannard & Sanders, 2015; Wolf & McQuitty, 2011), but relatively little attention has been given to the management of makerspaces as mediators between the macro environment and individual making. I suggest that managers are playing a vital role in reframing craftsmanship and the related urban policies in the context of makerspaces. This research seeks to investigate their experience of working with craftsmanship under the interest of current urban policies. This includes how managers perceive the values of craft and how they facilitate that accordingly. The research question is therefore stated as following: *How are values of craftsmanship understood and facilitated by managers of makerspaces in Utrecht's creative clusters Makers van Merwede?* As urban cultural policy regarding the revival of craft is a fundamental factor that initiates this research, the main research question is accompanied by a sub-question: *how are the makerspaces' managers enabled in their role by the local policy agenda (Agenda Merwede)?*

3 Methodology

The goal of this research draws on the perception and practices of makerspaces' managers in the phenomenon of crafts and making. In order to answer the research question, three qualitative research methods were applied. First, semi-structured in-depth interviews were conducted to collect direct and subjective opinions of managers. Second, in order to understand the impact of the context to this study, documentary analysis of strategic reports, policy documents and makerspaces' websites and publications were collected. Third, participant observation was applied during cultural activities such as studio open days, workshops and craft fairs. It provided insights into behavioural facts. This data collection gave multiple perspectives on the managerial innovation of makerspaces.

3.1 Case Study: Makerspaces of Makers van Merwede

In order to initiate investigation in such spaces, a case study was chosen accordingly: Makers van Merwede is a makerspace cluster located in the canal area of Dutch city Utrecht.⁴ The clustering of makerspaces is harnessed by cultural policies that aim to tackle pressing issues of city development, because their co-location helps to regenerate urban economy (Carr & Gibson, 2016; Banks, 2010; Grodach et al., 2017). It points at a place-based approach of social organisations, such as their revitalisation of previous industrial centres (Forno & Graziano, 2014). This approach is showcased by Makers van Merwede. Located in the Merwede area of Utrecht, the makerspaces of Makers van Merwede is one of the centre topics in the redevelopment plan. Initiated in 2016, a plan for the redevelopment of Merwede continues to be in effect at the time of research.⁵ Policies regarding the existing makerspaces are explicit in the urban design: Voorlopig Ontwerp Stedenbouwkundig Plan Merwede (9 January 2020).⁶ The municipality of Utrecht seeks to transform the previous industrial district to a new and mixed-use urban district, they very much appreciate the positive impacts that creative places and their small-scale manufacturing have brought to the

⁴ Website Makers van Merwede: www.makersvanmerwede.nl

⁵ Merwede redevelopment plan: <https://merwede.nl/toekomst/akkoord-over-samenwerking-merwedekanaalzone/>

⁶ Documental web page of the plan: <https://omgevingsvisie.utrecht.nl/gebiedsbeleid/gebiedsbeleid-wijk-zuidwest/deelgebied-merwedekanaalzone/>

neighbourhood.⁷ As the area is actively impacted by urban policy, it provides a suitable case study to understand whether makerspaces can lead to a more sustainable and community-oriented local development.

Makers van Merwede organises many public events, including annual summer and winter festivals that connect the makerspaces to the neighbourhood, providing an opportunity to study their presence in urban settings, Winterwinkelen is the winter festival of Maker van Merwede, it is a successful craft fair where people shop for Christmas gifts directly from local makers. Its operation is managed by an external managerial board, with supervision from the collective fund.⁸ As the three makerspaces all participate in the event, it makes it possible to measure the differences between their public approach.

Furthermore, the case study indicates a shift from consumption to production in Merwede's redevelopment. Because the previous approach of creative city theory often applies a simplified notion of 'creativity' to stimulate consumption and thereby results in gentrification, Grodach (2017, 86) identifies a "quiet turn" in urban development where 'creativity' is used as an engine for new types of urban manufacturing. Makers van Merwede is the home of five makerspaces, three of which have shown more interest in craft-related making, they are Vechtclub XL, Kanaal30 and De Createur. They host small-scale crafting production such as homeware, furniture and accessories. Craft activities in such makerspaces articulate such production-oriented urban agendas through the locally sourced production of creative and cultural goods (Grodach et al., 2017). In general, the selected three makerspaces of Makers van Merwede meet the conditions required to conduct this research.

3.2 In-depth Interview, Observation, Document Analysis

Qualitative interview allows interviewees to give insights into the elements that are important and relevant to the studied social context (Bryman, 2012, 470). Since this research aims at discovering managers' understanding and facilitation of craftsmanship, the data collection focuses on respondents' subjective view of sense making. Therefore, the method of interviewing is the most efficient as it unfolds their

⁷ Creative activities initiated by Merwede van Merwede are valued and posted: <https://merwede.nl/nieuws/>

⁸ More info of Winterwinkelen: <https://merwede.nl/event/winterwinkelen-bij-de-makers-van-merwede/>

understanding of values, social relations and vision within a specific community setting (Bryman, 2012). For the coherency of this research, all respondents were found with managerial roles in their makerspaces, which means that their experience can be discussed by a common set of structured questions. Despite that, their roles and responsibilities are varied in the managerial practices, such as cultural programmers, community managers, rental managers and so on. Semi-structured interview provides the flexibility to follow up more specific questions according to the interviewee's own perspectives (Bryman, 2012, 470). Prior to having conversations with respondents an interview guide was prepared to structure the questions based on the topics fundamental to the research question. Specific questions were refined during individual interviews.

Alongside qualitative interviews, methods that uncover behaviours are required to complement interview output. Observation is chosen as it is a research method that embeds everyday life (Angrosino, 2011). Researchers can gain an understanding of the studied context through such a technique. In this research, observation provided me the opportunity to understand how managers' values and visions are practiced through their actual work. Moreover, observation is especially suitable as cultural events could be observed within the specific setting of the makerspace (Angrosino, 2011). These cultural events are held in the three selected makerspaces and often in a regular manner. When observation of a certain subject is conducted repeatedly, as in this research of managerial practices, it allows researchers to synthesize their behaviour and reflect on theoretical dimensions accordingly (Angrosino, 2011). During observation, I chose to be a 'participant as observer' (Gold, 1958). Because some observation occasions are workshops and events that have exclusive access to only a certain number of participants (e.g. requirement for booking of places), researchers of makerspace are required to more actively engage as opposed to observe in the background. Although this type of observation role involves more contact with the people, the participation should be recognized as having research purposes (Gold, 1958).

Document analysis functions as a systematic elevation in a study, it is used in combination with other qualitative research methods in order to find corroboration through different data sources (Bowen, 2009). For instance, information contained in the documents could suggest angles that need to be asked or observed in other parts of

the research (Bowen, 2009). By examining different sources of data, Bowen (2009) argues that researchers can reduce bias that might exist in a single method. Combined with interviews and observation, document analysis helps me examine whether the ‘social facts’ (Atkinson & Coffey, 1997, 47) triangulate the insights that are derived from managers’ personal experience. In this research, urban policy is a determining factor on the popularity of craft. Important to answering the research question, policies help decipher the intersection of craft renaissance and the growth of makerspaces. Therefore, policy documents were collected as a source of data from macro levels to micro levels. It includes the regional development agenda of Merwede published by the municipality of Utrecht, the development report of Makers van Merwede, and visions of individual makerspace. The analysis of these documents is integrated with interview data by comparing how a certain topic is portrayed by documents and interviews respectively.

3.3 Sampling

The sampling section of this research firstly justifies the selection of makerspaces from the makerspace collective Maker van Merwede. Five makerspaces are located in the Merwede area, helping to transform the area from an old industrial block to a new urban district.⁹ These makerspaces are Vechtclub XL, Kanaal30, De Createur, De Alchemist and De Stads Tuin. While each makerspace operates with different focuses and specialities, the first three makerspaces share a more profound interest in craft-related making. They host ceramicists, wood furniture makers, leather accessories makers and more professions that directly involve craft skills. Additionally, they exhibit a better-defined community governance, specifying the contact details of their general management on their websites, providing access to data collection. Hence, this research focuses on those three makerspaces, Vechtclub XL, Kanaal30 and De Createur.

⁹ The historical account of Merwede area: <https://merwede.nl/toekomst/merwedekanaalzone-een-kansrijk-stuk-utrecht/>



Figure 1: The locations of three selected makerspaces in Merwede's urban design. Background image by marco.broekman and OKRA

Secondly, the research participants were approached with purposive and snowball sampling methods. According to Babbie (2013), purposive sampling enables a clear focus on that which is the most central to understanding the studied situations. In this research, the respondents are located in the three previously selected makerspaces that host makers and craft-related activities in Merwede. Moreover, respondents have to take certain managerial roles in the space. Alongside the primary sampling, purposive sampling also enables a selection of respondents among different managerial positions. Such as a composition between founders and employees. This help uncover a wide variety of population in the studied field. Finally, purposive sampling may expand samples in certain directions (Babbie, 2013). During primary interview analysis of the earlier sampling, effective angles or networks of the field will be found. They are used as a reference that directs later sampling. An overview of research participants is provided in Appendix C.

Meanwhile, snowball sampling help expand contacts from the network of respondents (Bryman, 2012). This strategy is especially suitable in this research as

makerspaces are communities where people work in the shared space with mutual visions. Additionally, makerspaces in Makers van Merwede organize collective events regularly. They are externally connected through their managers who are responsible for public relationships or cultural programs. I started making contacts by attending venues of Makers van Merwede, to get familiar with the management teams through observation and participation of events. Later on, I approached selected managers via email.

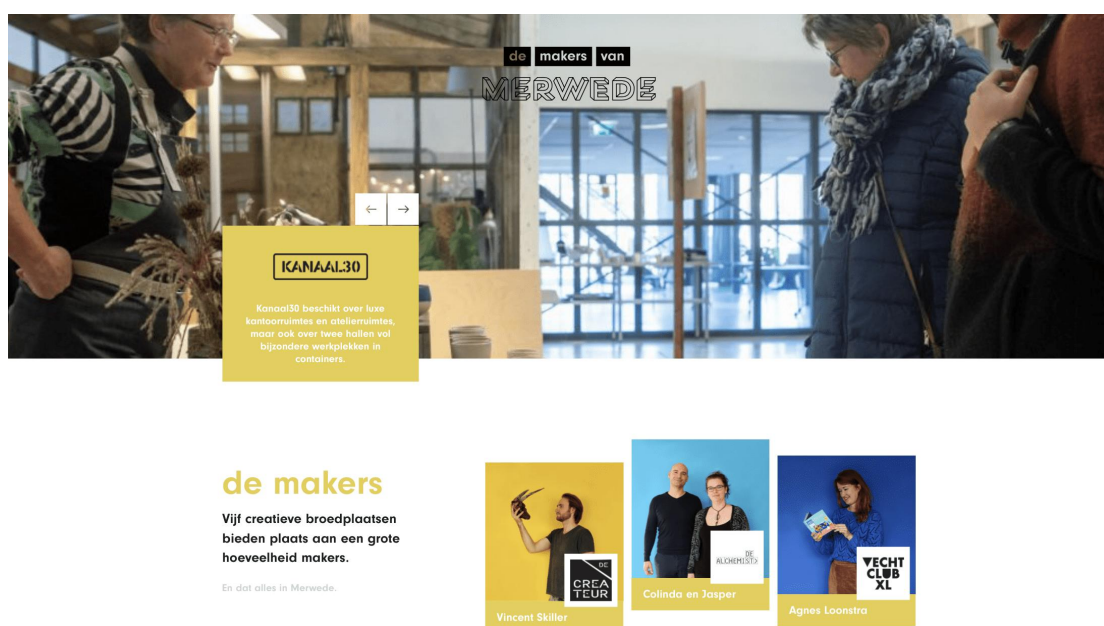


Figure 2: Website homepage¹⁰ of Makers van Merwede

3.4 Operationalization

There are three main concepts in this research: craftsmanship, managerial practices in makerspaces and urban policy related to craft and making. In order to discover the managers' perception and facilitation of craftsmanship in makerspaces, it is important to conceptualise and operationalise these three concepts. According to Babbie (2013), the conceptualisation process will help translate the aforementioned concepts into measurable dimensions to be refined in data collections. It is necessary to bear in

¹⁰ See: <https://makersvanmerwede.nl>

mind the specification of concepts, since it maximises clarity of the identified concepts in the context of the case study (Babbie, 2013, 172). To reflect this concern, the concept of craftsmanship is translated into categories that are related to the context, namely the *intrinsic values* and the *social values* from practicing craftsmanship in makerspaces. The concept of managerial practice is translated into dimensions between *initial responsibilities* and *social roles*, in which the former indicates their supposed job functions whilst the latter indicates their developed social identities in the community. The concept of urban policy is translated based on the development agenda of the neighbourhood, namely the *Merwede's redevelopment agenda*.

After conceptualisation, an operationalisation process of concepts is needed to transform the research question into interview questions (Babbie, 2013). In order to operationalise concepts into measurements, a conceptual order is followed. It is a focusing process that allows researchers to study their interests from general to in-depth (Babbie, 2013, 173). In this study, interview questions start from how making is enabled generally in the space before moving on to specific angles of managerial empowerment related to values of craftsmanship. The three concepts will be operationalised respectively in the following paragraph.

Firstly, pursuit of excellence and togetherness are angles that transform craftsmanship's intrinsic and social values into answerable questions. These angles were measured by asking the ways in which the managers understand and perceive, interpret such angles in the makerspace and how they support such pursuits through their work. It also included questions on societal levels, such as how they interpret crafts in today's society. Secondly, managerial practice is distinguished between initial responsibilities and their established social roles within the community. This was measured by observing how events are organized by the management teams in both shaping the physical space and the social environment. Later on, in order to discover how managers experience their responsibilities and social roles related to values of craftsmanship, they were asked questions on the implementation of shared resource and how the internal-external collaborations are stimulated. Thirdly, to measure the impacts of urban policies, development reports of Makers van Merwede was used for document analysis. Information indicated in the reports was asked in interviews, especially along questions of external collaborations among different makerspaces in

Merwede. An overview of operationalization of concepts is also shown in Appendix A.

3.5 Data Collection

The data collection of this research contains 10 hours of interviews with 9 respondents. Before and after the interviews, 10 hours of observation was gathered in the studied makerspaces, focusing on the daily tasks of the interviewed respondents. This part of the data was used to form more specific interview questions with each respondent; after interviews, it was also used to provide clarification of what they have said. Additionally, another 10 hours of observation was gathered during public venues of the studied locations. I would go to making workshops and the winter craft market, with the role of a 'participant as observer' (Gold, 1958). All data was collected between November 24th, 2019 and March 18th, 2020. The two interviews conducted in January 24th were used as pilot interviews to test the questions. Afterwards, concepts were better clarified and translated into day to day conversations for following interviews. Interviews were preferably conducted in the studied makerspaces, but some later ones had to be arranged online, due to the government measures in response to Covid-19 starting in March. The purpose of the research was provided to respondents before the interviews. A verbal consensus was confirmed with the respondents every time before the interviews. Consensus and interviews were both audio-recorded. The verbal consensus included anonymity and recording of the conversation. Mental notes were taken before and after interviews and were written down after leaving the site, some verbal notes were recorded by my phone when attending public events.

3.6 Data Analysis

Interview data analysis began with transcribing audio-recorded interviews. Prior to interview analysis, all interviews were converted into text with the help of the online website otranscrib.com. Coding process was done after the transcribing, helped by the coding system *ATLAS.ti*. A methodological framework of Charmaz (2006) was applied for coding, in which the analysis followed a process of open coding, focused

coding and axial coding. In open coding, the most frequently appeared codes was developed. This outcome was used in focused coding, when relations of codes were sought and integrated into categories. This process was applied to all interviews whilst keeping the research question in mind. Meanwhile, focused coding is not always a linear process: some earlier statements can be integrated later with others, so the research was constantly review data afresh. Subsequently, relations within categories was identified in axial coding. It helped specify the dimensions of a category and create relations among subcategories. According to the methodological framework, a coding table was developed in Appendix D.

The document analysis is based on a comparison between policy documents and related information retrieved from the Makers van Merwede website. The policy documents published on Utrecht municipality's webpage¹¹ provided the attitude of the policy makers towards creative manufactures in the area, such as makerspaces Makers van Merwede. The document Voorlopig Ontwerp Stedenbouwkundig Plan Merwede, (Jan 2020; literal: Merwede Preliminary Urban Design) was analysed as a main data point as it provides information on the development agenda of Merwede related to existing organizations including makerspaces. How makerspaces are incorporated into future plans and the extent of policy's enabling of craft were discussed based on this document. An overview of documents is shown in the Appendix E.

Observation of this research was analysed based on field notes. Some analysis particularly focused on evidencing what managers mentioned in interviews, to examine the extent of their managerial empowerment in practice. The observation conducted before and after interviews gave opportunities to analyse their daily tasks because they were all observed in their everyday work settings; the observation conducted during the craft market focused on analysis of their representative role of makerspaces in the neighbourhood.

¹¹ Document portal of Merwede agenda: <https://omgevingsvisie.utrecht.nl/gebiedsbeleid/gebiedsbeleid-wijk-zuidwest/deelgebied-merwedekanaalzone/>

4 Results

In this section, the analysis of interviews, observations and document analysis will be presented. This section is structured to respond to the discrepancy between theory and practice. While managers in three studied makerspaces: Vechtclub XL, Kanaal30 and De Createur do not often use the term ‘craftsmanship’ or ‘craftsmen’, they refer to the more generic term ‘maker’. This is possibly because the term craftsmanship sounds ‘old fashioned’, however, when they were asked about their practices, they were very much aware of the concept and actively applied the different values of craftsmanship described in the theory. More specifically, to answer the research question *how values of craftsmanship are understood and facilitated*, managers were asked about their managerial strategies in the spaces. All respondents could relate their vision to fostering the cultural, social and societal values of craftsmanship, reflecting those dimensions explored in the theory section. In addition, many respondents justify and harness the economic values of craftsmanship, echoing the theories of makerspaces as incubation.

The first section of the result chapter explores how makerspaces generally operate. Using this as a starting point, the second section will present how cultural, social, economic and societal values of craftsmanship are understood according to the context of such spaces, highlighting the perspectives of the managers. The third section will examine how the understood values of crafts are facilitated in makerspaces. The fourth section will provide a comparison of the three makerspaces through their different operational strategies in Winterwinkelen (literally: winter market), providing a more completed answering of the central research question. Finally, it is necessary to realize the impact of urban policy on how craftsmanship occurs in Utrecht’s creative cluster Makers van Merwede. In the last section, this research seeks to answer a sub-question: *how are the makerspaces’ managers enabled in their role by the local policy agenda (Agenda Merwede)?* With respondents’ actions, judgments and visions on Agenda Merwede, the last section will discuss whether, and to what extent, the case study does indeed reflect the current renaissance of craft in urban agendas (Grodach, 2017).

4.1 Makerspaces as Business

4.1.1 Operation and Community-oriented Management

In this section, what makerspaces do and how they function are described, from the perspective and experience of their managers. Fundamentally, makerspaces operate by renting out spaces to creative professionals, which does not only include providing working areas but also equipment and facilities (Anderson, 2012). In the studied three makerspaces, people who rent spaces pay monthly rent to the makerspace and thus have access to their chosen space type, of which some are individual studios, whilst some are shared spaces or single desks. Each workspace includes access to wi-fi, bathrooms, cooking areas, equipment such as wood cutting machines, 3D printers, laser-cut and in most cases, maintenance of the space, such as cleaning and fixing. This means that makerspaces operate as for-profit organizations whose clients are creative entrepreneurs. Their professions vary but they are all renters.

Income and costs are essential to the operation of makerspace and often involve significant implications for management (Van Holm, 2015). This is well introduced by interviewee 2, the financial leader of Vechtclub XL:

I share financial responsibilities with the director, help her make choices and structure it [...] I was involved in conversation about space maintenance and how facilities are used, because costs are involved. And I discuss with our community manager what kind of changes we're gonna have, what kind of people come into the space.

This quote indicates the engagement of financial inputs in overarching management, sharing of facilities, community building and in the maintenance of the physical space. These aspects are discussed with the financial leader to make the most of their economic investment and managerial cost. When specifying his responsibilities, the respondent emphasized his principle task of ‘setting up good guidelines’ aside from taking care of rental contracts. Niaros et al. (2017) call these guidelines “collaborative commons”, that are made as preliminary agreements between the space and the renters.

Aside from generating profits from rents, managers foster a sufficient making environment through a sense of community, echoing Adler & Hechscher’s

(2006) opinion, which considers makerspaces as collaborative organizations. They do so in three ways. Firstly, makerspaces create a sense of community with other co-located organizations (Gerdenitsch et al., 2016). Public making events are organized with themes, goals and target groups for public attention and commercial benefits. For example, crafts-related activities are expected by some respondents to bring commercial, governmental and educational organizations and different social groups together in the same space. More specifically, interviewee 5 explained the intention of Kanaal30 for its ceramic workshops:

Really different organizations come here, and they get inspired. [...] Organizations that want to do something creative and something for fun also. Sometimes it's important because [the objects] these people make [are] also nice to give away [as a gift].

Making workshops are seen as a unique experience that diversifies local activities. More importantly, respondents saw the value of crafts in connecting people both in the making and in the products. When different parties enter the space and enjoy time spent on making, the makerspace builds up its reputation as a creative place (Capdevila, 2014), where people from co-located organisations gather for enjoyment.

Secondly, managers reinforce a sense of community internally through communication (Merkel, 2015). During the management of the rental and events, managers supervise the space through different layers of internal communication. Regular meetings are held for overarching and long-term programs, whereas informal meetings occur constantly to adjust and negotiate immediate tasks. Some managers who take a director role have indicated a more intense meeting schedule, like interviewee 1: “My days are filled with meeting people in line of one of the activities.” And the topic of the meeting “depends on what is going on”, added by interviewee 5, “sometimes we do sessions, for what we can do to collaborate more.”

Thirdly, several interviews mentioned that developing a sense of community meant adopting particular rules and discipline, reciprocity and trust. This echoes Niaros et al.'s findings that makerspaces build on a trust-based community (2017). As the former artistic leader of Vechtclub XL, now the director of collective entrepreneurship fund of Merwede (ondernemersfondscollectief van Merwede,

gebiedsregisseur), interviewee 1 explained her vision as following:

I always explain to everyone the idea behind it is that you share knowledge and ideas and your network too. If you don't share them because you want to keep them for yourself, you were not allowed to join. Because if you don't have the mentality, it's not the way a fair will be successful.

A sharing mentality is considered by many respondents as fundamental and significant to joining makerspaces. Moreover, reciprocity in the space is harnessed by the sense of trust, that renters are not afraid to tell the information of sourcing and marketing channels if someone could use as advice. Interviewee 1 explained why:

It's believing in a bigger network which is based on trust and that someone is respectful enough to use the information you give, in a respectful way.

Even though sharing is encouraged in many aspects of making, the awareness is raised to make sure that information is used for a stronger network rather than competing in the market (Van Holm, 2015).

Finally, a sense of community is provided by a positive atmosphere that is welcoming and inclusive (Smith et al, 2015). In addition to the business side, makerspaces establish non-profit organizations within the commercial entity, which respondents refer to as *stichting*, translated into *the foundation*, for social and cultural purposes and activities. It is recognised as non-profit since the support it provides is not charged from the rent. Its operation is an addition to providing space and facilities, focusing on maker promotion. Interviewee 5 is the co-founder of Kanaal30, in her words:

We have a part that's more the business part there, that's the part we're earning our money with...And we want to make some impacts also more social and cultural. (so)We build up a stichting.

Similarly, interviewee 1 provided more detail on how foundations work: “We get our money from the commercial side. And I get a fee every month to organize the cultural

programming within vechtclub.” Many respondents indicate a fund-raising cycle inside their spaces which will in return initiate and support cultural programs. Such programs include social activities for internal makers and public events aimed at a wider public. I will provide more findings regarding these programs in the following sections.

To conclude, makerspaces function as both commercial entities and non-profit organizations for which the two support each other to strike a sufficient and welcoming making community.

4.1.2 Managerial Structure in Three Studied Makerspaces

In order to maintain long term cooperation with renters and to build a reputation for the future, management often operate with defined roles and responsibilities. Their important task is to construct a narrative of their making environment, specifically making sense to those who work there (Cunliffe, 2014). Although the management teams in the three locations might be organised differently between a defined management structure and co-management with makers, in general, the spaces are actively managed and sometimes regulated with certain rules and disciplines.

To analyse their impacts related to enabling values of craftsmanship, it is helpful to look into how each space structures their management. Among all, Vechtclub XL has the clearest responsibility division in the management team. With clearly stated on the website, each team member has a defined position and a separate contact for individual domains.¹² The roles in Vechtclub XL range from directing and overarching cultural programming to community building, finance, PR communication and rental. Some respondents from Vechtclub XL mentioned that they only took charge of certain activities, showing that different roles do not work across responsibilities very often. For example, as financial leader, interviewee 2 clarified that he is only involved in event management for the matters of budget. Meanwhile, those in leadership roles are shown on the top of the website page, indicating supervision and hierarchy in the space. However, on the opening day of a big public event, the space expects support from every manager. They were observed to share responsibilities of maintaining the space and create a good experience.

¹² Find indications from the website: <https://www.vechtclubxl.nl/over-vechtclub-xl/team/>

Comparing to Vechtclub XL's precise task division, Kanaal30 is mostly organized only by two co-founders. Besides, they gain help from freelance representatives in finance, sales at the gift shop and interns for event management and social media.¹³ Between the two founders, interviewee 5 mentioned her task as more cultural, whereas her partner is more in the business side. When observing a public event in the space, the management team tend to have a task division whilst sharing maintenance tasks together. For example, whilst doing their main tasks such as visitor coordination, some respondents were in the meantime working in catering and shop reception; when the event finished, the whole management team tend to help with cleaning.

De Createur is fully co-managed by its makers, except that the space is owned by the landlord. In the web page, no managerial information is stated, every maker is given the same space to only introduce one's creative practices.¹⁴ During public events, makers have full ownership of their own stands and workshops. Interviewee 9 shared that management of workshops in the event day is connected to who has and presents the skills. "The person who works in ceramics and up-cycles, that's all hers." She noted. Such approach is already indicated in everyday management. Interviewee 8 explained how general management works in De Createur:

We don't really have managers and stuff. We rent space from one guy and he provides us with the machinery. He is also responsible for finances. I'm the contact person of this location, renters contact me if there are maintenance problems, rental questions or anything equipment related. [...] interviewee 9 is busy with external communication for Winterwinkelen.

As per the above, it is noticeable that the respondent did not use position titles to describe their role, rather, management is achieved by what he implied as 'help' from the makers. Given such context, it is not surprising that neither of the two respondents from De Createur recognize themselves as managers, they both see themselves as makers who take responsibilities for a better community.

¹³ Find indications from the website: <https://kanaal30.com/hotspot/>

¹⁴ Find indications from the website: <https://www.decreateur.com/ondernemers/>

4.2 Understanding Values Craftsmanship in Makerspaces

As analysed in the previous section, makerspace in Merwede have active, yet different, management structures that work to create a sufficient making environment. In this section, the question of how managers, within such a specific context, understand the values of craftsmanship will be addressed.

4.2.1 Cultural Values of Craftsmanship

Craftsmanship indicates an attitude in cultural practice, in which Sennett translates it (2008) as the pursuit of excellence. Many respondents indeed considered craftsmen as people who seek to make something well. For example, interviewee 8 is responsible for communication and space maintenance at De Createur, he is also a furniture maker himself. He explained such pursuit by using himself as an example:

I'm trying to make the furniture lasts for, let's say 30 years. So that means I have to build a piece that is solid, that can last. And I think to do that, you need to know the materials, the connections, the way to build it. And that's why I say I'm a craftsman.

This indicates that craftsmanship involves mastered knowledge of materials and techniques in order to build a tangible piece that can be used long. The same insight also came from those that were not craftsmen themselves, interviewee 1 referred to craftsmen as “someone who has trained in a specific skill” and that their work can be used in “something practical”.

With a speciality in making something well, some respondents followed up the argument by recognizing people as craftsmen¹⁵, even when they do not make solely by hand. There is an increased importance on efficiency shown in contemporary craftsmanship, as machine making seems to be an inevitable trend in different scales of production. “Traditionally, we would see craftsmen as someone who's doing everything by hand,” interviewee 8 explained, “but since times are changing, it's hardly possible to earn money just by making furniture only by hand. So the definition of a craftsman would be just the ownership of materials that you treat

¹⁵ In this thesis, I use craftsman/men as a generic term to refer to either gender.

professionally.” Similarly, Interviewee 4, event manager and leather maker at Vechtclub mentioned the same concern:

What's craftsmanship for me is not only being able to work with your hands and to make a beautiful product, but it's also to learn how to be able to live off of it.

The way to be financially dependent from making often relates to reducing cost and the production time, it is considered just as important as the knowledge of skills and techniques. “So you can see that the makers are trying to make some steps in process, not made manually but with machine.” interviewee 1 noted.

Reflecting on Sennett’s (2008) theory, we can see that respondents justify a link between traditional crafting and the use of machines, as the latter help achieve their pursuit of excellence. Even though makers do not always manually complete all processes of making, what they do at makerspaces is expressing the core intrinsic values of craftsmanship. As interviewee 1 reiterated: “You want to make something beautiful, but you also want to make it efficiently. And even techniques involved, it's still the idea of a craftsman.”

Moreover, managers believe that managing and regulating the shared distribution of networks and information harnesses the authenticity of crafts. They appreciate the unique stories and life views conveyed by crafts in a persistent manner. Many respondents summarize such authentic feelings as a spiritual value that makes people’s life more beautiful and special (Wolf & McQuitty, 2011; Ocejo, 2017). As interviewee 9, furniture maker and event manager of De Createur mentioned: “I think everybody here is a good story [...] Maybe it's not needed practically, but it is needed mentally. So it’s not just a product, it's also an experience in enriching people's lives.” This thought is supported by interviewee 1, who said: “a big part of the experience of buying something is that you like the story behind it. And if I know that someone made it by hand, it gives more value to the product.”

In summary, the intrinsic value of craftsmanship is understood as the pursuit of excellence. Sometimes craft makers seek help from machines and combine that with manual work, but they still express the core value of craft. Their pursuit further leads to a sense of spiritual value embedded in the carefully made objects.

4.2.2 Social Values of Craftsmanship

According to the managers, makerspaces stimulate a suitable social situation where craftsmanship could evolve and grow. This is enabled by a sense of togetherness (Klamer, 2008). In their narrative of how makerspaces come into work, all respondents are aware of makers' seeking of togetherness in such spaces, so that they aim at providing such feelings as an essential.

Firstly, togetherness generates psychological benefit simply from being physically close to others. Sometimes it only involves talking about one's project without much expectation of help. Such angle is proven by the opinion of managers who are also makers themselves in the space. As interviewee 9 addressed:

I think it's healthy to be able to talk about your work. And that's how you evolve. If you're just alone, you go in circles because you only talk to yourself.

Similar insight is also provided by interviewee 4, who claimed the importance of togetherness even when everyone is working on their own making: "I think the most important thing is that there are a lot of people who are working with their own collections." And she soon summarized that as "a mutual feeling, that you're working with other craftsmen." This "mutual feeling" is being one of a group of people and it is constructed by the time spent together.

Yet, most of the time, togetherness means the capacity of an improved problem solving (Klamer, 2008) because makerspaces provide a supportive environment for learning new skills (Van Holm, 2015). Many respondents explained togetherness by highlighting how makerspaces are places where people can and will help each other, such as when interviewee 3 talked about community building. More specifically, it involves being able to discuss and to be inspired instantly by what they do. As interviewee 5 mentioned:

What I do know is that people who rent a place here, they do it with a reason. Quite a lot [of people] are like, okay, I've been working at home and it's quite individual. I need a place where other people are around and not

doing the same, but in the same area. So I can talk with people and discuss. Or when I'm thinking about the problem, you can talk with people to get inspired.

Following the argument outlined in the previous section that craftsmen master their skills in pursuit of excellence, being able to work together will provide an opportunity to overcome technical problems and improve approaches with a shared knowledge. In theories of such shared practices, recognition and respect evolve while people become familiar with those that are good at a particular issue (Jakob, 2012), since they know who to go to when they have problems with a specific issue in making.

The pursuit of excellence also translates to a desire to be acknowledged and recognised by peers and sometimes by potential customers (Von Busch, 2010). When asked about such dimensions of craftsmanship, respondents are able to recall their attempts to make the makers more visible. For example, online blogs are updated constantly to introduce makers' specialities and their new works, small exhibition cabinets in the hallways are used for showcasing projects and social activities are organized to build awareness of fellow makers.

Managers believe that such acknowledgement is mostly constructed naturally between makers themselves, as interviewee 3 noted: "most of the time the acknowledgement is between themselves, because everybody who creates something knows how hard [it is] to work." This is supported by interviewee 9 as well: "It's natural. And there are people you have more in common with than other people."

4.2.3 Economic Values of Craftsmanship

Craftsmanship often lacks effective ways to generate economic value for craftsmen themselves (Warren, 2014). When talking about their makers, many respondents seek ways to introduce them with an entrepreneurial mindset. The respondents' concern is based on the fact that many makers have mastered their skills but have limited experience operating a business. Interviewee 4 further explained the reasoning of their courses about pricing:

They could do some courses about prices and how to make a price range. I think that's important because you don't learn it anywhere, not at the art

academy, which is a shame. Because I think when you finish art school, you should be able to and at least know some basic things about selling your products.

Interviewee 1 explained: “If it's a clever maker, they will search for ways to make the production process be more efficient. And so they can make products with bigger margin.” In order to do that, entrepreneurial training is provided to improve quality control, pricing strategy and marketing (Van Holm, 2015). Interviewee 4 explained their importance by raising following questions: “What if my company becomes a little bigger? How do I deal with investments?” When makers intend to make a living from making, she concluded: “you will need to become really a business minded person.”

Many respondents see sales as essential to craftsmanship whereas makers could find it challenging to put their products in the market. Often, craftsmanship is considered as an activity that someone develops a relationship with oneself (Sennett, 2008). Yet, in the understanding of interviewee 9, who makes whilst carrying out managerial roles in the makerspace, craftsmanship should also be result-driven, since delivering a satisfying result to clients is just as important to the processes of making. She said: “what craftsmanship is to me is the idea that at the end, somebody has the product and is really happy with it.” Additionally, in line to a result-driven perspective, interviewee 1 expressed her opinion on what is a good entrepreneur in makerspaces. She highlighted the ability to talk about one’s products to present oneself to a bigger crowd. That indicates an entrepreneurial perspective of managers, an interest that is beyond making itself but in the relationship with costumers and the wider market (Aernoudt, 2004).

4.3 Facilitation of Craft Values in Makerspaces

In the previous section, it was shown that managers understand craftsmanship through the cultural, social and economic values around it. Following their understanding, this section will present how their visions to such values are facilitated in the contact with makerspaces. As makerspaces are communities where makers can sufficiently make together with shared facilities, their context is correlated to craftsmanship’s pursuit of

excellence and togetherness. In addition, managerial practices empower craftsmanship with entrepreneurial strategies.

4.3.1 Makerspaces as an Empowered Community: Sharing and Collaborating in the pursuit of excellence

The first common facilitation of craftsmanship addresses the pursuit of excellence. Some managers enable such pursuit by reinforcing sharing, collaboration and communication in the space, which are seen as particularly helpful to small-scale creative production.

Sharing of machines and digital tools is a fundamental ethic in such spaces (Niaros et al., 2017). When considering what and how physical equipment and its related skills are brought in and shared among makers, some responsible respondents often think in line with what kind of professions are already taking residence in the space, so that they can make the most use of them. As interviewee 3 well explained:

If someone wants to have a darkroom, which is something we don't have yet, then I start to think, which other renters would be able to use that kind of skill? And then there would be like five photographers and people with media design would want to experiment with such a niche.

That indicates that decision making is already taking place when professions are selected into to the space. In other words, the criteria of maker selection are tied to the skills those new makers have that can be effectively utilised in space and which existing machines and skills in the space can empower the new makers in return. Aside from equipment, soft skills and entrepreneurial knowledge are shared to reinforce efficiency. Marketing skills are valued in the minds of managers, they sometimes intentionally invite marketing-related companies or individuals into the space. Again, interviewee 3 explained in line to the selection criteria:

We have a few marketing people. It's not really creative industry per se, but it's something that could work for a lot of creatives to get new jobs or collaboration between those two.

The above implies that bringing more non-artistic skillsets into the space is a win-win when it leads to collaboration. Marketing experience and accompanying digital and analytical tools could help makers evaluate their current visibility in the market and suggest more precise platforms and target groups they should focus on in the promotion of their work. Meanwhile, marketing start-ups could also gain commission from nearby makers to build up their reputation. Consequently, a strict renter selection criteria applies to reinforce such vision. interviewee 3 further addressed: “I think effectively for what kind of disciplines we need. I try to manage to have a little bit of everything here with the idea that people could help each other.” Therefore, a diversity of professions is invited to Vechtclub XL to foster collaboration instead of competition.

Multidisciplinary collaboration is encouraged to promote the makerspace as well. For example, ceramic maker interviewee 7 worked together with a filmmaker to create promotion videos of Kanaal30. “I see that it brings in money. So I wanted to do it in a more professional way. Maybe start to do another video.” She said.

Additionally, the idea of sharing does not only apply to equipment and skills, it also fosters a shared network to the outside. Some respondents started introducing the sharing culture from physical aspect, whilst some added a social dimension. As interviewee 1 noted: “The idea is, if we all work together to get the biggest audience, we can get shop owners or the press into our own network.”

After what is presented above, respondents then argue the benefits of internal partnerships and collaborations to craftsmanship. On the one hand, sharing expands personal capacity as brand owners. Interviewee 4 explained:

Because, first, I only had the leather collection. And then I did a workshop here for ceramics. It was really good for me to learn new skills. So that's why I have my porcelain collection. If I want to make something with wood, I can go to the wood workshop.

Interviewee 4 experience of being close to materials and people who are specialised in them helped her to expand her collection lines. Because of sharing, the cost of experimenting with materials and creating prototypes in the space can be much lower than usual (Štefko R., Steffek V., 2017). This helps makers develop new skills and

products and gain more possibilities in the market. In order to encourage experimentation, interviewee 1 expects makers to provide a workshop to other makers.

On the other hand, people with different specialities collaborate to generate better results for mutual commissions. Interviewee 9 and interviewee 8 from De Createur have worked together for a client who want a wooden cabinet for their home. Whilst interviewee 8 is a furniture maker with a background in engineering, he has no background in interior design. So interviewee 8 initiated a collaboration by asking for help from interviewee 9. He further explained: “what we did is that we went there together. Interviewee 9 helped the people to think about the space. She made a design and we decided, let us do it.” This quote implies that, except for material and equipment sharing, knowledge support among makers themselves also harnesses pursuit of excellence. Yet the information of each other’s skills does not only flow among collocated makers. In makerspaces, online communities are used to foster internal acquaintance. All makerspaces have a group chat or social networking, such as a WhatsApp group or Facebook group. Interviewee 3 explained why it is specifically helpful to fostering collaboration:

We use Facebook for that and also our website, which every Tuesday, the communication department make a little notion of someone in particular and show their work with a nice message about them.

Makers’ new projects and intentions to collaborate are made possible by being seen by the whole community.

In summary, makerspaces are excellence-driven communities where the cultural values of craftsmanship are empowered by sharing tools, skills and networks. Managerial practices foster and facilitate collaborative activities through community management and internal communication. In the next section, I will further analyse how managers enable craftsmanship in a promotional dimension.

4.3.2 Makerspaces as Incubation: Managerial Empowerment and Promotion

The second common facilitation of craftsmanship is shown as a continuous process of social integration that simulate what Klamer (2008) summarizes as a sense of

togetherness. As addressed earlier, respondents understand craftsmanship as a shared practice, which demands acknowledgment from peers and from the audience. Many interviewees reinforce togetherness and shared recognition of making in order to empower craftsmen and help them towards a sustainable career trajectory.

Firstly, managers empower craftsmanship through their capacity for interpersonal relationship building. The majority of respondents had common opinion on hearing and talking a lot in the space help them acquainted with personal matters. During my observation before, after and even during interviews, respondents are always open to interruptions if makers have a request or want to have a quick catch up. For example, when I was finishing up the interview with interviewee 3, a maker came in for coffee pads, the respondent could immediately recall the maker's newest project, which he used to introduce the maker warmly and personally. Supported by the interview, this is what he mentioned he had been constantly doing every day, as to use his acquaintance to bridge individual makers and to foster potential cooperation. Interviewee 3 described himself as "match maker" in the makerspace. Similarly, interviewee 5 mentioned her small chats when she saw someone who is working on something relevant to another maker, that she would then suggest a conversation between the two. For the same intention, interviewee 1 shared her opinion and approach:

I think the role of a manager is to facilitate the meeting of people for what they can work on together. I know a lot of about what is happening in the building. So I can facilitate a real connection like, 'you should talk to that one'.

In the meantime, some respondents also expressed that listening to and chatting with makers could provide inspiration for their project development and presentation, as managers are the first ones who experience how a new product is described and presented, before they go to the market or the real clients.

Secondly, aside from single meetings initiated by managers, respondents also mentioned their support for collective social activities to facilitate peer to peer promotion. As interviewee 2 shared his financial enabling in such activities:

We initiated a forum during meals, where new renters can stand up and introduce themselves. We made an agreement with the restaurant to do the cooking [...] And had a financial conversation with them to sell the meals for 10 euros or something, like a very manageable type of price.

What is presented above is an example of a relatively formal presentation of oneself to the community, where makers are given an opportunity to practice personal storytelling. Meanwhile, many respondents also mentioned informal gatherings such as beer time, lunch break and film nights. Interviewee 6 and interviewee 5 from Kanaal30 both mentioned how accessible the lunch breaks are in their space. This is organized in group chats and through the physical settings in the space. From my observation of the three studied makerspaces, there is always an open lunch place which has a sink and basic cooking facilities. In any cases, internal gatherings are made easy and inclusive by managers. Additionally, internal social activities include sessions which often aim at entrepreneurial coaching. Interviewee 9 mentioned their sessions helping makers put their products in the market, whilst interviewee 5 mentioned their sessions on harnessing female business. More specifically, interviewee 4 and interviewee 1 had together run a training program, in which makers are taught to combine making with an entrepreneurial mindset.

Finally, in order to maximize the influence of craftsmanship, some respondents are devoted to promoting makers to a wider public. When asking about such promotion, online presentation is mentioned the most, after that, paper mediums are also mentioned to accompany offline events. With interviewee 6's passion of attracting more followers to their Instagram account, he revealed how social media plays a role in the promotion of craftsmanship, that is "to stay in topic of today" in order to integrate younger generations into the subject. Interviewee 4 took the responsibility of taking a professional profile photo of every maker, so that they are presented in a consistent style in the Instagram account of Makers van Merwede. Aside from this, interviewee 9 mentioned how paper media is still used in inviting local residents to workshops: "we have flyers and we have advertisements in local papers."

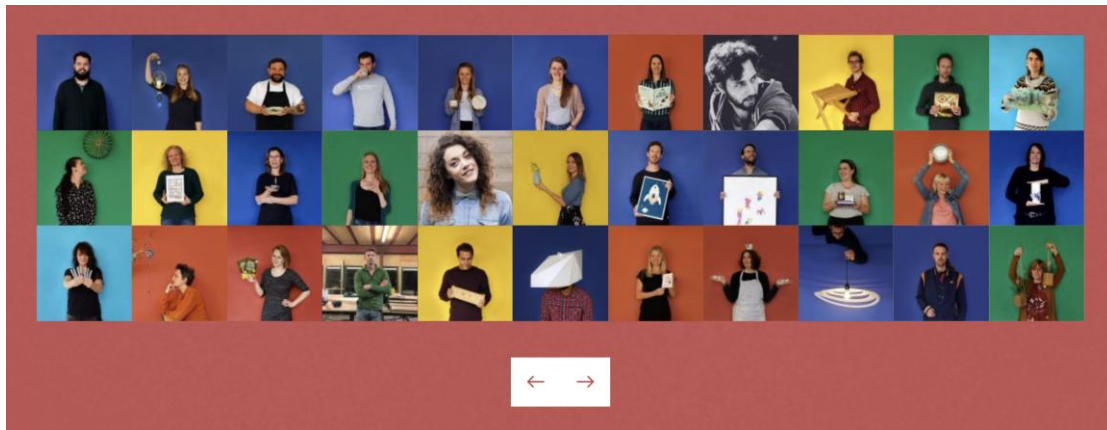


Figure 3: Makers' profile photos. Retrieved from makersvanmerwede.nl.

4.3.3 Makerspaces as Showroom: Presence in Urban Development

The third common facilitation of craftsmanship is to strengthen its relevance to the wider urban development context. Many respondents make sense of their long-term visions by relating makerspaces to the bigger area. In the theory, an explicit presence of such spaces in the neighbourhood will not only give more security to an inclusive employment of creative professionals, but also more authentic creativity to the neighbourhood based on the local context (Grodach et al., 2016; Peck, 2005).

interviewee 1 has mentioned her investment of time in external networking. From the local funding group, she applied for extra fund to introduce making to local residents, in which she explained:

It's interesting if we can get different groups of people inside, who live here but really don't know what's going on in their backyard. So, I ask for an extra fund to be able to put the flyers in the mailboxes. And you immediately see that there were more people coming which didn't fit in the normal targeted group.

By inviting a diverse social group into the makerspaces, Grodach (2017) refers to it as the societal values of craft in creative place-making. For example, some respondents expressed their effort on integrating a diverse age group into the space. Interviewee 5 initiated events to welcome children into the space. A young and new vibe is mentioned several times in the interview with interviewee 6, because he sought to attract the new generation to the space and to get inspired by what they can do there.

These practices all point to a diversification of local activities through craftsmanship.

Winterwinkelen (winter shopping) is a concrete example of how managers build up the impact of craftsmanship in the local area. Winterwinkelen is a collective cultural event of Makers van Merwede. During this annual event, people are welcomed into the makerspaces to be close to making.



Figure 4: Winterwinkelen poster. Image by Agnes Loonstra; retrieved from Merwede.nl.

From information on the main website, multi-layers of cultural programs are developed to get people involved in skills, materials and an inspiring atmosphere. Some makers show a full production process to the visitors, eventually, visitors are encouraged to purchase Christmas gifts directly from local craftsmen and contribute to a sustainable economy.¹⁶ Craft-related practises are associated with a set of policy agendas towards environmental sustainability achieved by clusters of individual making, such as makerspaces (e.g. Carr & Gibson, 2016). Reflecting the theory, in the Environmental Vision Part 2 (Omgevingsvisie deel 2) of Merwede, a sustainability plan is initiated and requests actions from all parties.¹⁷ Therefore, makerspaces showcase the presence of craftsmanship in response to the urban agenda of Merwede.

In summary of the section 4.3, I presented makerspaces' three common

¹⁶ Website: <https://merwede.nl/event/winterwinkelen-bij-de-makers-van-merwede/>

¹⁷ Report see: <https://omgevingsvisie.utrecht.nl/gebiedsbeleid/gebiedsbeleid-wijk-zuidwest/deelgebied-merwedekanaalzone/>

facilitations of craftsmanship. They are enhancement of the pursuit of excellence, maker promotion and social integration and presentation in urban development. Since Winterwinkelen is an intersection of the three studied makerspaces, I will use this event as measurement in the next section in order to provide more detail by their respective focuses.

4.4 Winterwinkelen: Nuances in the Show

Except for the common visions among the three studied locations, there are also differences as they all vary in the size, age and specialities. It is helpful to look into the nuances of their management of in order to form more complete answers to the research question. As mentioned above, Winterwinkelen is an annual craft event that all makerspaces of Makers van Merwede participate in. It is a good measurement to examine and present these differences. Additionally, from the nature of the studied subject, observation and document analysis will be used more often in this section.

4.4.1 Role and Mission in the Neighbourhood

To analyse their nuances, it is important to understand how each space positions themselves differently in the neighbourhood. When some respondents have a strong sense of mission for the collective identity, such as those from Vechtclub, some from De Createur seek to strengthen their own niche of a small community. In return, the facilitation of values of craftsmanship sees differentiations regarding their proclaimed role and mission in the neighbourhood.

Existing for 8 year in Merwede, Vechtclub XL is a leading force in Makers van Merwede. It has more than a hundred makers in the space across a variety of creative professions.¹⁸ During Winterwinkelen, Vechtclub XL seek to integrate all social groups into the space. A treasure hunt activity was initiated by Vechtclub XL to encourage visitors to complete all locations. A better route and routine among different locations are created with street art to make the event more accessible. Furthermore, management groups stood in turns by the entrance and greeted every visitor with instructions, a poster and a big smile. Later in the interview, interviewee 1

¹⁸ Website: <https://www.vechtclubxl.nl/over-vechtclub-xl/>

explicitly noted that knowing what kind of people come in and having an opportunity to talk to them make an important task for the role she was taking. She further described her focus towards as going beyond the building but towards a stronger connection in the area. Under such visions, Vechtclub XL stimulates collaboration not only among makerspaces, but it seeks to form one force that gives inputs in the policy making in order to maintain relevance in the new plan. As the respondent noted: “The ideas should be formed by the makers that are already here.”

Kanaal30 seeks to establish a creative and positive image of itself in the neighbourhood in order to stay in the future agenda of Merwede. It has a shorter history of only two years and around 40 makers at the time this research is conducted, noted by interviewee 5.¹⁹ All three respondents from kanaal30 expressed their concern as to whether the building could stay in the new plan. In order to claim their importance, new specialities are sought to establish aside from making. Proven by Winterwinkelen, Kanaal30 would hold presentations and salons during the event, some of them are business-related, where crafts could showcase to different organizations. Visitors would pass across the gift shop and many craft stands to arrive at the gatherings. Interviewee 5 mentioned her strategy of providing business meeting spaces whilst keeping maker studios next door. Later on, she made an example of how it works through their ownership of the scale model of Merwede: “[...] the model is for everybody to see the future plans, they can come over and look at it. I think that's positive (for us to have it).” In general, the space actively engages in hosting policy debates and meetings to help making stay present.

De Createur is home to makers who exclusively practice furniture making. It has a smaller community that hosts only around 30 makers.²⁰ In Winterwinkelen, makers from De Createur made a big wood sculpture in letter “M” referring to Merwede. Their different speciality is thus showcased visually comparing to the other spaces. In the meantime, visitors are encouraged to make new elements by hand and to add onto the sculpture. Whilst De Createur has better affordance to make the event more interactive, there is more space for each one to shine as well: “Everybody is a good story”, interviewee 9 explained, “with a smaller community, the aim is to give everybody a chance to sell themselves.”

¹⁹ Information is also available on website: <https://kanaal30.com>

²⁰ Website: <https://www.decreateur.com>

The three spaces have their respective societal focuses related to the neighbourhood. This sub-section provides information about how each studied makerspace engages themselves in the local environment and, hence, provides a comparison of how values of craftsmanship are facilitated in the urban level.



Figure 4: Greetings



Figure 5: Scale model



Figure 6: Wood 'M'

Figures 4-6 by author.

4.4.2 Cultural Programming

Narrowing down the perspectives from the urban level, the three makerspaces have distinctive approaches to cultural programming within their spaces for the event. This section will use their different approaches to provide more detail on the facilitation of craftsmanship. With a clear management structure and a vision of a stronger network, Vechtclub XL has developed defined cultural programs, including but not limited to Winterwinkelen. In general, interviewee 1 introduced their three program lines:

“There are internal activities for the makers; a program line to have public insight and to meet a bigger audience; and we have a creative entrepreneurship coaching.” These programs have multiple target groups to integrate broader perspectives.

Winterwinkelen is the program that fits in the second domain. During the event, I observed the program in its physical settings and consumer experience. In my field notes I wrote:

Soon I realized how cosy the event is. There are activities for children, such as hand printing workshops of Christmas cards. The entire space is arranged with visual guidance which is easy to orient and to find drinks, restrooms and places to sit. In the open studios, materials, products and personal belongings are all over the place. Despite being a workplace, it is not so tidy, it feels like arriving at the makers' homes.

From the impression I gathered, Vechtclub XL's seemingly effortless programming requires a good understanding of its charm and what the public would like to see. All four respondents from the space have expressed their proudness in attracting many return visitors from previous years.

Comparing to Vechtclub XL, commercial values and social impacts share equal importance to Kanaal30. Interviewee 5 expressed her previous concern on not having makers selling enough in the event. To maximize their influence and attract more audience, the respondent initiated open calls for outside makers, as well as presentation speakers in urban topics. Interviewee 5 also highlighted their effort on organizing live music from professional DJs as it could attract visitors to stay longer: "People came here for four days. You see them going around, they were watching live music and then they were like, 'oh there is something more', then they came in for the market. Or the other way around."

Finally, De Createur creates activities that actually get visitors' hand dirty'. They focus on introducing skills and materials which their makers are specialised with. During the event, full ownership is given to those that run their workshops. Interviewee 9 explained her intention:

Everybody can make here, how to get people participate in our projects of making? So, there are different types of materials we want to introduce to people, because it's connected to the things we do.

This quote implies a closer relationship that makers from De Createur try to establish with the visitors, which fosters local community ties according to Adams (2003). During my observation, every visitor is eagerly invited to try out techniques such as metal carving, laser cutting wood and painting with up-cycled objects. More importantly, they were encouraged to make something that they could take home with them.

In summary, this section of Winterwinkelen compares makerspaces' different focus in their facilitation of craftsmanship during a mutual cultural event. It functions as a supplement to the central discussion and enriches some of the previous analysis with detail.

4.5 Craftsmanship in Agenda Merwede

After analysing managers' understanding and facilitation of craftsmanship, the last section seeks to examine how urban policy contribute to the growth of craft-related makerspaces in urban development. Because of the subject of this section, the primarily source of data will be policy documents accompanied by online resources and interviews.

4.5.1 Creativity as a Local Tie

In the historical account, Merwede has been an industrial area dating back to the 19th century due to the construction of the Merwede canal. With an industrial character, the neighbourhood became the home of craft-related businesses such as makerspaces a decade ago (Voorlopig Ontwerp Stedenbouwkundig Plan Merwede²¹, Jan 2020). As for which came first, whether creativity or the policy, it is clarified in VOSPM (Jan 2020), as it states:

The current Merwede with its existing companies already has an identity. This identity is elaborated in combination with living, working and businesses. The area has the potential to be a beautiful new part of the city while preserving the unique industrial character, employment and recently flourished creative and community initiatives in the area.²²

Which is to say, in contrast to what is criticized in the Creative City theory that a simplified creativity is used as an amenity to attract new types of residents (Grodach, 2017), creativity in Merwede has already been evolving in aspects of the local urban life before the Agenda even initiated. Creativity in Merwede is not a simplified term but a component of the place identity. More specifically, Makers van Merwede plays

²¹ In short: VOSPM

²² Original text in Dutch: "Het huidige Merwede met zijn bestaande bedrijven heeft al een identiteit. Op deze identiteit wordt voortgeborduurd in combinatie met wonen, werken en bedrijven. Het gebied heeft de potentie om een prachtig nieuw stuk stad te zijn met, gedeeltelijk, behoud van het unieke industriële karakter, werkgelegenheid en de recent opgebloeide creatieve en maatschappelijke initiatieven in het gebied."

the role of a local tie between residents and the public space. One specific angle is shown in the nature of craft as empowerment of local employability (Jakob & Thomas, 2017; Grodach & Gibson, 2019). This is supported with the website Merwede.nl, an integrated website, where (new) residents can browse local options for careers, housing, entertainment, food, venues and cultural events. On this website, Makers van Merwede is explicitly introduced in the section “Werken” (to work),²³ indicating what alternative industries and projects that people work within the neighbourhood. On that page, small businesses such as craft-related production are described as creating fun jobs, not only in making but also in catering and cultural activities that are co-located with big international companies in the same area. This implies that creativity is considered as an unneglectable production force that generates local employment.

Supporting what is indicated on the website, policy documents regarding the development of Merwede claimed to keep the creativity in specific neighbourhoods. In VOSMP (Jan 2020):

The northern part of Merwede already has the character of creative and innovative activity that is being built upon [...] The goal is to present creative activity to maintain, strengthen and to also offer space to special parties that have added value for Merwede but are less strong financially.²⁴

In order to achieve the goal, many respondents mentioned that they were invited to conversations and debates for a better plan. Reflecting Grodach (2017), a small-scale creative production and community-based neighbourhood does appear to be the mutual goal between makerspaces and the Agenda Merwede.

²³ <https://merwede.nl/werken/>

²⁴ Original text: “Het noordelijke gedeelte van Merwede heeft op dit moment al het karakter van creatieve en innovatieve bedrijvigheid waarop wordt voortgeborduurd. Het doel is om aanwezige creatieve bedrijvigheid te behouden en te versterken en om hierbij ook ruimte te bieden aan bijzondere partijen die een meerwaarde voor Merwede hebben maar financieel minder sterk zijn.”

4.5.2 A New Type of Gentrification

Although, with what is presented above, it is still arguable that the new agenda can affect the presence of making in negative ways. Returning to creative city discourse, the authenticity of a place vanishes when new types of residents (often high-middle class) occupy old districts and result in increased value of property (Grodach, 2017; Zukin, 2016). Similar to what happens in creative city theory, respondents raise their concern in a new type of gentrification, in which makerspaces need to make way for new housing plans, mobility rearrangement and green solutions, as those plans attract high-profile residents and generate more economic values to the whole area.

Using housing and mobility plans as an example, VOSPM (Jan 2020) states a flexibility policy regarding the future of some existing businesses. When certain buildings fail to meet the vision of the overall plan, they will be demolished or repurposed into other functions. The document explains:

Part of the activity is not in line with Merwede's ambitions, because their logistics and business model are not in line with the future housing program and mobility regime in Merwede.²⁵

As a result, interviewee 5 and interviewee 6 both mentioned the hard work of Kanaal30 in establishing importance of its presence. Interviewees from Vechtclub XL also talked about their alternative solutions to confront such uncertainty, as interviewee 2 said:

A lot of buildings are going to be torn down. So, we think that either we can continue on another renting agreement, or we can eventually buy the building and stay here.

It is indicated that support towards craftsmanship seems to be conditional, it is according to the needs of higher programs in housing and mobility.

²⁵ Original text: “Een deel van deze bedrijvigheid sluit niet goed aan op de ambities van Merwede, omdat hun logistiek en bedrijfsmodel niet aansluiten op het toekomstig woonprogramma en mobiliteitsregime in Merwede”



Figure 7&8: An indication of the housing plan. On the left are the existing buildings in Merwede; on the right is an impression of the future plan. Majority of the added blocks will be residential buildings. (Voorlopig Ontwerp Stedenbouwkundig Plan Merwede, 2020)

4.5.3 The Potential of Makers van Merwede

In the previous section, Makers van Merwede gains some support from urban policies, whilst it has not yet proven the renaissance of crafts in urban development. However, makerspaces seek impacts through their negotiation of relevance. They seek connections and opportunities to claim the potential of making in the new plan.

As the Merwede agenda seems to adopt a ‘smart growth’ approach that aims that a mixed-use future neighbourhood (Grodach & Gibson, 2019), to involve craftsmanship into the new agenda, potential of makerspaces draws on a more diverse functionality. Many respondents mentioned coordination of inside and outside spaces around makerspaces to create alternative public areas for the residents. Those proposals focus on a cross-functional space including making, shopping, gardening and eating. In other makerspaces, interviewee 5 from Kanaal30 mentioned the extended function of the space by hosting meetings of the local authorities; interviewee 9 from De Createur mentioned their collaboration with the local art academy to expand their function in education. Having the above adjustments done, respondents asked for a more inclusive input system in the policy making.

In summary, urban policies are paying increased attention to building a

community-oriented and creative neighbourhood. They integrate the makerspace's perspectives into policy making and enable them to function as venues for public craft events to increase their relevance in the urban setting, which answers the sub-question of this research. However, it also urges makerspace communities to continuously reflect on a mutual and innovative development along with other programs in the broader area.

5. Conclusion

The final chapter of this research will present a summary of how the research questions are answered, following which, contribution to existing studies will be provided. This research question aims to explore how the values of craftsmanship are understood and facilitated by managers in Merwede's makerspaces. Since craft is allegedly undergoing a revival in urban settings (Grodach, 2017), the sub-question also seeks to examine how Merwede's local policy enables managerial practices related to craft. Together, the answering of the research question and the sub-question is a response to the gaps in previous studies of makerspaces, which often lack discussion beyond digitalization. The first section will address the ways in which the relevance of the values of craftsmanship is portrayed in the studied field, as the term itself was not used often despite its dimensions being actively practised. Then, the study of managerial perspectives towards craftsmanship and their equivalent facilitating strategies will be concluded. Furthermore, a conclusion on the impact of Merwede's development plan is provided. After answering the research question, the next section addresses limitations and provides potential perspectives for further research. In the end, I will give a self-reflection as the researcher, and, provide societal implications of this research.

5.1 Answering research questions

The values of craftsmanship are understood and facilitated in correlation to the needs of makerspaces. This means, managers 'make use' of different dimensions of craftsmanship in order to foster a better collective making environment. This is shown in different levels of their operation, including their facilitation of the cultural and social values of craftsmanship, such as in the pursuit of excellence and togetherness, towards a trust-based community; their harnessing of the economic values of crafts to incubate makers' career trajectories; and, their strengthening of the societal values of craftsmanship aiming at more attentions from the local residents. In general, when managers make effort in facilitating dimensions of craftsmanship, they are in a mediating position between makers and the public. Their goal is realising the strategic development of the makerspace and maximizing their managerial support to makers. Following this general conclusion, I will conclude how the values of craftsmanship

are practiced within three main themes: The cultural and social values of craftsmanship facilitated in community building; the economic values of craftsmanship harnessed by managerial incubation; and the societal values of craftsmanship strengthened in urban settings. After presenting these three main points, I will conclude the interference of urban cultural policy as questioned in the sub-question of this research.

Managers seek to foster a collaborative and inclusive community (Niaros et al., 2017) by harnessing the cultural and social values of craftsmanship. These two dimensions are contributed to respectively by the objectives of the *pursuit of excellence* (Sennett, 2008) and the *sense of togetherness* (Klamer, 2008), in line with what is gathered from the literature. In makerspaces, shared digital tools and collaborative commons enable a more efficient production process (Dougherty, 2012), which, as a result, enables better products and a more aspirational social condition of the maker (Sennett, 2008). Additionally, the time makers spend together for knowledge exchange and collaboration creates a sense of togetherness (Klamer, 2008; Luckman, 2013). Such sense of togetherness works as a socially integrating force. In their practices, whilst managers did not directly refer to the term craftsmanship very often (possibly due to the stereotypical impression of the word as ‘old fashioned’) they describe what they sought to realise in the space, usually relating to *sufficiency* and *sharing*. A sufficient making environment facilitates the pursuit of excellence and the implementation of sharing fosters the sense of togetherness. These two key words prove a strong relevance to the cultural and social values of craftsmanship that occur in the field of study. When looking at their specific facilitation strategies, there are strict maker selection criteria enabling convenient or unexpected collaboration; knowledge exchange between makers that does not only focus on skills but also an external network for resources or exposure opportunities; and, there is also interpersonal relationship building via online communication and presentation, from which the increased recognition of each other will foster a stronger sense of community (Gauntlett, 2011; Thomas, 2018). In all these practices, managers encourage reciprocity and trust. In addition, managers expand the cultural values of craftsmanship by justifying that crafts are not necessarily made by hand. Managers actively engage machines and machinal techniques into the space. Because digital making fits in the literal level of pursuit of excellence: digitally empowered

production process will make possible a faster production and more precise product quality. Therefore, managerial practices in makerspaces indicate a wider definition of craftsmanship (Adamson, 2010). Meanwhile, respondents push the boundaries of its concept towards a more inclusive term appropriate for contemporary society.

The economic values of craftsmanship are practiced by managers through the application of managerial incubation based on their awareness of the economic values of crafts in the creative industry market (Jakob, 2013). This perspective is not explicit in theories of crafts because craftsmanship, as a cultural practice, usually focuses on intrinsic fulfilment and the social benefits, evidenced by makers' lack of sufficient means to generate profit (Warren, 2014). However, harnessing economic value is a common component in theories of management, particularly relevant in literature of incubation in creative industries (Štefko & Steffek, 2017), as incubation reflects an infrastructural promise in co-working principles (Maxwell and Levesque, 2011). Therefore, it is arguably reasonable that managers expand the understandings of craftsmanship by adding an entrepreneurial dimension. When implementing this dimension within their makerspaces, managers initiate entrepreneurial coaching along with a variety of other ways to introduce knowledge of the commercial market to the makers. On a more personal level, they use their acquaintance in the space to foster joint commissions. Making is additionally empowered by managers' capacity for commercial promotion by establishing a strong internal and external network. From those attempts, managers contribute to makers' business generation and development (Van Holm, 2015).

The societal value of craftsmanship is practiced when it is introduced to urban settings. Managers bring the societal values of crafts to the spotlight when it becomes a bridge between individuals (makers, residents, visitors), organisations and the urban settings. This seems aligned with the promise of making identified in the literature, as an antidote to the polarizing creative cities agenda (Grodach, 2017). In the perspectives of managers, craft-related activities make a place creative and inspiring. It is a unique experience in urban life and managers thus strengthen the relevance of such values in the neighborhood by, for example, integrating a diverse social group into the space to let them experience the positivity that local making entails. Sustainability is another angle of the societal values of crafts, literature sees it as another contributor to the revival of craftsmanship in urban development (Collins,

2018). Managers' organizing of events where people can buy Christmas gifts directly from local craftsmen is one such examples. In fact, because of its sustainable and locally consumed production, the annual event Winterwinkelen is becoming part of the local identity.

In addition to answering the central research question, this research answers the sub-question by comparing Merwede development policy to the growth of Makers van Merwede's craft-related practices. In Merwede, making started to evolve before the development plan was initiated. Creativity has long been rooted in the neighbourhood as a generator of employment, as opposed to being adopted in its simplified form to attract certain profiles of residents (Florida, 2002). However, this does not necessarily mean that craft is in a dominant urgency in Merwede's urban agenda. Whilst the development plan acknowledges making and makerspaces as a positive force, it requests certain creative business models to make way to housing plans, mobility programs as well as a future 'urban garden'. The revival of craft in Grodach's (2017) ideal urban cultural policy is only partly proven in the case of Merwede. A rather 'smart growth' policy applies in Merwede through mixed-use projects and property-led redevelopment (Leigh & Hoelzel, 2012; Wolf-Powers, 2005; cited in Grodach & Gibson, 2019). Looking at the impacts of this plan, makerspaces seek to diversify their functions in order to better fit into the future neighbourhood. Their attempts include integrating municipal, educational and more commercial elements to the current functionality.

This research contributes to the theories of makerspaces by adding a dimension that is related to the potential revival of craft in the urban context. By looking at managers perspectives and practices, social phenomenon in makerspaces is beyond the *Maker Movement* discourse or the emergence of digitalization (e.g. Dougherty, 2012; Hatch, 2013; Niaros et al., 2017). In this research, makerspaces, rather than practicing dominantly digital-based making (Burke, 2014), host a combination of manual work and machinal work, which is considered as one of the core values of craft since it involves the pursuit of excellence. As this research is based on managerial practices, it provides more knowledge on managers empowerment in such spaces, enriching the previously explored community governance (Kostakis et al., 2015) with their incubating power that generates more business opportunities for making. Makerspaces are also shown as having a stronger

connection to the city development because the small-scale and place-specific craft manufacturing they foster provides an authentic creativity embedded in the local neighbourhood, as opposed to the simplified approach of creativity in the creative city discourse (Florida, 2002).

5.2 Limitation and further research

This research faces limitations in certain aspects. While we experience its revival in the contemporary discourse and urban development, the term craftsmanship itself has historical connotations associated with ‘hand making’, ‘traditional techniques’ and the profile of people who are called craftsman. An ‘old fashioned’ associations seem to relate to how craft is in Dutch language (*ambacht*). Meanwhile, contrary to an old sounding concept, the number of makerspaces has increased in the last decade in line to digitalization, they tend to be more associated to innovation, technology and the new generation (Dougherty, 2012). However, these two worlds increasingly embrace each other, and sometimes the values of craftsmanship form and guide objectives in such spaces. Managers of makerspaces may wish to use newer and more innovative terms in order to strengthen their relevance in the changing society, such as ‘makers’ and ‘creatives’. The definition of craftsmanship tends to be stuck in its historical acknowledgment, despite its dimensions being actively practiced in the creative field. For example, craft and craftsmanship have become a modern marketing tool: craft beer, craft coffee and other craft products have adopted the word ‘craft’ as a trendy description used to evoke traditional production methods and convey authenticity. A revised and broader definition of craftsmanship is needed to maximize its cultural, social, economic and societal values in making, as well as in the management of making environment. Further research could look at how the concept of craftsmanship has developed when it is practiced in innovative fields.

The second limitation is the sampling geography of this research. In the design of this research, 3 makerspaces are chosen, and 9 interviews are conducted. Within the 3 makerspaces, 4 out of 9 interviewees are from Vechtclub XL. This is because the space has a more established network and communication between managers. It is rather difficult to snowball in another space with a less defined managerial structure. As a result, more insights are gathered from Vechtclub XL.

There remains space to further study the implications of co-management in other, smaller makerspaces such as De Createur. Different to other spaces, respondents from De Createur have 'double identities', they recognized themselves as makers who take certain managerial roles as opposed to either maker or manager. Potential topics draw on the experience of those who are maker-managers in makerspaces.

Looking at the selection of the 3 studied makerspaces, although they each represent different focuses in the management, maker selection and positioning in the neighbourhood, they do not cover all types of makerspaces in Merwede. De Alchemist and De Stads Tuin are not studied due to a lack of information and time limitations. De Stads Tuin is of interest due to having multiple locations in Utrecht, each of them located in a rather different area of the city. How the management operates across a collection of makerspace locations will need further researching. This could expand the perspectives to a broader urban level instead of a single creative core. In general, this research suggests addressing a more complete typology of makerspaces.

The third limitation is a focus on perspectives of managers rather than makers. In this research, 4 managers have their making projects or studios in the space, this enabled me to gather hints of reactions from a maker's perspective. At certain points during the interviews, they would switch perspectives and reflect on what they said from a maker's eye. However, since the intention of the sampling method is to gather insights from managers or those who are involved in management, the opinions and experience of makers are not preliminarily considered due to the scale of this project. As I analysed the fundamental operation of makerspaces as a place designed to meet the need of its clients (makers), the affordance of management in such spaces needs to be tested by the experience of makers. Therefore, further research could address commonality and differentiations between the insights of managers and makers and could further address the satisfaction of makers regarding the managerial empowerment they receive in the makerspace.

5.3 Reflexivity

According to Hammersley and Atkinson (2007), in social research, it is almost

impossible to avoid subjectivity of the researcher. In this sense, they suggest understanding the effects of the researcher and see researchers as active participants of the studied field. Because their initiatives can also be informative to research outcomes. As the researcher of this project, my self-reflection is in the language difference, more specifically, me and the respondents tend to focus on different aspects of a same term, due to different socio-historical backgrounds we respectively stand for. While I am an international student in Arts and Culture, my respondents are Dutch and are working in management. The ways I overcame the language difference provides possible strategies on how certain concepts could be more efficiently studied with managers. I will provide details below.

My respondents are recruited with a primary focus as who are managers of making rather makers, and, their first language is Dutch. While I interviewed them in English, it gives difficulties for us to always refer to the same implications of certain terms, such as crafts. As I briefly mentioned in previous chapters, ‘ambacht’ associates to traditional impressions in Dutch language. When they have a background of not necessarily practice making directly²⁶, the respondents tend to fall into a certain discourse of the term and assume that is what we both do in the conversation. However, through researching this concept in its multiple definitions, some newer perspectives fit into the studied field very well, some are very much related to the nature of management. I was hoping to test those dimensions in interviews however, In pilot interviews, I realized a differentiation of understanding because when I asked questions directly with the word craftsmanship, the respondents seemed to hesitate, questioned why it is related to their managerial experience, and asked if I could make my questions more specific. Struggling further, in some other cases they would talk about the traditional meanings of craftsmanship and ended up missing the intention of my original question.

While I was confident about the occurrence of craftsmanship in makerspaces, I needed to break down the concept into answerable topics in practice. I had multiple approaches such as in one example, the interviews went well when I started my questions from what they do, instead of from how they think. Managers’ have a tendency to talk about something through an actual example. They justify an

²⁶ Makers tend to have a wider and newer understanding of craftsmanship as they actively involved in the field and gather knowledge of innovative practices of crafts.

idea from how they practice it so it is a more reasonable order to first ask about practices and then collect their understandings accordingly. I could gather their insights towards craftsmanship through the actions they take at work. As another example, more success came from asking about the dimensions of craftsmanship instead of craftsmanship itself. For example, ‘Is it important to be recognized by each other in the space? If so, how do you foster it?’ From this question, I could relate their answers to *togetherness* in craftsmanship. In fact, all respondents could relate their practices to certain aspects of craftsmanship, although sometimes they were doing it without knowing.

5.4 Social Relevance and Final Remarks

Makerspaces host small-scale creative production in urban settings. From the analysis of this research, makerspaces indicate a more inclusive future working place, a ‘utopian’ shape of urban manufacturing where people work with intrinsically fulfilling projects in a trust-based community. It seems to counter the draining corporate life and repetitive labour work in production lines (Jacob, 2013; Ocejo, 2017). But aside from individual happiness, this research also seeks to argue makerspace’s innovative approach that contribute to craft’s reengagement in contemporary society, showcased by seeing and justifying the core values of craft in new and sometimes digitally empowered urban manufactures. Although urban policies have a renewed interest in craft (Grodach, 2017), they usually prioritize high-tech urban manufacturing and as a result, a knowledge economy and craft manufacturing seems to lack support from development opportunities (Hansen & Winther, 2015). Whereas makerspaces in the case study all seek to connect craftsmanship to advanced knowledge and technologies. With the help of shared facilities and entrepreneurial knowledge, makers are offered the potential to evolve haptic skills to advanced production whilst preserving the human element of making. Afterwards, managerial incubation means that products are promoted in the local consumption market (Van Holm, 2015). Together with managerial facilitation of crafts-related production and consumption, there is a clear career development for working class jobs around makerspaces, in which it opens up the potential for quality employment (Grodach & Gibson, 2019).

However, makerspaces still see challenges in urban cultural policies,

through which this research leaves a final message to further discussion. According to Grodach and Gibson's (2019) article about the policy response to new types of urban manufacturing, they argue a failed awareness of incorporating redevelopment agendas to craft manufacturing (in our case makerspaces). A 'smart growth' policy seems to still take a dominant role in the development of post-industrial cities, where previous industrial land such as Merwede are expected to be transformed into residential plans, commercial activities and knowledge industries (Leigh & Hoelzel, 2012; Curran, 2010). Makerspaces are not in the centre of such plan of growth because they do not provide accommodation; they are also part of a niche market compared to mass commerce and the knowledge economy, which often focuses on new technologies. This situation is very much evidenced in this research and is why managers in Merwede's makerspaces aim to create a cross-functional space in order to fit into the future neighbourhood. As we now have a better understanding of how values of craftsmanship are bringing positive changes in social development and urban redevelopment, we shall advocate more progressive urban cultural policies that facilitate makerspaces and making activities.

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Appendices

Appendix A: Operationalization of Concepts

Concept	Dimension	Measurement (Interview Questions)
Managerial Practice of Makerspace	Responsibilities	<ul style="list-style-type: none"> - What is your role at this makerspace? - How do you describe your work?
	Shaping of the Physical space	<ul style="list-style-type: none"> - To what extent are you able to influence the physical environment of this space? - What are your responsibilities in the physical environment here?
	Implementation of shared resource	<ul style="list-style-type: none"> - How is the idea of sharing implemented in this makerspace? - How does your work help shape that?
Craftsmanship	Perception of the notion of craftsmanship	<ul style="list-style-type: none"> - As a manager of this space, in what ways do you see craftsmanship as occurring here? - What do you see as your role in supporting craftsmanship here?
	Perception of craftsmanship in makerspace	<ul style="list-style-type: none"> - How do you understand the relationship between craft and digital tools?
Intrinsic values of craftsmanship	Interpretation of the pursuit of excellence	<ul style="list-style-type: none"> - What do you do to help makers achieve the best results for their projects? - How do you see the pursuit of doing something well by hand in today's society?
	Interpretation of self-expression	<ul style="list-style-type: none"> - In what ways do you see crafts as one's self-expression in the society? - How do you help makers to better self-express?
Social values of craftsmanship	Markers of status	<ul style="list-style-type: none"> - As a craftsman, it is encouraging to be acknowledged by others, how do you foster the sense of recognition in the space?
	Networking	<ul style="list-style-type: none"> - How do makers know each other?

		<ul style="list-style-type: none"> - Do you contribute to the network? How?
Social roles of managers	Internal social interaction and collaboration	<ul style="list-style-type: none"> - How do you define yourself in the internal communication here? - How do you stimulate collaborations between makers?
	Harnessing makers' career trajectory	<ul style="list-style-type: none"> - How do you think makers' careers can be advanced by the makerspace? - What public events or activities have you organized? How do you understand them?
	External social interaction and collaboration	<ul style="list-style-type: none"> - How do makerspaces collaborate in de Makers van Merwede? - Why do you think it is important to make connections to the other makerspaces?
Development agenda of the Merwede	Perception of the agenda	<ul style="list-style-type: none"> - To what extent do you think the development agenda of Merwede shapes your makerspace? - Does the agenda fit into the vision of this makerspace?
Craft in Creative City discourse	Interpretation of the place identity of Merwede	<ul style="list-style-type: none"> - How does Makers van Merwede play a part in connecting residents in this neighbourhood? - How else do you think can improve the sense of community here?

Appendix B: Interview Guide

Responsibilities

1. What is your role at this makerspace?
2. How do you describe your work here?
3. What is a typical day of your work at [name of the makerspace]?

Shared resource

1. How is the idea of sharing implemented in this makerspace?
2. How does your work help shape that?

Notion of craftsmanship

1. As a manager of this space, in what ways do you see craftsmanship as occurring here?
2. What do you see as your role in supporting craftsmanship here?

Craftsmanship and makerspace's principles

- How do you think craftsmanship fits into the idea of sharing?
- How do you understand the relationship between craft and digital tools?

Pursuit of excellence

1. What do you do to help makers achieve the best results for their project?
2. How do you see the pursuit of doing something well by hand in today's society?

Self-expression

1. In what ways do you see crafts as one's self-expression?
2. How do you help makers to better self-express?

Togetherness

1. Do you think people make together here? Why is it important?
2. As a craftsman, it is encouraging to be acknowledged by others, how do you foster the sense of recognition in the space?

Internal social interaction

3. How do you define yourself in the internal communication here?
4. How do you stimulate collaborations between makers?

Harnessing makers' career trajectory

1. How do you think crafters' careers can be advanced by the makerspace?
2. What public events or activities have you organized? How do you understand the intention of them?

External social interaction

1. How do makerspaces collaborate in de Makers van Merwede?
2. Why do you think it is important to make connections to the other makerspaces?

Development agenda of the Merwede

1. To what extent do you think the development agenda of Merwede shapes your makerspace?
2. Does the agenda fit into the vision of this makerspace?

Place identity of Merwede

1. How does Makers van Merwede play a part in connecting residents in this neighbourhood?
2. How else do you think can improve the sense of community here?

Appendix C: Research Participants

Interviewee	Works at	Occupation/Managerial Role	Interview Duration
1	Vechtclub XL	Artistic Leader; transitioning role from artistic leader at Vechtclub XL to director of Merwede's collective fund.	1h 45 mins
2	Vechtclub XL	Financial Leader	1h 15
3	Vechtclub XL	Community Manager	1h
4	Vechtclub XL	Leather maker & Event Manager	45 mins
5	Kanaal30	Co-founder	1h 40
6	Kanaal30	Event management intern	40 min
7	Kanaal30	Ceramist & Marketing contributor	1h
8	De Createur	Furniture maker & Communication and Space Maintenance contributor	1h
9	De Createur	Furniture maker & Event management contributor	1h 20

Appendix D: Coding Book

Explanation of font colours:

- Black_apply to all
- Gray_apply to certain spaces
- Light gray_only apply to one space

Explanation of abbreviation:

- Vechtclub XL: v
- Kanaal30: k
- De Createur: d

Group codes	Codes	Description
Operation of the space	Division of responsibilities	Managers work in different roles, ranging from interim director, artistic programming, community management, financial management, event management, communication, etc.
	Foundation	Having a foundation to support social and cultural programs.
	Financial operation	Commercial part of the makerspace gives financial support to the foundation.
	Co-management (v,d)	Certain makers take managing roles for reduction of rent and a nicer community.
Vision of the space	Community	Building a trust-based community where information is shared and used with respect.
	Sharing	Sharing of machines, tools, materials, knowledge and a close network in the space.
	Knowledge exchange	Having the mindset of knowledge exchange and growth together.
	Specific selection criteria of makers	Having a variety of professions or all in the same field; and having those who treat their business seriously.

	Multi-lines of cultural programming	Organizing cultural programs for different target groups: internal social activities, public events and creative entrepreneurship sessions.
	Diversifying local activities	Creating an alternative place for inspiring and entertaining activities in the neighbourhood.
	Freedom of work	Managers have relative freedom in work hours, work content and vision making.
	Makers' autonomy(v,d)	Some decisions are made freely by makers from sharing responsibilities in the space.
	A young and new vibe (k,d)	Offering cheap rent for young creatives to start their business and take into account of younger generations' interest in event planning.
Internal communication	Internal meeting	Regular and formal meetings with the management team.
	Chats between colleagues	Informal meetings with the management team.
	Online information spread	Instant communication through WhatsApp groups and Facebook.
External communication	External meetings	Inviting members from different makerspaces to external meetings and decision making.
	Fund group	Forming an external fund group for fund raising and sharing among makerspaces.
	Neighbourhood network (v)	Investing time in the neighbourhood and meet diverse social groups.
Internal collaboration between makers	Internal network	Initiating internal partnerships through passion, knowledge, materials and/or machines sharing.
	Internal commissions	Makers with different specialities collaborate for events of the space, such as wintwewinkelen.
	External commissions	Makers with different specialities help each other to achieve a better result of a joint external commission.
	Unplanned	Makers Being inspired by casual talks in the

	collaborations	space, which leads to unexpected collaboration.
Promotion of craftsman	Online and Offline media	Using flyers, posters, videos and social media posts to promote making to a wider audience.
	Workshops	Providing space and budget for public workshop venues.
	Storytelling in consumer experience	Facilitating an atmosphere of crafts storytelling and therefore improve visitors' buying experience.
	Profile building	Building professional profiles of Makers van Merwede, such as photo taking, curating text editorials.
	Peer to peer promotion	Facilitating internal activities for talking about one's project with peers.
	Gift shop (k)	Running a gift shop where sells crafts made by its own makers.
Managerial empowering of craftsmanship	Entrepreneurial coaching	Holding internal sessions to give entrepreneurial advisory
	Internal connection building	Hearing and talking a lot in the space to get acquainted with interpersonal knowledge and to foster internal connections, this is mostly done in informal ways.
	Internal social activities	Regularly inviting all the makers to lunch and beer times, as well as dinners and film nights.
	Inspiration boosting	Managers thinking together with makers for their project development.
	External network (v)	Providing external networking resource, such as contacts of shop owners and the press.
Components of craftsmanship	Authenticity	Crafts convey stories and views of life in a persistent manner, it makes people's life more beautiful and special.
	Togetherness	Craftsmanship involves being acknowledged recognized by people who make together, makers construct a social life around it.

	Skills and techniques	Craftsman are good at a specific technique or skill.
	Efficiency	Craftsmanship involves sufficient instruments to realize crafting ideas, which is usually empowered by machines and digital software.
Importance of craftsmanship	Spiritual values to makers and consumers	Craftsmanship provides experience to enrich people's life.
	Economic fuel to the city (v, k)	Being aware of the benefits of creative making in urban development.
	A link between different rules and parties (k)	Crafts-related activities bring commercial, governmental and educational organizations and different social groups together in the same space.
Factors of successful craftsmanship	Entrepreneurship	Developing an entrepreneurial mindset in quality control, pricing and marketing
	Digital crafting	Using machines and digital software to achieve better result and a more efficient production
	Satisfying results (d)	Delivering a good experience and a beautiful product to the client.
Intention of Winterwinkelen	Promotion of the space and makers	To raise attention from the public, makerspaces open their studios and let people to see how and what creative people make.
	Christmas crafts fair	Giving the neighbourhood and opportunity to shop Christmas gifts from local craftsman.
	Stronger network in the area (v)	Strengthening the brand and impact of Makers van Merwede as a collective identity in the whole area.
Strategy of Winterwinkelen	Incorporation with commercial partners	Using help from branding agencies, commercial partners and entrepreneurs for music and theatre.
	Selection of external board committee	Including both managers and makers in the external meetings.
	Reward hunt	Visitors who complete all locations are rewarded a small craft gift.
	Open call for outside makers (k)	Providing cheap stands for outside makers to add diversity to the event and therefore to attract more

		attention from the public.
Vision of Winterwinkelen	Maker selection	Makers are invited to the events only when they have established ideas and mature products.
	Integration of local residents	Developing a good knowledge of what kind of people come visit and try to make the event as inclusive as possible.
	Specialization of each location	Each makerspace tends to clarify and strengthen their own specialities yearly to improve shopping experience.
	Yearly based tradition	Making the event a yearly tradition and to build a reputation in the city.
	A better route and routine (v)	Having a more accessible route between different makerspaces and having a better program routine in the event days.
	Involvement in actual making (d)	Getting people's hands dirty and experiment with materials that the makers do every day.
	Ownership of individual maker stands (d)	Being responsible of own's selling and workshops in the event.
Agenda Merwede	Impact on the rental contract	Talking about the uncertainty of rental periods of makerspaces.
	Judgment on the new plan	Discussing and explaining the downside of the new plan, mainly about housing plans, transportation rearrangement and green solutions.
Relationship between Merwede and Maker van Merwede	Negotiation of status	Seeking connections and opportunities to claim the importance of making in the new plan.
	Mutual goal	Highlighting a more sustainable and community-based neighbourhood as the mutual goal between makerspaces and the government.
Vision of Merwede	Diverse insights in policy making	Suggesting a diverse social background of policy makers.
	Facilitation of making	Suggesting a more inclusive accommodation of

		makers by multi-layers of rental prices and types of spaces.
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Appendix E: Overview of Material and Topic List in Content analysis

Makerspaces and Makers van Merwede, retrieved from websites:

- <https://makersvanmerwede.nl>
- <https://www.vechtclubxl.nl/over-vechtclub-xl/>
- <https://kanaal30.com>
- <https://decreateur.com>
- <https://www.decreateur.com/ondernemers/>

Merwede redevelopment plan, website and policy documents:

- Overview:
<https://merwede.nl/toekomst/akkoord-over-samenwerking-merwedekanaalzone/>
- Documents portal:
<https://omgevingsvisie.utrecht.nl/gebiedsbeleid/gebiedsbeleid-wijk-zuidwest/deelgebied-merwedekanaalzone/>
- Voorlopig Ontwerp Stedenbouwkundig Plan Merwede, 2020, Gemeente Utrecht.
<https://www.commissierner.nl/projectdocumenten/00006491.pdf>
- Omgevingsvisie deel 2, 2020, Gemeente Utrecht.
<https://omgevingsvisie.utrecht.nl/gebiedsbeleid/gebiedsbeleid-wijk-zuidwest/deelgebied-merwedekanaalzone/>

Merwede area (news, events, vision), retrieved from websites:

- <https://merwede.nl>
- <https://merwede.nl/werken/>
- <https://merwede.nl/event/winterwinkelen-bij-de-makers-van-merwede/>