THE POINT OF PARTICIPATING

Researching the influence of public participation on the social capital of participants

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Preface

This thesis was written as part of the master's programme Environment and Society Studies and on behalf of Bureau Wijland. The choice of the research themes, public participation and social capital in the context of sustainable development policy, was made based on my personal interest in the social side of sustainable development, and in line with the study programme and the mission of Bureau Wijland to increase diversity in the sustainable transition.

To kick off, I would like to take a moment here to acknowledge and appreciate my own social capital, and to thank those who have participated in this research \odot

First of all, I would like to thank all respondents for taking the time and effort to participate in this study, and for sharing their experiences and perspectives. Your input has been of great value.

I would also like to thank Bureau Wijland for their cooperation in this research and for the opportunity to make use of their knowledge and experience, as well as their extensive and 'Colourful' Network. In addition to writing my thesis, my internship gave me the opportunity to become acquainted with Bureau Wijland's working methods and network, and I was able to gain a lot of experience and meet many interesting people.

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Finally, I want to thank my family and friends who supported me throughout the process -especially Sander; I could not have done it without you. It's been quite the journey, but I finally made it!

Thanks to all, and I hope you enjoy the read.

Summary

Background In recent decades, there has been a demand for more bottom-up, democratic and inclusive forms of governance for sustainable development. Public participation is a hot topic in this regard, but in many cases, participation actually maintains or reinforces the democratic deficit it ought to address. Despite calls for more bottom-up participation, a top-down perspective dominates the literature and there is not much attention for the perspective of the public. This study offers a new, bottom-up perspective, by researching how participants experience the participation process and how they are influenced by it. **Purpose** The aim of this research is to gain more insight into how participating affects those who participate. It specifically focuses on the influence on social capital, as this factor is seen as especially relevant in stimulating bottom-up, collective action.

Method This study uses a comparative case study design to compare different types of participation processes. As the distinction between top-down and bottom-up participation is relevant to this research, it has been used as a selection criterion for the cases. Four cases have been selected that can be placed on a continuum from bottom-up to top-down: almost completely bottom-up, bottom-up but with top-down elements, top-down with bottom-up elements, and completely top-down. Data was gathered through semi-structured interviews with participants of these four cases, and short written interviews with two project managers. **Results** Bottom-up and top-down participation can both have a positive influence, but on different forms of social capital. Bottom-up participation can strongly contribute to informal, local networks of neighbourhood residents and thus increase cohesion within a certain area or neighbourhood. Top-down participation can provide network expansion and more formal connections, and it can stimulate citizens to participate more in formal structures. However, one form of social capital does not necessarily exclude the other, and if designed and implemented right, the participation process can even contribute to different forms of social capital at the same time. Three elements appear important in this respect: empowerment, meaningful cooperation, and structure or continuity, although not all three elements are always required. The neglect of these elements can result in no influence, a weak influence or even a negative influence of participation on social capital.

Recommendations One of the most important lessons from this study is that participation can increase existing inequalities with regard to social capital. The positive influence of participation on social capital runs the risk of becoming a self-fulfilling prophecy: strengthening informal social capital through bottom-up participation, and strengthening formal social capital through top-down participation in a virtuous circle. Nonetheless, this study also shows that this process can be overcome in three ways. Firstly, by carefully designing the participation process and considering how it can influence social capital. Secondly, it is essential to actively seek out the unusual suspects that do not have high stocks of social capital, and to strengthen their position so that they can also participate and become involved in the sustainable transition. Finally, this study also shows that it is not necessarily required for all of 'the public' to be involved in sustainable development policy. There are many possible forms in which those who participate and have sufficient social capital act as intermediaries or representatives for those who cannot or do not want to participate. In this way, support can be created and the voices of those who cannot or do not want to participate can also be heard.

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1. Introduction

1.1 Research context

Sustainable development has been a hot topic ever since the Brundtland Commission started to develop the concept, and their definition of "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" has been one of the most widely used (World Commission on Environment and Development, 1987, p. 41). Much attention has been directed to sustainable development and the transition to a sustainable society. However, in recent decades the attention has shifted towards the themes of justice, equality and democracy in the field of sustainable development and transition management. The current course of sustainable development is argued to favour the so-called eco-elite -the wealthier, higher educated and often white side of society- over the citizens with lower socio-economic status (Jhagroe, 2018; Lagunas, Lobbrecht & Heilbron, 2017; Marijnissen, 2018).

To overcome this, there has been a search for more bottom-up, democratic and inclusive governance alternatives for the predominant top-down, technocratic and elitist approaches to governance. In this regard, public participation is seen as an important concept. Besides increasing the democratic legitimacy of policy, including citizens in policy may lead to better informed and better supported policy, which makes it more effective (Jellema & Mulder, 2016). Identifying and assessing mechanisms that build popular support for green transitions is vital considering that not only technological, but also social and political challenges explain the persistent failure globally to address complex environmental problems like climate change (MacArthur, 2016).

1.2 Research problem statement

Calls for more participation of citizens in governance for sustainable development are increasing, but there are many complexities and controversies with regard to the research field. Empirical evidence of its effectiveness remains thin, due to conceptual and methodological issues (Chilvers, 2009). As will be discussed in the next chapter, the complexities regarding the evaluation of public participation effectiveness highlight the need to move beyond evaluation to critical studies of public participation. It is suggested that public participation often maintains or even reinforces the democratic deficit it ought to address and that more attention needs to be paid to the structural inequalities that underlie this deficit (e.g. Head, 2007; Young, 2000). To overcome this, participation should be more bottom-up instead of top-down, so that it can be better accommodated to the needs of the public, and thus more democratic (Chilvers, 2009).

There is a large body of literature addressing this issue, but what is remarkable is that the majority of these are from a top-down perspective, even the ones suggesting that participation needs to be more democratic or bottom-up (e.g. Hendriks, 2008; MacArthur, 2016). Yet, one would expect that to increase the effectiveness and democratic legitimacy of public participation there ought to be more attention for the perspective of the public, or the participants. To some extent this perspective can be found in the literature on environmentalism. A variety of studies suggest different types of factors that influence why and how citizens participate (e.g. Hill, 2012; Miller & Buys, 2008; Pelling, 1998). Four groups of factors can be distilled that may act as drivers or barriers for participation: personal,

social, socio-demographic and institutional. Yet, apart from the drivers and barriers of participation, a large part of the perspective of the public remains understudied in research on participation. Given the demand for more bottom-up participation, it is not only important to know drivers and barriers, but also how participants experience participation and what impact it has on them and on their lives. Therefore, in this study I focus on the influence that participation has on the participant, based on their own experience.

1.3 Research aim and research questions

The aim of this research is to gain more insight into how participating influences those who participate. To take into consideration the various interpretations and perspectives on participation, different types of participation projects or initiatives will be compared. Given that there are hardly any references in the literature as to what factors might be influenced by participation, I use the above-mentioned four groups of factors as a guideline. Because it is not possible within the scope of this research to include all four factors, I focus here on social capital. This factor is most consistently mentioned as a possible catalyst for participation, especially in the context of governance for sustainable development and environmental governance (Daniere et al., 2002; Miao et al., 2018; Miller & Buys, 2008). However, in this study the focus will not be on social capital as a potential catalyst for participation, but as a factor that is potentially affected by participation. This may clarify whether social capital, in addition to being a factor influencing participation, is also a factor influenced *by* participation, possibly creating a virtuous circle.

This study specifically addresses public participation in governance for sustainable development, either in policy making and implementation or sustainability initiatives. It is conducted within the theme of sustainable development and therefore also touches on the literature on environmentalism. However, the literature and theory on public participation is not limited to governance for sustainable development; the choice for this theme follows from the context in which this study is written - that is, the educational background of the researcher and the field of work of the hosting organisation. In this respect, the research question could also be answered on the basis of forms of public participation in governance in general.

Thus, this paper will try to clarify how participation affects the social capital of participants, and if this influence varies for different types of participation. The research question compatible with this aim is as follows:

How do different types of public participation in governance for sustainable development influence the social capital of participants?

An answer to the research question will be given by use of the following subquestions:

- 1. How can the participation process be categorized in terms of participant selection, communication and decision-making, and authority and power?
- 2. What was the level of social capital prior to participating?
- 3. How was the social capital influenced by the participation process?

1.4 Research approach

This study is carried out as part of an assignment for Bureau Wijland. Bureau Wijland is a consultancy agency whose aim is to sustainably embed diversity in society and to meaningfully connect people and organisations. This is done by functioning as a liaison

between citizens' initiatives, civil society organisations, the business community, the government and knowledge institutions. One of their aims is to create more diversity in the Dutch transition to a sustainable society. In this regard, public participation is a theme that is specifically relevant to their purpose of contributing to an inclusive, diverse and sustainable transition.

For this study, both the participation process and its influence on the social capital of participants will be analysed in four cases. Two of these cases are top-down, the other two are bottom-up. The influence of the participation process on the social capital of participants will be explored through in-depth interviews, so that the experiences of the participants are taken into account and the influence of different types of participation can be compared.

1.5 Relevance

1.5.1 Scientific relevance

This research adds to and connects the existing scientific literature on the concepts of public participation and social capital. There is a body of research on what influences citizens to participate (e.g. Hill, 2012; Miller & Buys, 2008; Pelling, 1998), and a body of research on the impact of participation in terms of its productive effects and democratic legitimacy (e.g. Beierle & Cayford, 2002; Chilvers, 2009). The predominant perspective in the existing body of research is top-down and focus is mostly on the process or outcomes of public participation (e.g. Hendriks, 2008; MacArthur, 2016). This study uses a different perspective: focusing on the perspective of the participant may shed a new light on the predominantly top-down perspective on public participation in the current academic field.

What also lacks in the theory on public participation is empirical analysis of how citizens themselves are influenced by participating. This study specifically pays attention to the effect that participating has on the social capital of the participants, and also on the difference in this regard between various methods of participation. As already mentioned, there are studies suggesting social capital as a possible catalyst for collective action (Daniere et al., 2002; Miao et al., 2018; Miller & Buys, 2008), but based on the literature review no studies were found that examined the reverse influence of public participation on social capital. This research thus adds to the existing literature by exploring this influence. By focusing more on the actor and specifically on social capital this study brings together literature on public participation, democratic theory, environmentalism and social capital.

1.5.2 Societal relevance

With this research I will explore the effects of public participation on participants from their own perspective, to be able to assess its value for both citizens and the government. By comparing different types of participation, I can also provide recommendations to Bureau Wijland on the effects and value of these different types of participation. As public participation in sustainability transitions is a topic on the agenda of public institutions and organisations on local, regional, national and international level, the conclusions of this research could be of relevance to all these parties. Besides public parties, there are also a number of private or non-profit parties that can benefit from including the public more in designing and implementing their future plans. Finally, public participation is a means to reach better inclusion of citizens in the societal transition to sustainability and is therefore of relevance to all citizens who are affected by this transition. The insights from this study could

be valuable in the design of public participation projects that are inclusive, accessible and representative of the wider public, and not just the usual suspects.

2. Literature review and theoretical framework

2.1 Sustainable development

According to the literature sustainable development can be achieved through three pillars of development: ecological, economic and social development (Lagunas et al., 2017; Murphy, 2012). The integration of these three pillars in practice proves problematic (Geczi, 2007). Most of the focus by academics, politicians and policy makers has been on improving social or ecological development to achieve economic development. However, the argument that there is a limit to how much economic development is possible without compromising ecological and social development shows increasing resonance (Geczi, 2007). Furthermore, many scholars have discussed the importance of social development as a precondition for achieving ecological and economical development (Geczi, 2007; Lagunas et al., 2017; Murphy, 2012). The attention has shifted towards the themes of justice, equality and democracy in the field of sustainable development and transition management. The current course of sustainable development is argued to favour the so-called eco-elite -the wealthier, higher educated and often white side of society- over the citizens with lower socio-economic status (Jhagroe, 2018; Lagunas et al., 2017; Marijnissen, 2018). The former has better opportunities to act sustainable, adapt to environmental changes and be involved in the transition to a sustainable society. The latter on the other hand often does not have the means to engage in this transition and is unevenly impacted by the negative consequences of environmental issues (Jhagroe, 2018; Marijnissen, 2018). In this way, sustainable development might even aggravate structural socio-economic inequalities, by excluding the ones who are hurt the most by environmental issues and strengthening the position of the wealthier part of society.

At the same time, the elite is generally more involved in governance for sustainable development. They are better represented in the political arenas, but also have better means to get involved in policy making or take action themselves. Citizens with lower socio-economic status on the other hand are underrepresented and largely left out of the debate (MacArthur, 2016; Young, 2000). So, while the elite is already in a better position to act sustainably and adapt to environmental problems, they also have better means to influence policy and politics to be accommodated to their needs, further widening the gap between the haves and the have-nots. The response to this has been a shift away from top-down, technocratic and elitist forms of governance to more bottom-up, democratic and inclusive governance (Chilvers & Longhurst, 2016; Ferguson & Lovell, 2015; Geczi, 2007). An important concept in this regard is public participation.

2.2 Public participation

Public participation is a widely discussed concept and is discussed in many terms, such as civic engagement, public deliberation or community engagement. These different terms have their own nuances, either referring to individual citizens or the wider public being included in policy making in a top-down way or being active in sustainability initiatives in a bottom-up way, or somewhere in between. In this research I will use the term public participation to refer to all forms of the involvement of citizens in governance for sustainable development.

According to an earlier study by Chilvers (2009) empirical research on public participation has developed in three streams. The first is committed to developing

participatory practices and innovative deliberative methodologies, the second focuses on evaluating the quality of participatory processes and outcomes, and the third contains critical studies with more reflexive accounts of public participation. While there are many studies that can be ascribed to the first stream, Chilvers argues there needs to be more empirical research in the second and third stream. According to his extensive review of the literature there is not much empirical evidence for the effectiveness of public participation and there is a need for reflexive and critical studies concerning democratic legitimacy. The three streams as proposed by Chilvers provide good guidelines for understanding the literature, and I will use them to structure my review of the literature in the following three sections.

2.2.1 Developing public participation

The first stream of research is committed to participatory process design and deals with the who, what and how of participation: who participates, what are the aims and purposes and how should it be designed? Chilvers and Longhurst (2016) for example describe who 'the public' in public participation is and what it means to participate according to four approaches: deliberative democratic theory, social movement theory, work on 'grassroots' innovation and practice theory. These see the public respectively as deliberative citizens informing decisions made by others; as civil society groups that are actively building new forms of institution, organization and commitment; as civil society actors engaged in contentious politics; or as consuming practitioners interacting with societal systems through daily performances.

Public participation in governance is seen as relevant to sustainable development for normative, substantive and instrumental reasons. From a normative perspective, citizens should be involved in governance because this is democratic. The substantive argument is that including citizens who are currently left out creates policy that is more accommodated to their needs, and thus more effective. This also has instrumental value, leading to more public acceptance and support which in turn smoothens the whole process of policy making and implementation for the transition to sustainability (Jellema & Mulder, 2016).

According to Arnstein (1969, p. 216) participation is "the redistribution of power that enables the have-not citizens, presently excluded from the political and economic processes, to be deliberately included in the future". It is the means by which the 'have-nots' can pursue significant social reform which enables them to share in the benefits of the affluent society. She proposes a 'Ladder of Participation', a typology of eight levels of participation ranging from manipulation to citizen control, with three degrees of power delegation: non participation, degrees of tokenism and degrees of citizen power.

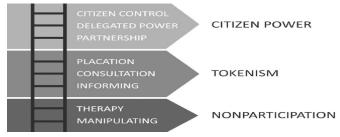


Figure 1: Ladder of Participation (adapted from Arnstein, 1969)1

Mastalerz, A. (2019). Classification and analysis of social participation initiatives in a post-industrial city: A case study of Pabianice. Urban Development Issues, 61, 51-63. https://doi.org/10.2478/udi-2019-0002

¹ Adapted from Arnstein (1969), from:

In Arnstein's ladder there is a normative distinction between the levels of participation, with a higher level of involvement being more desirable. Fung (2006) on the other hand argues that participation is context-specific and that in some cases full citizen power can be counterproductive, for example in rapid-response or technologically advanced decision-making. As such, there is no universally effective method. Similar arguments are made by other authors, such as Head (2007) and Rowe and Frewer (2000). A less normative typology of participation is the categorisation by the International Association for Public Participation (IAPP). The IAPP Spectrum of Public Participation distinguishes five types of participation: informing, consulting, involving, collaborating and empowering citizens (International Association for Public Participation, n.d.). These constitute a sliding scale of participatory forms in terms of the public's impact on decision-making, where more impact is not necessarily more desirable.

Yet, the IAPP spectrum covers only one aspect of the participation process: the public's impact on decision-making. But there are several more aspects by which different forms of participation can be distinguished. According to Beierle and Cayford (2002), different participation mechanisms can be classified on the basis of five trade-offs: degree of inclusion (broad vs. narrow), representation (socio-economic vs. interest group), kind of engagement (information sharing vs. deliberation), level of public influence (limited vs. moderate or high) and role of the government (active vs. passive). These trade-offs correspond to the dimensions that are most often mentioned in the literature by various other authors: degree of inclusion, representation, level of intensity, kind of engagement, level of influence, the public's impact on the decision and the role of the government (e.g. Head, 2007; Hendriks, 2008). However, the questions that are answered with these trade-offs are not created as an analytical tool, but as an aid to choose between different forms of participation.

Another conceptualisation of participation processes is the institutional design space proposed by Fung (2006). In this space participation processes can be analysed according to three dimensions: participant selection methods, modes of communication and decision-making, and extent of authority and power. Fung sees these as the most important dimensions along which forms of participation vary. Most of the analytical foci covered by other studies on public participation can indeed be attributed to Fung's three dimensions, albeit implicitly. Participant selection deals with the question of who participates and covers matters of inclusion and representation. Modes of communication and decision-making specifies how participants exchange information and make decisions, and includes the level of intensity and the kind of engagement. Furthermore the extent of authority and power describes the link between discussions and policy or public action, and in doing so deals with the level of influence of participants, their impact on the decision, and the role that the government -or other authorities- play in the process. In this regard, Fung's institutional design space is a more useful and parsimonious tool than the trade-offs by Beierle & Cayford (2002).

2.2.2 Evaluation of public participation

The second stream of research is concerned with the evaluation of participatory processes and outcomes. It is important to know the effects and effectiveness of different public participation models, because ineffective methods can have unintentional negative effects (Head, 2007; MacArthur, 2016). However, actual empirical evidence for the positive effects of participation remains thin (Chilvers, 2009). In many cases participation is not even

evaluated or only on an ad hoc basis. It is employed simply in recognition of the need to involve the public, assuming that it is an end in itself, not a means to an end (Rowe & Frewer, 2000; Beierle & Cayford, 2002; Chilvers, 2009).

Measuring the effectiveness of public participation has proven to be difficult for various methodological reasons. It is difficult to measure the impact of public participation on policy effects as there are many variables that can explain these effects, which makes it hard to trace back the influence of different participation models (MacArthur, 2016). Additionally, there is no clear-cut conceptualisation, resulting in a wide variety of practices and theories and a lack of criteria or appropriate benchmarks (Rowe & Frewer, 2000; Head, 2007). There is no agreement among scholars on what can be defined as successful participation and at the same time the purposes of participation are often unclear (Head, 2007).

Effectiveness is thus a relative term: different aspects of the results of a participation process can be evaluated, and what is considered effective depends on the objectives of participation, or what results are being measured. As mentioned earlier, participation can have different objectives or values: for instance involving the public for the sake of democracy and equality, or because including the public opinion in the process of policy-making makes policy that is better accommodated to the public's needs and thus easier to implement (Jellema & Mulder, 2016). The former would be effective in terms of democratic legitimacy, while the latter would be effective in terms of public support and implementation. Furthermore, involving the public in governance for sustainable development can have different kinds of results, e.g. policy improvement, environmental impact or social impact. In this sense, effectiveness thus also depends on what kind of results are being measured. Chilvers (2009) for example differentiates between outputs- the immediate substantive products such as reports and policy recommendations- and outcomes, the emergent impacts such as improvements in environmental quality or behaviour change.

At the same time, not only the results of the participation process can be evaluated in terms of effectiveness, but also the process of participation. Due to the above mentioned complexities, most evaluative research is focused on the process of participating more than the results (Chilvers, 2009; Rowe & Frewer, 2000). This emphasis on procedural evaluation suggests that better participatory processes lead to better results, but there is no empirical evidence that this is the case (Chilvers, 2009). Rowe and Frewer (2000) argue that evaluation of both process and results are needed, and neither one has preference over the other. They divide evaluation criteria into two categories: acceptance criteria -relating to the potential public acceptance of a participation model- and process criteria -relating to the effective construction and implementation of a participation process. Although Rowe and Frewer argue that both process and results are to be taken into evaluation, their criteria only partly cover participation results -i.e. the social impact in terms of potential public acceptance. Another study that focuses on results is the study by Beierle and Cayford (2002). Next to the participation context and process, they also evaluate the results of participatory designs in terms of output, improved relationships and capacity building. In doing so they include both output and outcomes in their evaluation. However, their study focuses on social value only, and thereby ignores other impacts, such as environmental impact or political impact.

Thus, it becomes clear that the complexity of conceptualizing participation effectiveness hinders a straightforward evaluation framework and that effectiveness of the participation method is not just dependent on the type of process but also on the objectives and the results that are being measured. Some authors (e.g. Beierle & Cayford, 2002)

provide criteria for evaluation, but these often only evaluate a certain aspect of effectiveness, such as the social impact. This suggests that the participatory design should be fit-for-purpose, and that the evaluation should take into account the process and the objectives of participation, as well as the different kinds of results, such as public acceptance, policy output or environmental impact.

2.2.3 Public participation and critical studies

The complexities discussed in the previous section highlight the need to move beyond evaluation to the third stream of research: critical studies of the construction, performance and discourse of participation (Chilvers, 2009). Critical studies often deal with the 'politics' of participation, reflecting on issues of democratic legitimacy. It is even argued by some scholars that democratic legitimacy lies at the heart of participation, and that process or output effectiveness is just a by-product: engaging the public is the actual goal, and achieving democratic legitimacy equals effective participation (Head, 2007; Hendriks, 2008; MacArthur, 2016). A common concern in the critical literature however is that public participation might be maintaining or even reinforcing the same democratic issues of more managerial or top-down forms of governing it ought to overcome (Chilvers, 2009).

Two concepts often discussed in relation to this are inclusion and representation. Hendriks (2008, p. 1013), focusing on policy networks for participation, suggests three criteria for inclusion: methods should be "open and accessible to functional and descriptive representatives from potentially affected publics; enable participants to meaningfully engage and influence decisions; and minimize external and internal forms of exclusion. In other words, to be democratically legitimate, participatory methods should be representative of the public and open and accessible to all. In practice, this does not seem to be the case. Chilvers and Longhurst (2016) analyse different participation models and find that all models of participation, although attempting to be inclusive, were subject to significant exclusions. Similar issues of inclusion and representation are found in various other studies, such as those of Beierle and Cayford (2002), Chilvers (2009), Geczi (2007) and Hendriks (2008).

Power is another theme that has been the subject of much criticism within public participation studies. Many scholars have followed Arnstein (1969) in arguing that public participation cannot be meaningful as long as there is no substantial power sharing. Head (2007) concludes that there is yet little empirical evidence of substantial power sharing in community engagement, and that it is precisely the recognition of inequalities in power relations that is fundamental to understanding the dynamics and limits of different methods. Chilvers (2009) in his extensive review of the literature also describes an increasing number of studies exposing critical issues of representation and power. MacArthur (2016) argues that participatory designs must engage more with broader issues of political economy, also paying attention to a deeper network of powerful actors and interests that run beneath participatory practices. According to Young (2000) our theories of public participation fail to account for the influence of a market ideology and socio-economic inequalities on the democratic process. Structural injustice occurs as a consequence of many individuals and institutions acting in pursuit of their own interests, within given institutional rules and accepted norms (Young, 2006).

And then there are those who argue that not only power, but empowerment is essential. Power sharing is of course an important aspect of empowerment, but it also has to do with building capacity among citizens (Head, 2007; MacArthur, 2016). Power sharing might even be counterproductive when not everyone is empowered to participate, leading to

deepened cynicism regarding governing institutions (Chilvers, 2009; MacArthur, 2016). Capacity building in this regard is crucial, considering that different groups of citizens have different starting points in terms of knowledge, skills and experience (Head, 2007). Engaging the public also requires the need to be attentive to the commitments that are necessary for meaningful participation, and taking seriously the potential constraints on marginalized and disadvantaged populations, such as lack of time off from employment or caregiving responsibilities (MacArthur, 2016). To avoid further erosion of trust, participatory mechanisms not only require fair representation and substantial power redistribution, but also the capacity of ordinary citizens to participate (Head, 2007; MacArthur, 2016). Otherwise they run the risk of being captured by the neoliberal development agenda and creating a new layer of technocracy (Chilvers, 2009).

According to some scholars, these issues reflect the need for more bottom-up, citizen-led processes that are more inclusive and better accommodated to the needs of the public and thus more democratic (Chilvers, 2009). However, some authors question whether the need for effective policy and the need for democratic participation are compatible to begin with. Beierle and Cayford (2002) conclude that more intensive forms of participation appear to be more successful in terms of policy outcomes, but also less democratic: they fail to engage the wider public or distribute the benefits of participation beyond a small group. Fung (2006) mentions that some forms of participation can enhance effectiveness of governance but at the same time may not be suitable to enhance justice: effective participation may require extensive involvement from a small group willing to invest substantially in terms of time and other resources. Hendriks (2008) also considers the limits of inclusive, democratic governance and argues that a certain level of exclusivity is sometimes required for good deliberation. On the other hand, Chilvers (2009) argues that critical studies should resist being overly critical and should move beyond simplistic dichotomies like technocratic/democratic to study participation in a more nuanced and hybrid manner. Participation can be a mix between both or focus more on either, depending on the specific context. In carefully choosing and designing participatory methods, Beierle and Cayford (2002) even argue that the two can create a virtuous circle with one process adding to the effectiveness and integrity of the other.

Returning to Chilvers (2009) and his review of the three streams of participation research, the author concluded that there is a need for more research into the evaluation of participation methods and critical studies of public participation. Since then there have indeed been many such studies, and this present study can be attributed to the third stream of critical studies, as it focuses on democratic legitimacy. My literature review further builds on the notion that participatory processes often face the same problems as more top-down forms of governance, and that there is a need for the design of more bottom-up participatory processes.

2.2.4 Public participation: top-down or bottom-up

What is remarkable from the literature reviewed is that the majority is from a top-down perspective, even the studies suggesting that participation is too top-down. Most of the times participation is analysed from the perspective of the party who designs or initiates the process -often government actors- and addresses questions such as how to select a more representative public, or how to transfer more power to the public without losing efficacy (e.g. Hendriks, 2008; MacArthur, 2016). One would expect that to increase the democratic

legitimacy of public participation and make it more bottom-up there ought to be more attention for the perspective of the public, to see what stimulates or hinders them to participate, or how they are impacted by participating. Studies that are from a bottom-up perspective can be found in research on environmentalism, focusing on the psycho-social factors that relate to sustainable feelings, attitudes and behaviours -thus also including participation (Hays, 2014; Miller & Buys, 2008).

Within the literature on environmentalism there is a small body of research exploring drivers and barriers of public participation, but it gives a rather unfocused and incoherent image. A variety of studies discusses all kinds of different factors that can stimulate or hinder the public to participate. Based on a broad review of these studies they can be categorized into 4 groups of factors: personal, social, socio-demographic and institutional. Personal factors are individual characteristics that can be attributed to either personal values or capacity. These are described in varying terms in the literature, including: values, norms, beliefs, sense of obligation, feeling of responsibility, capacity, knowledge, experience or ability (e.g. Corner, Markowitz, & Pidgeon, 2014; Hill, 2012; Pradhananga, Davenport & Olson, 2015). Social factors are the features of an individual's social life, such as social relations or community networks. These features are generally conceptualised as social capital (e.g. Daniere, Takahashi & Naranong, 2002; Miao, Heijman, Zhu, Qiao & Lu, 2018; Pelling, 1998). Socio-demographic factors include variables such as age, ethnicity and gender, but also socio-economic features like income or education level (e.g. Ferguson & Lovell, 2015; Miao et al., 2018; Miller & Buys, 2008). Finally, the last group pertains to institutional factors. Examples of institutional factors are the level of trust in the government and governmental institutions or the institutional power position (Macnaghten & Jacobs, 1997; Paloniemi et al., 2015; Pelling, 1998).

Apart from the drivers and barriers of participation, a large part of the perspective of the public remains understudied in research on participation. Given the demand for more bottom-up participation, it is not only important to know what stimulates or prevents the public from participating, but also how they experience participation and what it brings them: what impact does participation have on them as individuals and on their lives in general? With this knowledge, public participation can be better attuned to the needs and wishes of the public, which ultimately enables broader participation and thus greater democratic legitimacy. Therefore, in this study I focus on the influence that participation has on the participant, based on their own experience. Given that there are hardly any references in the literature as to what factors might be influenced by participation, I use the above-mentioned four groups of factors as a guideline.

Because it is not possible within the scope of this research to include all four factors, I focus here on social capital. This factor is most consistently mentioned as a possible catalyst for participation, especially in the context of sustainable development and environmental governance. It enables citizens to address problems together and take collective action by sharing resources and creating an environment of mutual trust and responsibility (Daniere et al., 2002; Miao et al., 2018; Miller & Buys, 2008). Or, as Miller and Buys put it: "in the context of sustainability and sustainable resource management, social capital provides a strong base for community capacity building, engagement and collective action, with researchers believing that communities with strong "stocks" of social capital are more willing and able to initiate, participate in and maintain environmental initiatives". In light of these arguments, social capital can be especially relevant for the development of more bottom-up participation in governance for sustainable development. However, in this study the focus will not be on social capital as a potential catalyst for participation, but as a factor

that is potentially affected by participation. This may clarify whether social capital, in addition to being a factor influencing participation, is also a factor influenced *by* participation, possibly creating a virtuous circle.

2.3 Social capital

As with public participation, the literature on social capital is complex, and it contains a range of definitions of the term (Hays, 2014). The most common definition of social capital is the one used by Putnam (in Onyx & Bullen, 2000, p. 24) that social capital comprises "those features of social organization, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions". These features can be seen as a measure of the likelihood of people in a community participating in activities that will be to their collective benefit (Howat et al., 2001). Despite there being different definitions and conceptualisations of social capital, central elements in most definitions are social networks, social norms, reciprocity, participation and social proactivity (e.g. Onyx & Bullen, 2000; Rydin & Holman, 2004). The variety in definitions has made it difficult to analyse or measure social capital properly (Daniere et al., 2002; Howat et al., 2001; Miller & Buys, 2008).

Exceptions are the models discussed by Hays (2014) or Onyx and Bullen (2000). Hays proposes a model of four types of informal networks within which neighbourhood residents might be embedded: family, friendship, church and neighbourhood networks and a specific set of attitudes towards the neighbourhood. Because this model predominantly focuses on social capital relating to the neighbourhood, it is not a complete measure of social capital. A more comprehensive measure is the 36-item scale developed by Onyx and Bullen. With their research they have empirically tested and validated the theoretical components of social capital, and from the 36 items they were able to distinguish one general social capital factor and eight distinct factors that were related to the general factor: participation in the local community, social agency, feelings of trust and safety, neighbourhood connections, family and friends connections, tolerance of diversity, value of life and work connections. Not all of the aforementioned central elements emerge as a specific factor. Some of them are related to several aspects: social norms are implicit in the aspects of feelings of trust and safety, tolerance of diversity and value of life, and social networks are covered by the aspects that relate to social connections: neighbourhood connections, family and friends connections and work connections. Reciprocity is implicit in items that relate to the general factor of social capital, such as helping a neighbour or getting help from friends.

Another way of conceptualising social capital is to distinguish between different forms of social capital. An often-made distinction is that of networks building links *within* communities or groups and networks building links *between* communities or groups of actors, the former termed bonding social capital and the latter bridging social capital (Rydin & Holman, 2004). As can be seen for example in the model by Hays (2014), bonding capital is the most often used type of social capital, especially in local-level studies. Rydin and Holman (2004, p. 123) argue that the distinction between bonding and bridging social capital is insufficient and propose a third type of bracing social capital, referring to "social capital that is primarily concerned to strengthen links across and between scales and sectors but only operates within a limited set of actors". They describe cross-sectoral, cross-scale horizontal and vertical linkages that go beyond the bonding of any specific group but are more specific than suggested by the rather broad concept of bridging. This is especially useful for describing partnerships or collaborative situations between a small group of actors

from different scales or groups where the development of common norms and values is key -unlike bridging social capital that emphasises the network of linkages and is rarely considered in relation to norms and values, but also more strategic and variably dense than is the case with bonding social capital. While many studies of social capital focus on the 'network' element, Rydin and Holman stress the importance of also including the 'norms' element. In this way, social capital analysis distinguishes itself from network analysis by also addressing how actors behave in relationships of trust (or distrust), the existence of common norms and values, and the exercise of reciprocity between actors. It assesses resources that actors within a network may possess, but also sets them in the context of certain aspects of social relations between those actors.

As mentioned in the previous section, social capital is seen by researchers as a possible catalyst for participation. These findings are however somewhat nuanced by scholars such as Hays (2014) and Miller and Buys (2008) who argue that the relationship between social capital and public participation is much more complex, and that social capital can both predict and restrict participation. This is known as the dark side of social capital: by strengthening existing network patterns it can stimulate positive behaviour or attitudes but also negative ones, and it can work as a mechanism for further inequality. Nevertheless, while there are various studies on the influence of social capital on public participation, there is little knowledge on how participation impacts social capital in return. Therefore this study focuses on how public participation influences the social capital of participants.

2.4 Conceptual model

Following from the above review of the literature, the aim of this study is to gain more insight into how a participant's social capital is influenced by public participation. To take into consideration the various interpretations and perspectives on participation, different types of participation projects or initiatives will be compared. The research question compatible with this aim is:

How do different types of public participation in governance for sustainable development influence the social capital of participants?

To answer this research question, I will analyse the social capital of participants of different types of public participation in governance for sustainable development.

As can be concluded from the literature review there is no clear-cut conceptualisation of social capital that can be used as an analytical tool. Therefore I use a combination of the eight factors by Onyx and Bullen (2000) and the concepts of bonding, bridging and bracing social capital by Rydin and Holman (2004). The eight factors are suitable to provide a more general picture of an individual participants' social capital and its different aspects, such as feelings of trust or neighbourhood connections. With the concepts of bonding, bridging and bracing capital on the other hand it is possible to look at the relational aspects of social capital: how the various connections, networks and relations work, e.g. if they are more oriented within their own community or outside the community. Thus, for this research I will refer to the eight aspects of social capital as individual social capital and the three latter aspects as relational social capital. Furthermore, I will compare different types of participation processes. The objective is not to evaluate these processes on their effectiveness or democratic legitimacy, but to compare them to see if different types of

participation have a different influence on social capital. The institutional design space by Fung (2006) seems like an appropriate analytical tool to make this comparison, because it includes different aspects of participation processes and because it is not based on a normative perception of participation. With this tool the most common analytical foci for assessing the participation process are covered. Below each of the concepts will be further discussed.

2.4.1 Individual social capital

To assess changes in the social capital of participants I will use the eight factors as distinguished by the measuring instrument of Onyx and Bullen (2000): participation in the local community, social agency, feelings of trust and safety, neighbourhood connections, family and friends connections, tolerance of diversity, value of life and work connections. Each of the 36 items on their scale is a question that relates to one of the eight factors. For example, the questions "Have you visited a neighbour in the past week?" and "In the past six months, have you done a favour for a neighbour?" relate to the factor of neighbourhood connections. As the eight factors are the primary components of the general social capital factor and as many items relating to a specific factor are similar, it is unnecessary to include all 36 items in the analysis for this study. By using semi-structured interviews and an interview guide based on the eight factors and the underlying 36 items, the meaning of each factor can be sufficiently identified. The purpose is to assess how these factors may have changed because of the participation process. The eight factors will now be briefly discussed.

Participation in the local community refers to participation in formal community structures or events, such as membership of a local club, volunteer work or attending a local community event. Social agency or proactivity in a social context refers to a sense of personal or collective efficacy or the capacity of an individual to plan and initiate action. Taking action or initiative is central in this factor, and items range from seeking mediation in a community dispute, to picking up rubbish in a public place, to helping someone out when not asked for. Feelings of trust and safety pertains to how an individual feels about his community, neighbourhood or other people, both familiar and unknown. Neighbourhood connections concern the more informal interaction within the local area. Family and friends connections relate to the quality of contact with relatives and acquaintances. Tolerance of diversity refers to how an individual feels about topics such as multiculturalism or people with different lifestyles. Value of life pertains to feelings about an individual's one life and their value to society. Finally, Work connections is a factor that only relates to individuals in paid employment and refers to how they feel about their work relations and community.

2.4.2 Relational social capital

Adding to the eight factors of social capital the typology of different types of social capital by Rydin and Holman (2004) will be used, distinguishing between bonding, bridging and bracing social capital. This typology extends beyond a more individual assessment of the different dimensions of social capital to a more relational perspective, considering how social capital relates to an individual's community or wider environment. *Bonding social capital* refers to social capital that builds or strengthens links within the community, whereas *bridging social capital* builds links towards outside the community, with other communities or groups of actors. *Bracing social capital* is more or less a combination of bonding and bridging social capital, where cross-sectoral, cross-scale, horizontal and vertical links are made between a

limited group of people, such as a partnership or collaboration initiative. This form of social capital is less locally based than bonding social capital, but more focused and specific than bridging social capital, which is usually mainly focused on networks outside the local community, and not on the development of common norms. These concepts can be identified by assessing which parties are involved in the sustainability initiative, how they are related and how these relations have possibly been changed by the participation process.

2.4.3 The participation process

The participation process will be analysed according to the three components of Fung's institutional design space (2006): participant selection; communication and decision-making; and authority and power. These three components give insight to important topics in participation research: the extent of inclusion and representation, the kind of engagement and the level of influence or power. This allows for a valuable comparison of different types of participation. Participant selection assesses the extent of inclusion and representation of an initiative and considers who is eligible to participate, how they become participants and how representative and accountable they are. There are five common selection mechanisms, ranging from most to least inclusive: open and self-selected, selective recruiting, random selection, lay stakeholders and professional stakeholders. When an initiative is open and self-selected, anyone is eligible to participate, and participants are a self-selected subset of the general population. This method is the most inclusive, but not always the most representative as not everyone has equal capacity or motivation to participate. Selective recruiting and random selection are more representative methods. where in the former participants are selected, also from subgroups that are unlikely to engage; and in the latter participants are randomly selected from the general population. Lay stakeholders are unpaid citizens who have a deep interest in some public concern and thus are willing to invest substantial time and energy to represent. They represent those that have similar interests but choose not to participate. Professional stakeholders often are paid representatives of organized interests and public officials. These may not be representative of the wider public opinion and are also not inclusive of the general population.

The dimension of communication and decision-making assesses the kind of engagement of an initiative: how participants communicate and make decisions and the level of intensity of participation. In the institutional space this dimension is represented in six modes of communication and decision-making: listening as a spectator, expressing preferences, developing preferences, aggregating & bargaining, deliberating & negotiating, and deploying technique & expertise. In the first category participants do not put forward their own views at all, but listen as spectators who receive information about some policy or project. In most cases there is at least some possibility for participants to express their preferences by being able to ask questions or say their piece. Then there are processes that allow participants to explore preferences. They encourage participants to learn about issues and sometimes transform their views and opinions by providing them with appropriate information. Participants usually discuss these issues with one another rather than simply listening to experts. With aggregation and bargaining, participants know what they want, and their preferences — often mediated by the influence and power that they bring — are aggregated into a social choice. The exploration and bargaining allows participants to find the best available alternative to advance the joint preferences they have. When participants deliberate and negotiate, they try to figure out what they want individually and as a group. Participants often receive educational background materials and exchange perspectives,

experiences and reasons with one another to develop their views and discover their interests. Finally, many public policies and decisions are determined through the *technical expertise* of officials. This mode usually does not involve citizens, it is the domain of planners, regulators, social workers, teachers and principals, police officers, and others like these.

The third dimension is that of *authority and power* and pertains to the impact of participants in the participation process: what is the level of authority that they have over decisions and what influence do these decisions have over final policy. This influence and authority can be ascribed to four categories, ranging from least to most influence: personal benefits, communicative influence, advice & consultation, co-governance and direct authority. With the category *personal benefits*, the participant has little to no influence and participation merely serves to derive personal benefits of edification or fulfil a sense of civic obligation. When participants have *communicative influence*, they exert influence on the authorities by altering or mobilizing public opinion, indirectly causing public opinion to make certain decisions. With *advice and consultation* officials preserve ultimate decision-making power but commit to receiving input from participants and considering this in their decisions. *Co-governance* is when citizens join in a partnership with the authorities to make plans or take action. And ultimately the highest level of empowerment is *direct authority*, where citizens themselves have the authority over decisions or resources.

Assessing both changes in the participant's social capital and the type of public participation provides the opportunity of comparing the influence of different types of initiatives on the social capital of participants. The conceptual framework is presented schematically in figure 2 below.

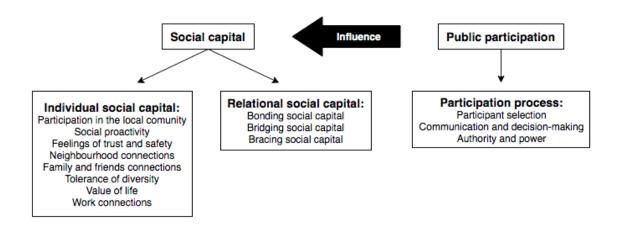


Figure 2: Conceptual model

3. Methods

3.1 Research design

3.1.1 Philosophy and approach

There are several ways and terms to describe the methods of a research project. For example, Saunders, Lewis and Thornhill (2012) describe the approach to the role of theory in research as the research approach, Creswell and Poth (2018) as (beliefs about) research methodology, and Bryman (2012) as the principal orientation to the role of theory. For a beginning researcher, the research onion (Saunders et al., 2012) can offer support in designing the research. In the research onion shown in Figure 3 the different methodological choices in the research process are described. In this research report, the terminology as described in the research onion will be used. Although the terminology among others varies, the essence of the methodological definitions is similar. To start with, it is important to consider the research philosophy and research approach. These are the philosophical assumptions and the approach to theory that underpin the methodological choices concerning the research design. These influence the way in which the research question is formulated and answered. Two major philosophical assumptions relate to ontology and epistemology: beliefs about, respectively, the nature of reality and what is considered accepted knowledge.

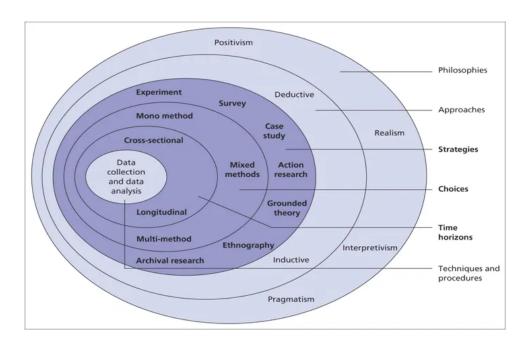


Figure 3: The research onion (Saunders et al., 2012, p. 128)

As can be seen in Figure 4 by Bryman (2012) a distinction can be made between a qualitative and quantitative research design. These designs can be interpreted through their associations with specific philosophical assumptions, research approaches, and different strategies (Bryman, 2012; Saunders et al., 2012). However, these are not inextricably linked, and the distinction between qualitative and quantitative is not fixed. In practice, quantitative

and qualitative elements are often combined, and a design can be chosen that is not necessarily associated with the philosophical perspective used (Bryman, 2012; Saunders et al., 2012). What is most important is that the research question follows logically from the philosophical perspective and that the different elements of the research design form a coherent whole (Saunders et al., 2012).

	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

Figure 4: Fundamental differences between quantitative and qualitative research strategies (Bryman, 2012, p. 36)

For this research a qualitative design was chosen. As can be seen from Figure 4, a qualitative design is generally characterized by an inductive approach and an interpretivist and constructivist philosophical perspective. This study, however, is neither fully inductive nor deductive. A deductive approach is when theory drives the research process and an inductive approach is when theories are the product of research (Bryman, 2012). Deductive research starts with reviewing academic literature and from there designing a strategy to test theory, while inductive research starts by collecting data to generate or build theory from (Saunders et al., 2012). In the case of this research, literature has been reviewed to inform the research strategy, but no hypotheses were formulated to test the theory. Rather, the concepts that were distilled from the literature are used as sensitizing concepts, to be able to explore, reflect on, and expand the existing theory on public participation and social capital. This study is thus deductive in the sense that it is driven by theory -using sensitizing concepts- and inductive in the sense that it does not test the theory but builds on existing theory. This approach is especially helpful with respect to the used concepts, considering the existing literature on the topics of public participation and social capital is broad and abundant, yet incoherent and inconclusive, with no clear-cut conceptualization of either concept. Using sensitizing concepts leaves room for nuances and alternatives to the concepts used without them being fixed through the elaboration of indicators, and they can provide "a general sense of reference and guidance in approaching empirical instances" (Blumer, in Bryman, 2012, p. 388).

Although the research approach is not fully inductive, a qualitative design is most appropriate for this research because of the constructivist and interpretivist philosophy. According to Creswell and Poth (2018) qualitative research is often interpretivist because the intent is to make sense of -or interpret- the meaning others give to the world or because an issue needs to be explored to get a more complex detailed understanding. While quantitative research provides a general picture of trends, associations and relationships, it does not tell about the processes that people experience. Furthermore qualitative research can be used to empower individuals to share their stories and have their voices heard. Besides leaving room for the multiple perspectives and conceptualizations in the field of research regarding public participation and social capital, it is also useful to look at the different ways in which participants perceive the participation process and how it affects their social world. Also

because an important goal of this research is to provide a more bottom-up perspective of public participation, using a qualitative design can empower participants to share their experiences and reflect on how they were affected by participating. This corresponds to the argument made by Saunders et al. (2012) that it is more realistic to treat respondents as humans whose behaviour is a consequence of the way in which they perceive their experiences, rather than as if they were unthinking research objects who respond in a mechanistic way to circumstances.

3.1.2 Strategy

The research philosophy and approach have implications for another aspect of the research design: the research strategy. Several types of strategies are mentioned in the literature. Bryman (2012) mentions five types of research designs: the experimental design, the cross-sectional design, the longitudinal design, the case study design and the comparative design. Creswell and Poth (2018) discuss narrative research, phenomenology, grounded theory, ethnography and case study. Some of these are similar to the ones mentioned by Saunders et al. (2012): experiment, survey, archival research, case study, ethnography, action research, grounded theory and narrative inquiry. Of these strategies, the case study is the best fit for this research: the case study provides an opportunity to study and analyze the complexity or specific nature of a case in its own context. Since the purpose of this research is to study and compare different types of participation processes, I use a comparative case study design.

As discussed in the previous chapter, there is a distinction in the literature between top-down and bottom-up participation. There are calls for more bottom-up participation, but based on the literature review it appears that most attention so far has been focused on top-down participation and theory on bottom-up participation can only partly be found in research on environmentalism (e.g. Chilvers, 2009; Hays, 2014). Thus, because of the relevance of this distinction to this research and to examine both types of participation in practice, it has been used as a selection criterion for the cases: two top-down and two bottom-up participation projects were selected. This form of sampling is called purposive sampling, as the samples are strategically selected because of their relevance to the research question and research objectives (Bryman, 2012).

Initially, the intention was to examine cases in Nijmegen and Delft: a top-down and a bottom-up project in each city. The cities were selected because a unique or experimental participatory programme was implemented there. In Nijmegen, where a lot of attention has been given to bottom-up participation in the context of the European Green Capital year in 2018 (https://www.greencapitalchallenges.nl/), the bottom-up project Mijn Groene Wijk was selected. Within this project, residents are supported in starting and implementing their own sustainable initiative. In Delft, an experimental top-down case was selected. In the framework of a new participation approach called Delfts Doen, the municipality invited citizens and other stakeholders to participate in discussing the flexible development plan (Omgevingsplan) of an experimental project for sustainable innovations -The Green Village (https://thegreenvillage.org/). In addition, in both cities a more common form of participation was selected: in Nijmegen the top-down participation process for the redevelopment of the Kanaalzone-Zuid, and in Delft Stichting Groenkracht: a bottom-up initiative under which several community gardens in Delft were started by neighborhood residents and other societal parties.

However, due to practical reasons, it proved impossible to use The Green Village in Delft as a case study: because of problems with privacy laws, respondents could not be approached. When this became evident, the interviews for the other cases had already been conducted. However, while interviewing for these cases, a different methodological approach proved to be useful and interesting. Literature on different types of participation suggests that participation projects often tend not to be entirely top-down or bottom-up, but are on a continuum (Tonkens & Verhoeven, 2019). During the search for cases, this also became visible in practice: there is a wide variety of types of participation, with most projects not being entirely top-down or bottom-up. The cases that were already selected were top-down or bottom-up in different 'degrees', and in addition a fourth case was selected that was also on a different place on the continuum: the participation processes for two parks in Nijmegen -Daniëlsplein and Maasplein parks- in the framework of Operation Steenbreek. With these four cases, a good impression can be given of different types of top-down and bottom-up participation projects and their influence on social capital: Stichting Groenkracht is a case that is almost completely bottom-up, Mijn Groene Wijk is bottom-up with top-down elements. the participation processes for the Daniëlsplein and Maasplein parks are top-down with bottom-up elements, and the participation process for Kanaalzone-Zuid is a classic, fully top-down case. The cases and their extent of being bottom-up or top-down will be further explained in the next section, and are explained in order of their place on the continuum.

Although originally the intention was to select two cases in Nijmegen and two cases in Delft, eventually three cases in Nijmegen and one case in Delft were thus selected. However, this is still considered methodologically justified, as this research is primarily about public participation and participation policy in the Netherlands. Therefore, the municipality where the participation takes place is less important. Research on participation in the Netherlands shows that in general there is little difference between Dutch municipalities and their participation approach (van den Bongaardt, 2018). In addition, Delft and Nijmegen are comparable cities in terms of sustainability policy, and therefore the policy context is not expected to differ significantly (Telos, 2019).

3.1.3 Case descriptions

Stichting Groenkracht, Delft

Stichting Groenkracht is an initiative set up by residents of Delft to help start, plant and use community gardens in and around Delft. The objective is to connect people and places in Delft and the surrounding area and to make people aware of the possibilities and use of sustainable foods (https://www.groenkracht.nl/). The gardens are designed according to permaculture principles and set up in the neighborhood, with the help of neighborhood residents and other parties, such as elementary schools, permaculture specialists, housing corporations and local entrepreneurs. Stichting Groenkracht is an almost completely bottom-up initiative: it was initiated by local residents and, after the start-up, the gardens are run almost entirely by residents. The municipality is involved, but mainly at the start-up and primarily through financial support and assistance in selecting a location (E. van Tuinen, personal communication, August 28, 2020).

Mijn Groene Wijk, Nijmegen

Mijn Groene Wijk is a project that was realized in the aftermath of the European Green Capital year by consulting agency Lentekracht on behalf of the municipality of Nijmegen. The aim of the project was to give residents of Nijmegen the opportunity to realize their own sustainable initiative, by providing knowledge, experience, network and budget (B. Lamberts, personal communication, November 13, 2020). In this way, Lentekracht functions as an intermediary and is in this sense the link between the residents who implement the initiative and the municipality -and possibly other parties involved such as housing corporations or district managers. The initiatives can be considered bottom-up, because they are set up and implemented by residents, but the project also has top-down elements: the project is actually an initiative of the municipality with Lentekracht as intermediary and the ultimate authority therefore lies with the municipality (B. Lamberts, personal communication, November 13, 2020).

Participation programmes for the Daniëlsplein and Maasplein parks, Nijmegen

The participation processes for the redevelopment of the Daniëlsplein and Maasplein parks took place within the framework of Operation Steenbreek by Stichting Steenbreek, which aims to green the living environment and adapt it to climate change (https://steenbreek.nl/). The goal of the parks' redesign was to transform a paved square into a green park (Derkzen & Otter, 2020). The participation process was set up in the same way for both parks: led by the municipality, with introductory meetings for all residents of the neighborhood and then a resident working group that participated in an ongoing design process under the leadership of a project manager from the municipality (Derkzen & Otter, 2020). The residents' working groups consisted of 5-6 residents for Daniëlsplein park and 8-10 residents for Maasplein park. Because the participation processes were led by the municipality they are top-down. However, because of the design of the processes with the residents' working groups, they are also partly bottom-up.

Participation programme for Kanaalzone-Zuid, Nijmegen

As part of the redevelopment of the Kanaalzone-Zuid area in Nijmegen, a participation programme was implemented at the beginning of the planning process. This process consisted of three steps: collecting opportunities and threats from residents, entrepreneurs and other stakeholders in a first online meeting; presenting and discussing the first ideas in a second physical meeting; and presenting the preliminary development plans in a third online meeting (S. Biesta, personal communication, December 3, 2020). Direct stakeholders such as entrepreneurs and residents were invited to the meetings, and in addition, the invitations to the meetings were also distributed via social media (S. Biesta, personal communication, December 3, 2020). This participation process is a classic top-down form of participation: the initiative and the leadership of the process are entirely in the hands of the municipality, and residents and other stakeholders are invited to inform them and provide an opportunity to express their opinions. It must be noted that the redevelopment of the Kanaalzone-Zuid is not a sustainability project per se, as it is primarily aimed at creating living and working space in the area of Kanaalzone-Zuid. However, part of the redevelopment also involves making the area greener and more sustainable, which nonetheless corresponds to this study's context of governance for sustainable development. Also, as explained earlier, as theory on public participation is not limited to governance for sustainable development, it is still considered methodologically valid.

3.2 Research methods: data collection and data analysis

3.2.1 Data collection

Semi-structured interviews were used as the data collection method for this study. This method fits well with the aim of this study, which is to gain insight into how participants in different participation projects are influenced by the participation, with an emphasis on the participant's perspective. With these types of interviews the focus is on the interviewee's point of view, and insight can be given into what the interviewee sees as relevant and important (Bryman, 2012), or, as Brinkmann and Kvale (in Creswell & Poth, 2018, p. 164) describe it: "attempts to understand the world from the subjects' point of view, to unfold the meaning of their experience, to uncover their lived world". Semi-structured interviews offer the opportunity to 'probe' answers, where you want your interviewees to explain, or build on, their responses, which is important when you want to understand the meanings that participants ascribe to various phenomena (Saunders et al., 2012). Furthermore, semi-structured interviews may provide important background or contextual material that will help in understanding the context of the cases and the relationships between variables.

Eleven respondents were selected based on their participation in one of the four cases. All respondents were participants, and in some cases the respondents were also initiators; for Stichting Groenkracht one respondent was the initiator of the project who was also a participant of one of the community gardens, and the participants of Mijn Groene Wijk were all initiators and participants of their own initiative. The aim was to interview at least three participants for each case, to be able to compare the perspectives of different participants. This was successful for all cases except for the participation programme for Kanaalzone-Zuid in Nijmegen. For this case, privacy laws hindered the search for respondents, and in the end two participants have been interviewed. The interviews were conducted using an interview guide with relevant themes and questions, which can be found in Appendix 1. Due to restrictions related to Covid-19, no face-to-face interviews could take place and all interviews were conducted by telephone or online, via Skype or Zoom. The interviews lasted 30 to 85 minutes, and were all conducted in Dutch. Prior to the interview, each respondent was asked for permission to have the interview recorded and to be used for the study. This allowed all interviews to be transcribed afterwards so that they could be used for analysis. The quotes used in this report have been translated into English by the author. After transcription, the interviews were sent to the respondents for approval.

In addition to the interviews with participants, for two cases, short written interviews were also conducted via email with professionals involved: for the project Mijn Groene Wijk with a project manager from Lentekracht, and for the participation programme for Kanaalzone-Zuid with the project manager from the municipality. These interviews were intended to cross-check data or ask additional questions regarding practical and organisational aspects of the projects. For Stichting Groenkracht, one of the interviewed participants of a community garden was also the director of the foundation, so these aspects could be addressed during the interview. For the participation programmes for the parks Daniëlsplein and Maasplein, no interview with the project manager could be done, so for this case the practical and organisational aspects were cross-checked via other sources, such as websites and other documents. For the other three cases, these aspects were additionally also checked as much as possible with secondary sources. An overview of the respondents for each case and more detailed information regarding the interviews can be found in Appendix 2.

3.2.2 Data analysis

The method of analysis usually depends on whether a research study uses an inductive or deductive approach (Saunders et al., 2012). Different methods of analysis have been designed to specifically fit inductive or deductive approaches. For example, studies with an inductive approach often use the Grounded Theory method with initial, focused and axial

coding, to be able to develop theory from the data. But there is also a generic approach to analysis that is not specifically linked to an inductive or deductive approach (Saunders et al., 2012). As this research is not entirely inductive or deductive, this approach was used for analysis. This approach follows the general principles for analysing qualitative data according to five steps:

- 1. identifying categories or codes that allow to comprehend the data;
- 2. attaching data from disparate sources to appropriate categories or codes to integrate these data:
- 3. developing analytical categories further to identify relationships and patterns;
- 4. developing propositions;
- 5. drawing and verifying conclusions.

The transcribed interviews have been manually coded, using software programme Excel to keep a schematic overview of the coding process. This was done by printing the transcripts, reading each transcript carefully multiple times and ascribing relevant units of data to the appropriate categories. These categories consisted of codes that were either derived from sensitizing concepts that emerged from the theory, or that emerged during analysis of the data. However, due to the multitude of sensitising concepts derived from the literature -as described in section 2.4- the vast majority of data units could ultimately be attributed to one of these categories and thus these categories or codes were eventually leading for the subsequent analysis.² These categories could then be used to identify relationships and patterns, develop propositions and draw conclusions from the data. Propositions have not been made explicit in reporting the results of this report, due to the iterative character of the analysis: in the process of coding and identifying relationships and patterns, propositions were made implicitly and checked during the analysis with the data from different interviews. These relationships and patterns are described in chapter 4 and the interpretations and conclusions that followed from this are discussed in chapter 5.

3.3 Evaluation of research quality

According to Creswell and Poth (2018), it is important that researchers evaluate the quality of their research and they should engage in validation strategies, which include for instance confirming or triangulating data from several sources, having studies reviewed and corrected by participants, and employing other researchers to review procedures. Validity and reliability are important criteria in establishing and assessing the quality of research (Bryman, 2012; Saunders et al., 2012). However, these terms are generally seen as applicable to positivist, quantitative research, and thus they are not compatible with the qualitative design chosen here (Saunders et al., 2012). Alternative criteria have been presented for qualitative research by Lincoln and Guba (in Bryman, 2012, p. 390): credibility, dependability, confirmability and transferability.

Credibility refers to the 'truth' of the findings and the researcher's interpretation of these findings. Credibility can be enhanced by ensuring that research is carried out according to the canons of good practice and by verifying findings with respondents -also referred to as respondent validation. To achieve the former, the methods and preparation of this study are reported extensively so they can be verified by others. Respondent validation is attained by sending the transcripts of the interviews to the respondents for approval. Another way of enhancing credibility is triangulation: using more than one method or source of data. For this study, data was gathered through semi-structured interviews only because the objective is to gain more insight into the participants' perspectives on participation, and

² The code-book that has been used for this study and contains all codes and attached data is too extensive and detailed to include in this research report. It can be consulted with the author's consent at the Radboud University Thesis Repository.

semi-structured interviews are most suitable for this purpose. Therefore, no triangulation took place with regard to the data collection method. However, there is triangulation of sources: for each case, several participants were interviewed in order to be able to compare their perspectives. If possible, findings were also cross-checked by means of short interviews with the professionals involved, and through information from secondary sources, such as websites, policy documents or other literature.

Dependability refers to the consistency of research findings if they would be repeated on other occasions or by a different researcher. It entails keeping complete records of all phases of the research process and making them accessible, so that other researchers are able to replicate it. This is ensured for this study in the form of this research report, in which the research process is described in detail, and also by storing and making accessible all research data. Confirmability refers to the objectivity of the researcher -although an interpretivist approach means that there will always be a certain level of interpretation and subjectivity. Researchers should demonstrate that their findings represent the participants' perspectives and not their own. This also means being aware of one's own values and possible biases. In this study I have done this by staying conscious of the assumptions and preconceptions that I have, and also by describing how different conclusions have been reached and providing examples of quotes to prove that findings have been derived from the data. Finally, transferability is concerned with the question whether research findings can be generalised to other settings or situations. This is a tricky criterion for qualitative research, and especially for case studies, as these are aimed at exploring the contextual uniqueness and significance of the cases at hand. Providing a detailed description of the characteristics of the cases makes it easier for future research to build on the conclusions and interpretations of these specific cases. To ensure transferability for this study, such descriptions are also part of the research report. In addition, by linking the results to existing theory, it is made plausible that they could also apply to other, similar cases.

3.4 Research ethics

In designing a research study, it is important to consider research ethics. According to Saunders et al. (2012, p. 226), ethics refer to "the standards of behaviour that guide your conduct in relation to the rights of those who become the subject of your work, or are affected by it". Bryman (2012) discusses four main areas of ethical principles in social research: avoiding harm to participants, the principle of informed consent, avoiding invasion of privacy and avoiding deception. Avoiding harm to participants implies that there must be no negative consequences for participants and the research experience must not be a negative one. Participants must be treated with respect and their wellbeing and safety must be carefully considered. In addition, the voluntary nature of participation must be respected, meaning that participants cannot be harassed or forced to participate and can withdraw from participation at any time (Bryman, 2012). They also have the right to determine how they will participate, not to answer questions or withdraw any data they have provided (Saunders et al., 2012). The principle of informed consent involves providing participants with sufficient information and assurances regarding their participation to allow them to understand the implications of participation, so they can make an informed decision as to whether or not they want to participate (Saunders et al., 2012). Avoiding invasion of privacy means that the researcher takes measures to protect the privacy or anonymity of respondents and the confidentiality of personal data or findings in all phases of the research process (Bryman, 2012). Avoiding deception means that researchers do not represent their work as something other than what it is (Bryman, 2012), and are conscious of their own integrity and objectivity. This means being open and truthful and promoting accuracy (Saunders et al., 2012).

In the design and execution of this research, conscious thought was given to these ethical principles at every stage. This means that respondents were approached for an

interview in a respectful manner. Before and during the interview, they were clearly informed about the process, about the content and goals of the study and about what would happen with the data from the interview. In addition, the transcribed interviews were sent to the respondents for approval. They were able to review them and, if needed, adjust or add to them. Participants were also asked if they wanted to receive the final report of the study. Their names have been anonymised in the research report and in the data so that they cannot be traced back to the individual respondent. The data is handled in a responsible and confidential manner, and is only shared with Radboud University for the purpose of research verification. Participation in the interview was voluntary and respondents could withdraw at any point in the process. The date and time of the interviews and the method of interviewing online or by telephone- were decided in agreement with the respondent.

4. Results

In this chapter the results of the analysis will be discussed according to three sub questions:

- 1. How can the participation process be categorized in terms of participant selection, communication and decision-making, and authority and power?
- 2. What was the level of social capital prior to participating?
- 3. How was the social capital influenced by the participation process?

For each case, a short introduction to the case will be given, after which the three sub questions will be answered. At the end of this chapter, in section 4.5, an overview of the results for all four cases will be provided and a comparative analysis will be made. On that basis, the results will be interpreted in chapter 5, to be able to answer the research question, draw conclusions and provide recommendations for practice and further research.

4.1 Stichting Groenkracht, Delft

Stichting Groenkracht is an initiative set up by residents of Delft to help start, plant and use community gardens in and around Delft. The gardens are entirely run by neighbourhood residents with only minimal support of the municipality, and therefore out of the four cases it is most bottom-up on the continuum.

4.1.1 Participation process

Participant selection

The community gardens basically consist of three layers of stakeholders or participants. The garden is managed by a garden committee consisting of active participants. This core group is supported by Stichting Groenkracht and a group of professionals associated with the foundation. In addition, there are the local residents who are involved in the garden: they manage their own patch of the garden or make more passive use of the garden - for example, to go for a walk or to meet other local residents. These three layers are also reflected in the selection mechanism of the gardens: there are different types of participants who are involved through different selection mechanisms. In principle the garden is open to anyone who wants to participate and therefore falls into the category open and self-selected. There is, however, a limited number of participants who can participate in the garden (i.e. manage their own piece of garden), which means that there is a waiting list. Neighbourhood residents can sign up and there is an effort to keep the garden accessible to everyone: either through managing their own garden, or through open access to the garden for walks and the like. The garden is managed by lay stakeholders: a core group of active participants. In the bigger gardens, a group of participants form a garden committee that represents the larger group of participants in the garden. Neighbourhood residents can also sign up for this themselves; in some cases - when there are not enough applications - they are asked or selected by Stichting Groenkracht. Stichting Groenkracht was set up by a small group of initiators and is supported by a network of specialists engaged by the initiating group. These are professional stakeholders who advise and guide the start-up and management of the gardens and who support in the contact with other professional parties, such as the municipality or the housing corporation.

Important goals for the garden are inclusion, diversity and support among local residents. Representation is not a goal in itself, the most important thing is that the garden is accessible for everyone who wants to use it, either for gardening or just for strolling around or meeting other local residents. Representation and diversity are not always easy to achieve, there are sometimes frictions between participants with different cultural backgrounds, or participants with a certain cultural background are over-represented. There is a lot of enthusiasm among local residents to participate, but it turns out to be a challenge to actively and permanently connect participants to the garden, especially in more disadvantaged neighborhoods. As the initiatior puts it: "...that is very difficult to organize - because in those neighborhoods, for example, you may have started a garden committee, but within a year one of them is in the hospital with open tuberculosis, another has attempted suicide and has psychological problems, and a third one is not responding at all anymore, and will probably not participate either. All sick and all reasons why it doesn't work. Well, at another garden it's the same thing, similar reasons that people are sick, or can no longer participate" (Respondent 2, August 28, 2020).

Communication and decision-making

In terms of communication, community gardens mainly fall into the category of *deliberation* and negotiation. In the smaller gardens the participants themselves form a working group that manages the garden, and in the larger gardens the garden committee does so. When a garden committee has been formed, one person is appointed by the group (in some cases proposed by Stichting Groenkracht) as chairperson. The group works independently, divides the tasks among itself and makes decisions in deliberation and on the basis of consensus. Participation in the garden or garden committee is therefore quite intensive and time consuming, which makes it difficult to commit participants to the garden for the long-term.

Authority and power

In terms of power and authority, the gardens work on two levels of empowerment: they are partly a co-governing partnership and partly have direct authority. The community gardens are started as a collaboration between participating neighbourhood residents and Stichting Groenkracht, the municipality, housing corporations and sometimes surrounding schools or other societal parties. These parties are mainly involved in the start-up. The municipality and housing corporation support through financing and helping to select a location. A contract for the management of the garden is drawn up with the municipality under certain conditions and rules. One of the conditions is that there is a garden committee that makes decisions for the garden and is the contact person for the municipality. In some cases, Stichting Groenkracht remains the municipality's contact person. After the start-up of the garden and the establishment of the preconditions, the management of the garden is left entirely to the garden committee and they have full authority over decisions and resources. In some cases the garden even opens up possibilities for further cooperation, as one respondent explains: "...soon the sewers will be replaced in the neighborhood, then the garden was approached -.i.e. the volunteers of the garden- that the public space will also be redesigned by the municipality in a limited way, and what could they do in the interest of the garden? So if there is such a project they know where to find us" (Respondent 1, August 27, 2020).

4.1.2 Pre-existing social capital

Individual social capital

Overall, a certain amount of social capital was already present among the respondents. All three respondents were already socially proactive; they took action or took the initiative when they felt it was necessary and they knew how to do it or where to go for help. They had a network on which they could build with good connections, although the type of connections varied: sometimes the emphasis is on neighbourhood connections, sometimes on family or friends, and sometimes more on work connections. For one respondent, the neighborhood connections were not necessarily strong, but instead she used an app that provided the opportunity for reciprocity and the sharing of resources: "...what I do is I have one of those accounts on Peerby. I don't know if you know that: an app where you can borrow stuff from your neighbors. These are often people who are a bit environmentally friendly, left-wing, well-educated. (...) So that sort of system I use, and not so much that I ask my neighbor to help me hang the lamps, but I'm a member of a service exchange club and we organize that, so that's more my choice of how I do things through an app or a network or a system, which is more in line with how I am" (Respondent 2, August 28, 2020). All three respondents also had social norms from which their social engagement stemmed: they had a general sense of trust in society or in people, they were tolerant of diversity and considered their lives to be valuable. The only aspect where there was a difference in existing social capital was participation in the local community: two respondents did not participate in other structures before participating in this initiative. One respondent had been involved in other projects or initiatives before this initiative.

Relational social capital

In terms of relational social capital, there is a clear difference between the respondents. Two of the respondents only had *bonding social capital* prior to their participation, consisting of small, informal social networks that were mainly focused on the neighbourhood and their own circle of family and friends, or sometimes on small-scale organisations such as a student council. The respondent who played a central role in setting up the community gardens and the Stichting Groenkracht also possessed both *bridging social capital* - a broad network of contacts - and *bracing social capital* - specific networks consisting of various parties who worked together under shared norms. This difference in social capital can be explained through the work of this respondent: "As a consultant - and actually I still do that kind of work - I work a lot for municipalities and housing corporations. In resident participation, planning, integral plans, social, physical. (...) I often have such a role. As a kind of intermediary between that living world with all its dynamics, the residents and the hassles on the one hand, and that system world of the corporation or municipalities on the other hand, and I understand both worlds and I make that link and I actually translate on both sides what is going on" (Respondent 2, August 28, 2020).

4.1.3 Influence of the participation process on social capital

Individual social capital

At first sight, the influence of participation on the social capital of the respondents seems limited and variable, but patterns can be found nevertheless. Participation mainly strengthens existing social capital, and in some aspects it also generates new social capital. Especially for the aspects that are related to social norms, the existing capital is

strengthened: working together with fellow residents in a community garden increases mutual *trust* and *tolerance*, and it increases the feeling of contributing something to society and in that sense adds *value to life*. According to one respondent this was very meaningful: "What we saw in the volunteers of the living labs, above all, was fulfillment. So participating in such a project gave meaning to their lives. And that may sound very heavy, but it was also very important for these people, that they are part of a greater whole with which you actually make the city better, or make each other better, and therefore feel better yourself" (Respondent 2, August 28, 2020). New capital is generated in the form of social networks and *neighbourhood connections*: people get to know each other, help each other, and this may lead to *friendships* and a better connection with the neighbourhood.

There is a difference in this regard between the respondent who played a central role in the start up of the foundation and the other two respondents. The first is more professionally involved in the garden, and participation has not so much led to informal contacts in the neighbourhood or friendships, but rather to more professional connections and formal *participation*, and an increase in 'formal' *proactivity* such as lobbying the municipality or starting other initiatives. For the other two respondents, participation in the community garden is more of a hobby, they participate because they want to be socially involved, but also because it contributes to their personal well-being. For them, participation has not led to more *social proactivity* or *participation* in formal structures, or improved *work connections* or professional relationships.

Relational social capital

Participation in the community gardens primarily has a positive effect on the respondents' bonding social capital: the networks and relationships it creates are mostly local and focused on the neighbourhood. Participation mainly contributes to a strong network among participants of the garden, and to a smaller extent also outside of the garden, with other local residents. Furthermore, it brings active local residents into contact with each other. The community gardens are thus primarily focused on the neighbourhood, but the cooperation between participants, Stichting Groenkracht and its network of professionals, the municipality, the housing corporation and other societal parties also creates a different kind of network. This network is characterised by mutual cooperation and trust, and by the strategic approach to shared values of greening, social cohesion and capacity building within the community. This can be categorised as bracing social capital, although it does not so much benefit the participants but rather the professional stakeholders. Participants are hardly involved in these partnerships and there is not much contact between the different gardens either; this mainly runs through Stichting Groenkracht.

4.2 Mijn Groene Wijk, Nijmegen

Mijn Groen Wijk is a project with the aim to give residents of Nijmegen the opportunity to realize their own sustainable initiative, by providing knowledge, experience, network and budget. Citizens run their own initiative, but they are dependent on consulting agency Lentekracht and the municipality for support and financial aid. Thus it can be considered a bottom-up project, but with top-down elements.

4.2.1 Participation process

Participant selection

As with the previous case, the Mijn Groene Wijk project also consists of several layers of participants or stakeholders and thus of several selection mechanisms. All citizens of Nijmegen can submit a sustainable or green initiative, although the project is intended to give the 'unusual suspects' - the citizens who do not have everything they need to start an initiative - a chance to contribute to making the city more sustainable. The three initiatives studied in this research were carried out by *lay stakeholders*: a core group that invested a lot of time in the initiative and represented a broader group of local residents or another target group. *Professional stakeholders* were also involved: the core groups were supported by consultancy agency Lentekracht and their professional network. The project was carried out by Lentekracht on behalf of the municipality.

Because of the inclusive, open-to-all character and intensity of the project, the group of initiators that participated is not necessarily representative. However, all three initiative groups represent a broader target group: in two initiatives the local residents and in the third initiative the Somali community within Nijmegen. The wishes and needs of these target groups were taken into account, and in all three initiatives they were involved in some way and according to the initiators there was a strong support base.

Communication and decision-making

The communication and decision-making practices within the initiatives can be categorised as *deliberation and negotiation*, combined with *technical expertise*. All three initiatives have a core group that functions largely independently with support from Lentekracht where necessary - for example with the budget or involving stakeholders. In some cases, there is also cooperation with the municipality or other expert parties who are sometimes also involved in the decision-making process. In one of the initiatives, the group was even involved in the drafting of a decree by the traffic committee of the municipality. One of the goals of the project Mijn Groene Wijk was to let initiatives function independently as much as possible to keep them embedded in the neighbourhood. The initiative groups themselves were in charge of the implementation of the initiative, divided tasks among the group and made decisions in consultation and on the basis of consensus. In terms of intensity, this is an intensive form of participation that requires a lot of time and commitment from the participants.

Authority and power

The initiatives can best be categorised as a *co-governing partnership*, with the level of impact on decision-making sometimes tending more towards *advice and consultation*, and sometimes towards *direct authority*. The initiatives are carried out in collaboration with Lentekracht and the municipality or other parties, where these parties are mainly involved in setting up and supporting the initiative. The project manager from Lentekracht explains it as follows: "Each initiative was drawn up and implemented by local residents, who thus set to work in their own neighborhoods. Lentekracht only offered support, but never took over the leading role. This was to ensure that it always remained an initiative of the neighborhood and that it also remained embedded in the neighborhood for the future (once we stepped out). In addition, we also saw to it from Lentekracht that all parties/residents who might be affected

in any way by an initiative were informed and/or involved, so that everyone's interests could be taken into consideration" (Respondent 12, November 13, 2020). Although the initiatives had to fit within a certain scope and budget set by the municipality, the participants had a large degree of freedom and authority over the implementation. In one of the initiatives, a traffic decree had to be issued by the municipality. Although the core group was closely involved by the responsible committee and their input was taken into account in the drafting of the decree, they mainly had an advisory function: "The proposals are done by a public servant, and the traffic commission reviews that, and the police look at whether they're able to enforce it, and the fire department looks at whether they can do their job if there's a fire or there's an accident of someone who needs to be picked up by ambulance. (...) Yes, we've had quite an impact on that. We worked well with that man. He listened carefully and we reviewed and commented on his pieces. Anyway, you need someone like that to achieve your goal and we just had an interest in it (...) The municipality, which is in charge of that, we helped again with answering the letters of objection" (Respondent 4, August 27, 2020). But also in this case the group had full authority over the decision-making and resources in the implementation of the initiative.

4.2.2 Pre-existing social capital

Individual social capital

All three respondents already had a stock of individual social capital before the Mijn Groene Wijk project, although there are differences for some of the aspects. All three are socially proactive: they take action when necessary and know how to get help or information. They also share social norms: they have good trust in other people or in the neighbourhood and are tolerant towards others - although two respondents did indicate that they live in a rather homogeneous neighbourhood and therefore had little to do with diversity. All three of them feel that their lives are valuable and that they contribute something to society, partly through their community involvement. The social connections or networks they can rely on are also present, although in different forms. Two respondents mainly had connections in the neighbourhood or their circle of family and friends, and for one respondent, the connections in the neighbourhood mostly were the result of his active involvement in the housing complex. The other respondent is a social worker who is connected to the Somali community in Nijmegen. Because of his key role in this community, he had strong and interlinked connections through his work, in the neighbourhood and with family and friends. In terms of participation in the local community, respondents differed more clearly. One respondent had not participated before and had started this initiative mainly out of sustainable motives. The respondent who was a key figure in the Somali community was very actively involved in that community and through his work as a social worker, but did not participate much in formal structures. The third respondent was closely involved as chairman of the local association concerning his residential complex.

Relational social capital

The respondents' existing relational social capital falls mainly into the category of *bonding social capital*: it is locally oriented and involves connections between existing groups or communities, such as the neighbourhood, family, friends or work. For the respondent who is the chairperson of the local association, his social capital somewhat resembles *bridging social capital*: because of his role as chairperson of the association, he has a network of

other local associations and other active residents. The respondent who was a social worker even had social capital that resembles bridging and bracing capital: he has an extensive network within Nijmegen municipality and he acts as a liaison between the municipality, the Somali community and other social organisations. From this role he collaborates with these parties on specific themes or topics, or on the basis of shared values: "...as a key person. And also if other organizations ask me something, for example, there are activities or there is budget or there are topics, then I will think along with them. So I also worked on projects in radicalization from the municipality. Then we started looking for confidants within the community, who will investigate the community. When mothers and fathers have questions about raising their children. That is project Radicalization that we do preventively. The municipality wanted to have confidents within the community, and wanted to start arranging that. So they asked me and colleagues from Hatert to talk to the community, and then we invited the community to come together and gave them the information so that they could choose their own confidants, and two or three confidants from the community were chosen and they were trained by the municipality. That's the way we usually work" (Respondent 6, September 16, 2020).

4.2.3 Influence of the participation process on social capital

Individual social capital

The influence of participation on the individual social capital of the participants is strongest for the aspects of participation in the local community and social proactivity. One respondent actually participated more in initiatives and activities in the local community. The other respondents did not, but they did indicate that they wanted to do this more often. Despite the fact that all three of them were already socially proactive, the experience, knowledge and network they acquired through participation provided them with increased capacity to start initiatives and take action. The influence on neighbourhood connections and family or friendships was less clear: some connections were strengthened or new friendships or neighbourhood connections were created, but the respondents did not see this as a relevant outcome of participation. Work connections did not apply to two respondents, as they are retired; the third respondent was able to expand his network for the benefit of his work - and vice versa - but participation did not result in strengthened work connections. Finally, for all three respondents, feelings of trust, tolerance for diversity and value of life were already good prior to participation and have not changed much. One respondent did indicate that his tolerance was strengthened by working with different people: "During the information session, we also invited other target groups. Of our community, most are Muslim, but we also invited people who are not Muslim. We also asked: when it comes to food, what do you want to eat? Do you eat with us, or do you have a different preference? So in that way there was definitely tolerance, that two groups that have different beliefs, that they come together, they go and eat together, everybody eats what they want and there is respect. (...) I start looking at things with a different set of eyes. Everyone is a human being, everyone may believe what they want, may do what they want, but respect each other, just treat each other with respect. So that I got more insights. That way you become tolerant, that you accept" (Respondent 6, September 16, 2020).

Relational social capital

For all three respondents, participation led to a strengthening or increase of both bonding and bracing social capital, and to a lesser extent, bridging social capital. *Bonding social*

capital has increased in different ways. The initiatives have strengthened the links between the members of the initiative groups, but have also led to more bonding with the local community. In the case of the chairperson of the local association, for instance, it has led to a collaboration between chairpersons of different local associations and a group of active volunteers within the housing complex; in the case of the key figure within the Somali community it has led to the strengthening of ties within that community, but also with other target groups within the local community. All initiatives were partnerships between Lentekracht, the municipality and other local or social parties. These collaborations were generally based on shared values -ecological and social sustainability- and were constructive and based on mutual trust. These collaborations can be seen as bracing social capital -although it should be noted that in some cases the goals of the participants were actually different from those of the other parties, but they nevertheless conformed in order to achieve their own goals. This is still-and perhaps precisely- a form of bracing social capital because of the strategic cooperation it implies. As one respondent explains: "...and it wasn't so much subsidy that solved the parking problem, which is where it all started, but it was subsidy because we were going to plant a green hedge. It was obviously a subsidy that had to do with greenery, and tiles out, greenery in. Well all right, for the good cause" (Respondent 4, August 27, 2020). In addition, for two respondents the partnership led to an expansion of their network: they acquired or strengthened connections that lead to a general expansion of their network -bridging social capital- or to more strategic forms of cooperation on specific themes such as greening -bracing social capital.

4.3 Participation programmes for the Daniëlsplein and Maasplein parks, Nijmegen

The participation processes for the redevelopment of the Daniëlsplein and Maasplein parks had the objective of transforming paved squares into green parks. Because they were organised by the municipality they are top-down forms of participation, however they are also partly bottom-up due to the residents' working groups that were involved in the designing process.

4.3.1 Participation process

Participant selection

The participation projects for the Daniëlsplein and Maasplein parks consisted of a working group of *lay stakeholders*. Neighbourhood residents or other interested parties could sign up if they were interested in contributing to the redevelopment and greening of the parks and if they were prepared to invest the time to attend a number of meetings. They represented the interests of the neighbourhood and specifically of the people living in the vicinity of the parks. Because everyone who had an interest or was interested could participate, both projects can be called inclusive, but not necessarily representative. In both cases, it was mainly the 'usual suspects' or people with a strong personal interest who took part. In the Daniëlsplein project, different groups of stakeholders - such as local youth - were explicitly approached and involved and the interests of different target groups were taken into account in the decision-making process. According to one respondent, although the group was not necessarily representative, this approach did succeed in creating sufficient support and the plan was well received in the neighbourhood: "...you hope, of course, that more people will come, but well, we had a large enough group to come to a reasonably supported plan, yes, and it's not, of course, it turned out not to be a really controversial project, greening"

(Respondent 11, October 29, 2020). The Maasplein project was less successful in creating support. The respondent who participated in this programme explains that hardly any local residents or stakeholders were involved, and although some participants took the interests of the local residents into account, there was a lot of resistance from the neighbourhood: "other residents, who lived at Maasplein, and who were actually less in favor of changes, they weren't actually there. Look, they didn't opt for a greening perspective either, so it's logical that they weren't in that group at all. So the moment there was an open afternoon on Maasplein, (...) there was a great deal of resistance from the people who live directly on Maasplein" (Respondent 10, October 28, 2020). Also a number of participants dropped out during the project due to miscommunications regarding the objectives and scope of the project: "...because it was thus not immediately clear to them that it would matter to them. So Maasplein, for those who lived on Maasplein, is of direct importance, but other residents want something right outside their front door and to do something there. So if that takes a long time, or isn't discussed, they think, well, I'm just sitting here and then they drop out, and partly also because they don't always come up with something themselves..." (Respondent 10, October 28, 2020).

Communication and decision-making

The projects are fairly intensive forms of participation, and the method of communication and decision-making is a combination of various mechanisms. The parks were designed under the supervision of *technical expertise* and through *deliberation and negotiation* of the working group. The design was proposed by a project manager and a landscape architect, and sometimes other experts were involved - such as local police or community coaches. Participants were able to discuss their wishes and concerns and put issues on the agenda. Based on this input, the design was adapted on the basis of consensus, but within the boundaries of municipal regulations and the available budget. Sometimes, however, it seemed to respondents that the working group mainly served to *develop their preferences*: the design was accommodated to their wishes but at the same time much depended on municipal regulations, budget and the interference of other public servants. This sometimes made it seem as if the participants had more of a signalling function and the municipality mainly wanted to test plans that had already been made.

Authority and power

The level of authority and power of the participants is somewhat ambiguous for these two projects. On the one hand, the projects seem to be *co-governing partnerships* between the working groups and the municipality. The public servants involved seemed to be at the service of the participants and a number of wishes were put on the agenda or actually granted, and if not granted, at least treated seriously and at length. The respondent that participated in the project where many participants dropped out - partly because they felt that they were not being listened to - also considered the final influence on the design to be reasonably large. On the other hand, the project manager and landscape architect defined the parameters of what was possible, and the municipality always had the deciding vote. A considerable number of the plans or ideas were put forward within the municipality and then shot down by other officials. In this light, it sometimes seemed more like *advice and consultation* on a plan that had already been decided on than actual cooperation to develop a plan together. One of the respondents underlined the risk of these situations, where the municipality is very ambitious about citizen participation but does not do enough with the input: "the moment you go to residents here and you start asking all kinds of questions and

it's not fed back or not fed back enough. Then it means that the next time they say, oh, there you have them again. And what happened? Niente. Then the door is not opened again" (Respondent 10, October 28, 2020).

4.3.2 Pre-existing social capital

Individual social capital

The pre-existing social capital of the three respondents is fairly comparable and was already present before the participation process. What is striking is that all three of them already participated in the local community and were socially proactive. They had participated before and in various types of formal structures, such as community councils, community magazines or self-started initiatives. They are proactive and know where to go or who to approach if they want to do something or if they have problems. In general, they have a good feeling of trust and safety and are tolerant, despite the fact that they live in a more disadvantaged and diverse neighbourhood where there are regular conflicts or incidents. All three do not feel much social cohesion in the neighbourhood but do have good connections, with neighbours or other people in the area, but also with family and friends or colleagues. The respondents are socially involved, and this involvement encourages them to participate and makes their lives feel valuable.

Relational social capital

Before this participation process all three respondents were primarily involved within their own local community. Through previous participation and initiatives, they had built up a network of connections and contacts within the neighbourhood and within the municipality. For instance, two of the respondents had served on neighbourhood renovation committees, the other respondent was part of a network of local initiatives aimed at greening. All three have built up links with other active and committed local residents, but also with societal parties within the neighbourhood, such as community coaches or the housing corporation. This social capital can be seen on the one hand as *bonding social capital*, because it strengthens the connections within the local community, but in a certain sense it can also be seen as *bridging social capital* because the respondents have a fairly extensive network with many contacts.

4.3.3 Influence of the participation process on social capital

Individual social capital

Participation in the Daniëlsplein and Maasplein projects seems to have had a similar impact based on the experiences of the participants. Despite the fact that the respondents already participated in the local community and were socially proactive, they still consider these aspects to be positively influenced. All three have been strengthened in their network and social contacts in the neighbourhood: participation contributes to seeking help and taking action together, it enlarges the network and provides insight into which organisations are relevant for different problems. It also strengthened the connection with the neighbourhood and increased mutual connections between active local residents, although these were not always informal or friendly contacts. One respondent did indicate, however, that this type of participation process is too short-term and limited to create a stable network and lasting connections: "then maybe they should be more structured. Just thinking out loud, then maybe you should have an annual project. For instance, I could mention something like

picking up litter in the neighborhoods or something like that, something collective, neighborhood barbecues. This is too one-off for that" (Respondent 9, October 27, 2020). As far as family and friend connections and work connections are concerned, the respondents saw little influence from participation, although one respondent did retain some friendships as a result of the project and the initiatives that followed. All three respondents indicated that the cooperation between participants contributed to an increased sense of trust and safety, although more continuity would have been desirable here as well. For two respondents, the same applies to tolerance: cooperation can increase tolerance. However, one respondent indicated that because of participation he felt less tolerant towards the cultural diversity in the neighbourhood - although this was not only caused by this process, but also by earlier experiences or incidents: "You come into contact with a lot of other people. So different people of faith, immigrants and you name it. So yeah, well it's hard for me to say anything about that. I'm quite attentive to someone who takes advantage of things socially. And then there are all of them, including Dutch people, but also many foreign people, who make you think, God, did you come here for this? If you are committed to all kinds of things, then you can have a very good life here. And I always get annoyed, but that's the same with the Dutch.(...) but that's also because I was often in conflict with the housing association about it, to get things organized. Let's say I've been busy for five, six years" (Respondent 11, October 29, 2020). All three respondents mentioned social involvement as the driving force behind their participation, and they derive satisfaction from this involvement; in this sense, participation gives value to their lives.

Relational social capital

Despite the fact that the respondents already had a good basis of relational social capital, the participation did generate new capital or strengthen existing capital, although some comments should be made. In both cases, the projects did not necessarily strengthen the social binding within the neighbourhood, but they did strengthen the connections between actively involved residents - bonding social capital. For all three respondents, participation also expanded the existing network with all kinds of contacts in the neighbourhood and the municipality, such as local police officers, community coaches or youth workers - in a certain sense bridging social capital. In addition, the projects can be seen as strategic collaborations that have established connections between involved local residents and various parties at other levels, such as the municipality or other initiatives in the community. These connections have been formed on the basis of broadly shared values: liveability and greening of the neighbourhood. Participation has therefore also produced bracing social capital. However, the influence of these participation projects on social capital is weak. For the two respondents from the Daniëlsplein project - which was reasonably successful - it was weak because the influence of the working group was not always experienced as strong enough, and also because the project was not structural enough to have a real impact. For the Maasplein project, which was not considered successful, the generated social capital is even weaker because the negative experiences with the participation project only reinforced the distrust in the municipality and caused a lot of participants to drop out of the project, or as the respondent puts it: "I have actually been reaffirmed in part in the lack of coordination and the lack of really being able to work with residents" (Respondent 10, October 28, 2020). Nevertheless, the respondents indicate that they continue to participate despite the negative experiences, partly out of a sense of civic duty and partly because they believe that participation can have a positive effect if the cooperation with the municipality is good and constructive.

4.4 Participation programme for Kanaalzone-Zuid, Nijmegen

As part of the redevelopment of the Kanaalzone-Zuid area in Nijmegen, a participation programme was implemented at the beginning of the planning process. As the programme was organised and controlled by the municipality and participants primarily invited to be informed and share their opinion, this programme can be considered a typical top-down project.

4.4.1 Participation process

Participant selection

The selection mechanism for the participation process for Kanaalzone-Zuid consists of a combination of three mechanisms: open and self-selected, selective recruitment and professional stakeholders. Anyone who was interested could participate in the project. In addition, local residents were selectively approached and city-wide professional stakeholders were invited. It can therefore be seen as an inclusive process, and -according to the organisation- it was also representative because participating residents were spread across the districts and targeted stakeholders were invited. Because of the design of this research, it is difficult to determine to what extent the project was actually representative, but in any case, the representativeness is debatable. Partly because this type of open-to-all participation projects is often attended by the 'usual suspects' and people with a strong personal interest, and partly because the attendance at the meetings due to the COVID-19 virus was not very high. The two respondents interviewed for this study both participated on behalf of a neighbourhood council. Although they therefore also had a specific interest in participating, they did contribute in some way to representation and support because they represented the interests of neighbourhood residents, as explained by one of the respondents: "It is difficult to speak to many people in these times, of course, but because we also go door-to-door, putting up leaflets or flyers, you speak to people and you also hear things. And the members of the neighbourhood council are spread throughout the entire neighbourhood, so in every quarter of the neighbourhood, as we call it, there is a neighbourhood council member who also speaks to people in his area. And we don't know exactly what's going on, but we do know the broad outlines of what's going on" (Respondent 7, October 22, 2020).

Communication and decision-making

The participation process for the redevelopment of Kanaalzone-Zuid was not an intensive one. The method of communication and decision-making can best be categorised as a mechanism to *develop preferences* of the participants. There were two meetings at which the first plans and ideas were discussed in smaller groups. At a third meeting the preliminary plans were presented. The first and third meeting were physical, the second was digital. Participants could express their wishes, concerns and ideas. This input was then concisely summarised and reported back to the participants. The purpose of the meetings was to gather opportunities, threats and ideas from stakeholders and to inform them about the preliminary plans.

Authority and power

The purpose of the participation programme was to receive advice and consultation from stakeholders and to involve them in the planning process. At the first meeting, participants were informed and input was collected. Preliminary plans were then developed and reviewed with the participants in a second meeting. The input of stakeholders was discussed extensively during the meetings and, according to the project management, the reactions could lead to adjustment of the plans. In practice, it is unclear to the respondents what ultimately happened with the input and what impact it had on the subsequent developments. One respondent expressed his understanding towards this: "I do understand that they can't give back everything of course. And apart from that, you can't embrace all those thoughts. you can't do that either. So yes, I think that was enough for the moment. (...) I'm in politics and then you know that one time you win something and the next time it doesn't happen, so I can deal with it quite easily" (Respondent 8, October 22, 2020). The other respondent saw this more as a disappointment: "Well, I've looked at the reports and I know what the other neighborhood council members have contributed, but there's little of that in the reports. I think that is a pity, a missed opportunity (...) During the physical meeting, they discussed it at length with the moderator and someone from the municipality. But if you look at the follow-up to the virtual meeting, you can't find any of that anymore. I indicated a number of things there as well, ideas on the subject. And there was actually no further discussion of them. It seems as if it is a fixed plan that has to be sold" (Respondent 7, October 22, 2020). In that respect, and with regard to the degree of authority and power of the participants, the programme falls more into the category of personal benefits: participants have little or no expectations of their own influence and participate mainly for personal benefits or a sense of civic obligation.

4.4.2 Pre-existing social capital

Individual social capital

The two respondents had a fairly similar level of pre-existing individual social capital before the project. Both are socially engaged and *participate in formal structures*: one respondent is mainly active in the neighbourhood council in his community, the other has served on neighbourhood councils and boards in several places in Nijmegen and is active in a local political party. They are *socially proactive*, and because of their social involvement they also have the capacity and the network to take action when they feel it is necessary. Both are retired, but have good social *connections*: either in the *neighbourhood*, or with *family or friends*. Social involvement also gives both of them a good sense of *trust and safety*, *tolerance* and *value of life*.

Relational social capital

The pre-existing relational social capital of the two respondents is also quite similar, albeit with slight differences. Both already have *bonding social capital* through their local network, participation and connections. Both also have some form of *bridging* and *bracing social capital*, although the focus is somewhat different. One respondent has an extensive network with many different types of connections within the city, this is a large but unfocused network and therefore qualifies best as bridging social capital. The other respondent has a more specific and strategic network that is primarily aimed at the improvement of the neighbourhood in collaboration with other involved local residents or societal parties: thus mainly bracing social capital.

4.4.3 Influence of the participation process on social capital

Individual social capital

Both respondents did not see any influence of the participation programme on their individual social capital, as it was too brief and limited for that. Both already had considerable social capital through their involvement and participation in other networks and initiatives. Both respondents did see a positive influence of earlier participation in other projects or initiatives on their social capital: it stimulates more *participation*, creates the capacity to be *socially proactive* through a strengthened network and social *connections*, as one respondent explains: "Yes, of course it has an influence, because it makes you more involved with people from and in the neighbourhood. And as such, because you speak to more people, you have more contacts and hear about more things, you see more, you hear more about what is going on in the neighbourhood" (Respondent 7, October 22, 2020). It also contributes to an increased sense of trust and safety, tolerance and value of life.

Relational social capital

Similarly, there was no influence on the relational social capital as a result of this participation process. But again, for both respondents, previous forms of participation or involvement have contributed to *bonding, bridging* and *bracing social capital*: it has strengthened ties within their own community, expanded their network to include connections outside their own community, and has led to strategic cooperation between different types of actors or parties on specific themes. One respondent provides an example of how these different kinds of connections can reinforce one another: "We are now also trying, through the community manager, to get more contact with the community police officer, the boa's, the youth coaches and others who are walking around here. So that you also find out more from their side about what's going on and about the problems. Well, for example, we have made an agreement with DAR to see: how can we tackle the pollution, what can be done about it? (...) by participating in the activities in the neighbourhood, and the activities towards the municipality, and municipal groups. In this way, you can also increase and improve your internal contacts within the neighbourhood. And that is a good process" (Respondent 7, October 22, 2020).

4.5 Comparative analysis

Below a schematic overview of the findings of the four cases can be found for each of the three sub questions. For each case, a '+' indicates the presence of that code: for the participation process (sub question 1) a '+' indicates which elements were applicable; for the existing social capital (sub question 2) it indicates the presence of specific aspects of social capital; and for the influence on social capital (sub question 3) it indicates that there has been a positive influence. Codes that have been referred to by only some of the respondents in the case are indicated with a '(+)'. For sub question 3, a '(+/-)' indicates that respondents indicated both positive and negative influences. Due to the qualitative nature of this research, however, a remark must be made. The tables serve as an aid to clarify the results, but they do not offer the nuance or the contextualisation that emerged from the interviews. They are intended to give an indication of the differences between the cases, but no firm conclusions can be drawn from them -precisely because of the nuances and subtle differences that this research also tries to shed light on. These subtleties and the interpretation of the results will be discussed in the next chapter.

Table 1 shows the findings for sub question 1: How can the participation process be categorized in terms of participant selection, communication and decision-making, and authority and power? As can be seen from the table, the cases are assigned multiple codes for almost all categories. For participant selection, Stichting Groenkracht, Mijn Groene Wijk and Maasplein and Daniëlsplein parks mainly consist of a group of lay stakeholders, with either professional stakeholders or a wider group of self- selected participants involved. For Kanaalzone-Zuid the participants are partly self-selected and partly recruited, and there are also professional stakeholders involved. As to communication and decision-making, the cases of Stichting Groenkracht, Mijn Groene Wijk and Maasplein and Daniëlsplein parks are also similar: they mostly fall within the category of deliberation & negotiation, sometimes with technical expertise of professionals. Kanaalzone-Zuid is mainly designed to develop the participants' preferences. For the code of authority and power, again the aforementioned three cases are similar: they are co-governing partnerships, with Stichting Groenkracht also having direct authority and Maasplein and Daniëlsplein parks leaning towards advice and consultation. Kanaalzone-Zuid is assigned both personal benefits and advice and consultation.

•	Participant selection				nunicationsion		Authority and power				
	Open/self- selected	Open/ selective recruitment	Lay stakeholders	Professional stakeholders	Develop preferences	Deliberate & negotiate	Technical expertise	Personal benefits	Advice & consultation	Co-governin g partnership	Direct authority
Stichting Groenkracht (Delft)	+		+	+		+				+	+
Mijn Groene Wijk (Nijmegen)			+	+		+	+		(+)	+	(+)
Maasplein & Danielsplein parks (Nijmegen)			+		(+)	+	+		+	+	
Kanaalzone-Zuid (Nijmegen)	+	+		+	+			+	+		

Table 1: Schematic overview for sub question 1: How can the participation process be categorized in terms of participant selection, communication and decision-making, and authority and power?

Table 2 shows the findings for subquestion 2: What was the level of social capital prior to participating? For the individual social capital, the image of existing social capital is pretty much the same for all cases: most respondents already had a good level of social capital, with the exception of participation in the local community and work connections - the latter did not apply to a number of respondents because they were retired. As for the relational social capital, most respondents also already had bonding social capital. The bridging and bracing social capital differed much more per respondent, both between cases and within cases.

	Individual social capital							Relational social capital			
	Participation in the local community	Social proactivity	Feelings of trust & safety	Tolerance of diversity	Value of life	Neighbour- hood connections	Family & friends connections	Work connections	Bonding social capital	Bridging social capital	Bracing social capital
Stichting Groenkracht (Delft)	(+)	+	+	+	+	+	+	(+)	+	(+)	(+)
Mijn Groene Wijk (Nijmegen)	(+)	+	+	+	+	+	+	(+)	+	(+)	(+)
Maasplein & Danielsplein parks (Nijmegen)	+	+	+	+	+	+	+		+	+	
Kanaalzone-Zuid (Nijmegen)	+	+	+	+	+	+	+		+	(+)	(+)

Table 2: Schematic overview for sub question 2: What was the level of social capital prior to participating?

Table 3 shows the findings for sub question 3: *How was the social capital influenced by the participation process?* As for the influence of the participation process on the social capital,

there were more differences both between and within cases than in Table 2, the only exception being that none of the respondents saw a significant influence on their work connections -partly because some of them were already retired. The respondents for Kanaalzone-Zuid did not see any influence on their social capital, individual or relational. The respondents for Stichting Groenkracht mostly saw an influence on their social norms (feelings of trust and safety, tolerance of diversity and value of life), social connections (neighbourhood and family and friends), and on bonding social capital. The Mijn Groene Wijk respondents mostly saw an influence on participation in the local community, social proactivity, social connections and bonding and bracing social capital. And finally, the respondents for Maasplein and Daniëlsplein parks mostly saw an influence on participation in the local community, social proactivity and social norms. They also saw an influence on bonding, bridging and bracing social capital, although they didn't consider the influence very strong. In two cases, there was even a negative influence described by a respondent, although the other respondents saw a positive influence.

	Individual social capital						Relational social capital				
	Participation in the local community	Social proactivity	Feelings of trust & safety	Tolerance of diversity	Value of life	Neighbour- hood connections	Family & friends connections	Work connections	Bonding social capital	Bridging social capital	Bracing social capital
Stichting Groenkracht (Delft)	(+)	(+)	+	+	+	+	+		+		(+)
Mijn Groene Wijk (Nijmegen)	+	+		+		+	+		+	(+)	+
Maasplein & Danielsplein parks (Nijmegen)	+	+	+	(+/-)	+	(+)	(+)		+	+	(+/-)
Kanaalzone-Zuid (Nijmegen)											

Table 3: Schematic overview for sub question 3: How was the social capital influenced by the participation process?

5. Discussion

In this chapter, I will discuss and interpret the research findings to be able to answer the research question for this study:

How do different types of public participation in governance for sustainable development influence the social capital of participants?

The findings will be discussed and interpreted by answering the sub questions in section 5.1. After that the findings will be related to the theory discussed in chapters 1 and 2 to reveal similarities and differences in section 5.2. In section 5.3 recommendations will be given for practice, and finally, the limitations of this research and recommendations for future research will be discussed in section 5.4.

5.1 Discussion and interpretation of results

I will discuss the results of my research by answering the sub questions. First, I will discuss the participation processes of the different cases on the basis of the selection mechanism, the manner of communication and decision-making, and the degree of authority and power. Then I discuss the pre-existing social capital of the participants and after that the influence of participation on social capital.

5.1.1 How can the participation process be categorized in terms of participant selection, communication and decision-making, and authority and power?

The different participation processes were selected because they varied in the extent to which they were top-down or bottom-up, and these differences are well reflected in the analysis of the participation process, as can be seen in Table 1 in the previous chapter. The Stichting Groenkracht in Delft is the most bottom-up: the community gardens are inclusive and open-for-all, they are intensive forms of participation and the gardens have a great deal of power over the available resources - although the gardens are not involved in policy making and therefore have no influence on policy. The project Mijn Groene Wijk is also a bottom-up project, but is somewhat more steered by the municipality: the initiatives are supported and guided by Lentekracht on behalf of the municipality. These are also intensive projects, and although the municipality and Lentekracht set the frameworks for the project, the initiators have a rather great deal of freedom and influence in implementing the initiatives. The participation processes for the Daniëlsplein and Maasplein parks are more top-down: these projects are carried out by the municipality, but in the design of the parks there is close cooperation with the participants, and the participation is not as intensive as in the two previously mentioned cases, but still quite intensive. The degree of influence on the policy is somewhat questionable: although the input of the participants is listened to and discussed extensively and included in the design, it sometimes seems as if the participants give advice rather than actually take decisions. The participation process for Kanaalzone-Zuid is completely top-down and clearly differs from the other three cases: it is not a particularly intensive process, and participants have hardly any influence or say in the plans. They can give their opinion or express concerns, and these are discussed extensively, but ultimately it is unclear what happens to the input.

What is striking is that the two bottom-up cases actually consist of two or three layers of participants: a core group of participants and a supporting (professional) party, and sometimes a broader group of participants, as is shown in Table 1. For these cases, the professional stakeholders function as a bridge between the municipality and the participants, and in turn the core group of participants functions as a mouthpiece for a larger group of participants who cannot or do not want to be as intensively involved. In this way, a small group of participants is empowered to carry out a project or initiative largely on their own, and they also represent a larger group of citizens who are not or less involved. However, this does not only apply to the bottom-up cases: in the case of the Daniëlsplein and Maasplein parks the core group of participants also are a group of lay stakeholders that function as a mouthpiece for a larger group of neighbourhood residents.

There appears to be some relationship between these constructions and another aspect that stood out in the analysis of the participation process: the perception of the participation by the participants. In the two bottom-up cases, the participants' experience of successful participation is greater than in the other two cases: they experience the cooperation with the municipality or other parties as positive and there appears to be mutual trust. They also have the feeling that they are taken seriously, that they have a great deal of influence or freedom and that the project and their role in it really matters. This is partly because they are closely and intensively involved in the project and its implementation, and partly because they receive the support they need to carry out the project well. This is also an important goal of the Mijn Groene Wijk project: to ensure that an initiative is embedded in the neighbourhood, so that it continues even when the municipality or Lentekracht steps back. In a certain sense, this has been achieved, although one of the respondents does indicate that more training for participants or local residents is needed, so that an initiative does not stagnate when Lentekracht withdraws or the funding stops.

In the other two cases, the participants' perception of success is less pronounced. In the participation processes for the parks, the participants are for the most part satisfied with the end result, but there are sometimes doubts about the participation itself. Some participants felt they were taken seriously but had doubts about the actual influence they had; it sometimes seemed as if the municipality had already made the plans and the participants did not have much of a say. In the project for the Maasplein park, the cooperation even went very badly: many participants stopped in the process and their trust in the municipality declined significantly as a result. In the participation process for Kanaalzone-Zuid, the participants also have strong doubts about their influence on the final plans: they do not see their own input clearly incorporated and have the feeling that the municipality tried to push through a plan that had already been made.

Relating this to the different layers of participants of the bottom-up cases, it could be argued that creating different layers of participants -for instance a group of lay stakeholders and a supporting professional party- is an important factor for the participants' perception of success. However, this does not explicitly follow from the results, as the cases of the Daniëlsplein and Maasplein parks illustrate: in this case there is a group of stakeholders that is supported by professionals, but the perception of success is not very strong. This is something that could be explored further in future research.

5.1.2 What was the level of social capital prior to participating?

Several points emerge from the analysis of participants' perspectives on their pre-existing social capital. As can be seen in Table 2 in the previous chapter, it becomes clear that all

participants already had a good stock of social capital before participation, and that this stock - in line with the literature discussed- partly stimulated or facilitated participation (Daniere et al., 2002; Miao et al., 2018; Miller & Buys, 2008). There are subtle differences between the participants of the bottom-up cases and those of the top-down cases in the existing social capital, except for the social norms: value of life, feelings of trust and safety and tolerance of diversity. For all participants, these aspects are already good: they generally have a good sense of trust and tolerance and an appreciation of their own lives. These aspects contribute to social engagement, and social engagement - in this case, participation - in turn contributes to these feelings as well.

However, the participants of the bottom-up cases have a more local and informal network: their social capital is more focused on their own neighbourhood and consists more of social connections with neighbours, colleagues or friends and family. They are socially proactive in the sense that they take action or address someone when they feel it is necessary. The participants of the top-down cases also have good social connections, but what is striking about their social capital is that it is more focused on formal or professional networks: they participate more in formal structures and know where to go within the municipality or society if they want to take action or need help. In the bottom-up cases, the emphasis is therefore more on bonding social capital and social connections; in the top-down cases, it is more on bridging and sometimes even bracing social capital, (formal) participation and social proactivity. Within the bottom-up cases, there are a few exceptions of participants who do have a more formal, professional or extensive network: this is related to the work they do (one respondent works as a social worker, for example) or other social positions they hold (one of the respondents is the chairman of the board of a local association, for example), which provides them with an extensive network.

5.1.3 How was the social capital influenced by the participation process?

In terms of the influence of participation on social capital, a similar pattern can be seen as in the existing social capital, although here there are also more differences between the bottom-up cases, as shown in Table 3 in the previous chapter. Because the community gardens are mainly focused on the neighbourhood and have little to do with the municipality, their influence on the social capital is therefore mainly on bonding social capital and the informal social connections within the neighbourhood. An exception to this is the initiator: she already has an extensive network through her work. In addition, she has set up the foundation that supports the community gardens, Stichting Groenkracht. This has also produced more 'formal' social capital, and in addition to bonding also bridging and bracing social capital: she has a more extensive network and also forms strategic partnerships with other parties. The initiatives of the project Mijn Groene Wijk are also strongly focused on the neighbourhood, but because they are carried out in close cooperation with Lentekracht and the municipality, they also yield bridging and bracing social capital in addition to bonding social capital: an expanded network, and strategic cooperation with other social parties. For some respondents, they also contribute to a more formal network and more participation in formal structures.

In the participation programmes for the Daniëlsplein and Maasplein parks, the influence is also mainly on more formal or professional network expansion and participation - although locally oriented and within their own neighbourhood. In this case study, it is easy to see the added value of bracing social capital, not only for the network but also for mutual trust and strategic, constructive cooperation. In these projects, there is little trust and in one

of the cases, distrust has even been reinforced. For these participants, participation led to a more extensive network: both connections with other active neighbours and connections with professional or social parties, but it did not result in a lasting network or structural, valuable cooperation. What was striking was that these respondents indicated that they continued to participate, despite their disappointments or distrust, and that they did so partly out of a sense of social duty, to let their voices be heard and to contribute something to society. This is comparable to the two respondents from the Kanaalzone-Zuid: participation does not necessarily benefit them, but they still do it because of a sense of social duty. According to the respondents, due to the short duration and limited intensity of the participation process it had no impact on their social capital. It did become clear that both respondents already had a lot of social capital through other forms of participation or social involvement.

Bottom-up vs. top-down participation

It therefore seems that bottom-up participation and top-down participation can both have a positive influence on the social capital of participants, but in a different way. Bottom-up participation can strongly contribute to informal, local networks of neighbourhood residents and thus increase cohesion within a certain area or neighbourhood. Top-down participation can provide network expansion and more formal connections, and it can stimulate citizens to participate more in formal structures. In this light, participation with regard to social capital primarily seems to be a self-fulfilling prophecy: those who already have more informal forms of social capital are more inclined to engage in bottom-up participation, which further strengthens their informal social capital. Conversely, those with more formal forms of social capital are more inclined to engage in top-down forms of participation, thereby strengthening their formal social capital. This creates a cycle in which participation, both top-down and bottom-up, contributes mainly to strengthening the position of those who already have social capital and widens the gap with those who have less social capital and are not involved in governance for sustainable development.

Nonetheless, the results of this study also show that one form of social capital does not necessarily exclude the other: bottom-up participation can also contribute to network expansion or strategic cooperation -as the case of Mijn Groene Wijk shows- and top-down participation can also ensure social cohesion in a neighbourhood, as -more or less- with the programmes for the Daniëlsplein and Maasplein parks. If designed and implemented right, the participation process can even contribute to different forms of social capital at the same time. It can for instance contribute to informal social connections and social cohesion in the neighbourhood, as well as formal network expansion and strategic partnerships. The Mijn Groene Wijk project is a good example of this, because the initiatives were kept embedded in the neighbourhood, but participants were also supported in the right way and engaged in constructive partnerships with the municipality or other societal parties.

There are a few elements that appear important in this respect: empowerment, meaningful cooperation, and structure or continuity. The neglect of these elements can result in no influence, a weak influence or even a negative influence of participation on social capital. For the participation processes for Daniëlsplein and Maasplein, respondents indicate that these elements would have made the influence of participation on social capital stronger. Participants did not always feel like they were taken seriously, and sometimes felt as if they were invited in a more symbolic manner instead of having actual influence over the design of the parks. Also, they indicated that the effects of the participation on social capital would have been stronger if participation had been more structural or long-term. Consequently, participation did contribute to network expansion and more formal or informal

social connections, but not to a stronger sense of neighbourhood cohesion, trust or more structural cooperation. Similar points were made by the respondents of the Kanaalzone-Zuid case -although empowerment was not very relevant to this case, due to the format of the participation programme.

In contrast, when these elements are present there can be a positive influence, for instance the case of Stichting Groenkracht is seen as much more successful by the respondents due to these elements. Participants of the community gardens and Stichting Groenkracht as an intermediary are empowered to manage the gardens almost completely autonomous, and the gardens are rather structural and long-term projects. Stichting Groenkracht has become a strategic partner for the municipality and also engages in partnerships with other societal parties. Despite the fact that there is not much cooperation between the participants and the municipality or other parties, the cooperation that does occur is constructive and there is a mutual feeling of trust. The same goes for the Mijn Groene Wijk case: the cooperation or partnerships with other parties are experienced as constructive and establish feelings of trust. Yet, for one of the initiatives of this case, the initiator does mention that more empowerment or continuity is needed to ensure or strengthen the effect of the initiatives.

Thus, from the research findings it becomes clear these three elements can contribute to the success of a participation process, but not all three elements are always necessary. One might argue that in bottom-up participation, empowerment is especially important, and meaningful cooperation is less so: there is not always a need for cooperation with the municipality, what is most important is that participants are able to carry out an initiative. On the other hand, empowerment is less relevant in top-down participation: as the municipality is in charge of the process, it is especially important that participants are listened to and feel like they are being taken seriously. Structure and continuity can be relevant for both forms of participation, depending on the objective of the participation.

5.2 Theoretical reflection

In this section, the results and conclusions of this study will be related to the theory. Because no literature was found on the effects of participation on the participant, and more specifically on their social capital, this study provides new and different insights into these effects. Yet, some of the results are not surprising, given the theory on participation and social capital that does exist. The suggestion of a virtuous circle in which participation and social capital reinforce each other seems logical, based on the literature on inequality in public participation and sustainable development: it confirms the notion of an elite that advances itself by participating, creating a growing gap to those who do not have the means or the capacity to participate (Jhagroe, 2018; Marijnissen, 2018). It is also no surprise that bottom-up and top-down participation tend to lead to different forms of social capital, even though this is not something that is discussed in existing theory.

What is perhaps more striking is the finding that one form of social capital does not necessarily exclude the other, and that both bottom-up and top-down participation can create or strengthen a mix of different forms of social capital - provided certain elements are properly taken into account. A parallel can be made here to the discussion within the existing participation literature on the trade-off between effectiveness and democratic legitimacy: on the one hand, there are those who argue that participation may not be effective and democratic at the same time (Fung, 2006; Hendriks, 2008); on the other hand, there are those who argue that we should move beyond such dichotomies and study participation in a

more hybrid and nuanced manner (Chilvers, 2009). Participation can thus be a mix of both, creating a virtuous circle where one process contributes to the other (Beierle & Cayford, 2002). This logic can be extended to the influence of participation on social capital: top-down or bottom-up participation can contribute in different ways to formal or informal social capital or a mix of the two, depending on the specific context and goals of the participation process. As with the trade-off between effectiveness and democratic legitimacy it may seem as if there is also a trade-off between stimulating informal social capital through bottom-up participation and formal social capital through top-down participation, but this need not be the case. In carefully designing the participation process, top-down and bottom-up elements of participation processes can be combined, and both informal and formal social capital can be realised, creating a virtuous circle where one form contributes to the other.

Two of the elements that emerge from this study as important in this process can also be found in the existing literature. Empowerment is often cited in participation literature as essential: both substantial power sharing and capacity building are necessary for effective and democratic participation (Chilvers, 2009; Head, 2007; MacArthur, 2016). In addition, the importance of meaningful participation is also discussed in the literature: the effect of participation depends to a large extent on the extent to which participants feel taken seriously and cooperate constructively with each other or with the governing party, and ignoring this can actually have serious counterproductive effects (Arnstein, 1969; Beierle & Cayford, 2002; MacArthur, 2016). The third element that emerged from this study is that of structure and continuity: several respondents mentioned that this element contributes significantly to the influence of participation on social capital. This is a new insight, as the element of structure and continuity did not explicitly emerge from the literature review for this study, and so far does not seem to be a significant part of the current theory on participation. This insight is relevant, as it is plausible that structure and continuity are not only important elements when it comes to the influence of participation on social capital, but also to the literature on public participation in general.

Finally, and related to these elements, the results of this study largely confirm what Rydin and Holman (2004) emphasise: the importance of including social norms and social relations in the analysis of social capital, rather than limiting it to a network analysis. This provides the opportunity to study not only the network and social contacts, but to place these in the context of shared norms, trust and reciprocity. This approach has been of great value to this research, as it has provided important insights into how participants have experienced participation and its impact on their social capital. It is this approach that has shed light on the contrast between processes where cooperation was experienced as constructive and mutual trust was good, and processes where these elements were less or not present.

5.3 Recommendations

This study is carried out with the objective of providing lessons and recommendations for practice. One of the most important lessons from this study is that participation can increase existing inequalities with regard to social capital. The positive influence of participation on social capital runs the risk of becoming a self-fulfilling prophecy: those who already possess informal social capital strengthen it through bottom-up participation, and those who possess formal social capital strengthen it through top-down participation in a virtuous circle. Meanwhile, the group that should be involved most urgently remains out of the loop, which only widens the gaps in social capital. Another important lesson, however, is that this process can be overcome. The results of this study lead to a number of recommendations.

Firstly, although it may seem obvious, it is important to break this cycle by carefully considering the selection and design of the participation process. It is not only about choosing a top-down or bottom-up form of participation, but also about how that form can influence social capital. This study shows that three elements play an important role in this process: empowerment, meaningful cooperation and structure and continuity. However, it is not so much necessary that all three elements are present in the participation process, but rather that these elements and the form of participation are attuned to the objectives and context of the participation. For example, a process may not be long-term or structural, but it can still have a strong positive influence on the social capital due to meaningful cooperation. It is important to look at the purpose of the participation: is the purpose to enable participants to carry out an initiative independently, or is the purpose of the participation to collect input from participants, to be able to create more effective policy and more support? In the first case, the emphasis would be on empowerment, whereas in the latter case it is important that there is meaningful cooperation. And of course, a combination of these elements is also possible, as in the case of the Mijn Groene Wijk project: the aim is to empower citizens by providing them with the right support, so that they can carry out an initiative on their own and build up their own networks in the neighbourhood, but at the same time also foster meaningful cooperation with the municipality or other parties. When this happens structurally, it can establish valuable partnerships between citizens, government and other societal parties.

A second recommendation concerns those who remain outside the picture. As has been discussed extensively in the literature review, the main critique on public participation is that it often reinforces the inequalities it was designed to overcome. This research shows that this is also the case for social capital. To counteract growing social inequality, it is essential to actively seek out the unusual suspects and offer them the opportunity to participate and thus increase their social capital. Participation can lead to more social capital, which in turn can lead to more participation or involvement in the sustainable transition. It is important to remember that those who participate do so partly thanks to the social capital they already have, and it is therefore important to strengthen the position of those with limited social capital so that they can also participate and become involved in the sustainable transition.

This relates to the third recommendation. This study also shows that it is not necessarily required for all of 'the public' to be involved in sustainable development policy. There are many possible forms in which those who participate and have sufficient social capital act as intermediaries or representatives for those who cannot or do not want to participate. Such a form can actually be found in some way in all four case studies: for the community gardens in Delft, it is Stichting Groenkracht and, within the gardens, a garden committee; in the Mijn Groene Wijk project, it is Lentekracht that forms the bridge between the municipality and the residents; in the participation processes for Daniëlsplein and Maasplein, it is the residents' working groups that represent the rest of the neighbourhood residents; and in the process for the Kanaalzone-Zuid, the participants were members of a neighbourhood council that represents the rest of the neighbourhood. What is most important here is that the chosen intermediary party actually represents the interests of the target group and has the mandate of that target group. In this way, support can be created and the voices of those who cannot or do not want to participate can also be heard.

5.4 Limitations and suggestions for further research

5.4.1 Research limitations

First of all, a limitation of this study is its scope. For each type of participation process, a case was selected, and per case, 2 or 3 persons were interviewed. Ideally, for each case type, several cases would have been studied for comparison purposes, and also more respondents would have been interviewed, but this was not possible within the scope of the research. To resolve this I have tried to confirm the information from the interviews with other sources as much as possible. Especially for the case of Kanaalzone-Zuid, it was very difficult to find respondents. The two respondents who eventually agreed to take part are both members of a neighbourhood council and, in terms of social capital, are probably not necessarily representative of the average participant, although as members of that neighbourhood council they do represent their neighbourhood and therefore know in broad terms what is going on there. In this sense, they can actually also be seen as an extra layer of lay stakeholders that function as a mouthpiece, although this was rather coincidental: it was not part of the design of the participation process, and it was also not intended when selecting the participants for this study.

Due to the difficulties in finding respondents, three cases in Nijmegen and one case in Delft were ultimately selected. This could be seen as a limitation of this study, but as already discussed in chapter 3, it fortunately did not cause any methodological problems. As a matter of fact, in the end the cases provided a lot of valuable information, and also proved to be very good examples of participation processes that lie at different places on the top-down/bottom-up continuum. So even though the scope of the research was not very large, with the four cases used it was still possible to look at four completely different forms of participation, and in addition also at different types of participants. This diversity has been of great value to this research.

Another limitation of this study is that it was conducted by a somewhat inexperienced researcher. This resulted in the research not always being conducted in the most correct or efficient manner. This was noticeable, for example, when conducting the interviews -particularly in the earlier interviews. Some questions were suggestive and sometimes the respondents were not questioned enough in response to certain answers. This somewhat limits the flow of information and the suggestive questions can influence the respondent in answering the questions. On the other hand, these kinds of irregularities in the execution of the research are inevitable as it is part of a learning process and thus mistakes or inefficiencies are part of that process. Besides, the research was carried out under the supervision of an experienced researcher who could steer where necessary and who could support in solving or clarifying problems that arose. In this way the quality of the research was safeguarded and the study has still provided a lot of valuable information and insights.

5.4.2. Suggestions for further research

With the results of this research, different social institutions - such as Bureau Wijland or the municipality - can benefit in choosing or designing certain participation processes. With this research I also hope to have been able to contribute to the theory on public participation and social capital. The results provide new insights into how participants are influenced by participating, and specifically on how their social capital is influenced. It offers a different perspective, that of the participant, as opposed to the predominantly top-down perspective in the current literature on public participation. Future research can build on this different

perspective and new insights. For example, the three elements of empowerment, meaningful cooperation and structure and continuity provide interesting starting points to explore further what influence these elements have on the participant and the participation process, and if there might be other elements that have not been identified in this research. Future research could also explore how bottom-up and top-down elements can best be combined to realise specific mixes of informal and formal social capital. Also, as mentioned in section 5.1.1, more attention could be given to the role of intermediary parties or lay stakeholders, and how such an extra layer of participants can benefit the participation process and results, and the participants' perception of success.

However, my research on this topic is a bit of a drop in the ocean. Much is still unknown about the relationship between social capital and participation. My research offers more insight into the influence that participation has had on the social capital of participants. There may of course be other aspects besides social capital on which participation has an influence. Future research could identify these aspects further. This is relevant to investigate since the main purpose of participation is to involve citizens, and their perspective on participation is therefore of great importance. Furthermore, this research uses qualitative methods and semi-structured interviews in order to properly explore the different aspects of social capital and to gain a good understanding of the perspective of the participants. These perspectives are of course based on the interpretations and experiences of participants, and are therefore highly subjective. It would be interesting for future research to also use quantitative methods to look more objectively at the effect of participation on participants in order to test the findings of this study, for example through experiments, surveys or observations.

Finally, in line with the literature on this subject (e.g. Jhagroe, 2018), this research also shows that those who participate are often the usual suspects. In this way, participation can actually increase inequality, and instead of the virtuous circle that has been discussed, could in that light also be seen as a vicious cycle. Within the scope of this research, it was unfortunately not possible, but it would be very interesting - and in my opinion essential - to conduct in-depth research into the unusual suspects: the citizens who do not participate and often stay out of the picture. It would be interesting to know why they do not participate and how to encourage or enable them to do so, or at least how to ensure that they are properly represented.

References

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of*

- Planners, 35, 216-224. https://doi.org/10.1080/01944366908977225
- Beierle, T. C., & Cayford, J. (2002). *Democracy in practice: Public participation in environmental decisions.* Washington, DC: RFF Press.
- Bongaardt, T. van den. (2018). *Monitor burgerparticipatie 2018: Een inventarisatie van gemeentelijk beleid en activiteiten op het gebied van burgerparticipatie*. Den Haag, Nederland: ProDemos. Retrieved from: https://www.prodemos.nl/wp-content/uploads/2018/05/ProDemos-Monitor-Burgerparticipatie-2018.pdf
- Bryman, A. (2012). Social research methods. New York, NY: Oxford University Press.
- Chilvers, J. (2009). Deliberative and participatory approaches in environmental geography. In N. Castree, D. Demeritt, D. Liverman, & B. Rhoads (Eds.), *A companion to environmental geography* (pp. 400-418). Chichester, United Kingdom: John Wiley & Sons.
- Chilvers, J., & Longhurst, N. (2016). Participation in transition(s): Reconceiving public engagements in energy transitions as co-produced, emergent and diverse. *Journal of Environmental Policy & Planning, 18,* 585-607. https://doi.org/10.1080/1523908X.2015.1110483
- Corner, A., Markowitz, E., & Pidgeon, N. (2014). Public engagement with climate change: the role of human values. *WIREs Climate Change, 5,* 411-422. https://doi.org/10.1002/wcc.269
- Creswell, J. W., & Poth, C. N. (2018). Qualitative inquiry & research design: Choosing among five approaches. Los Angeles, CA: Sage.
- Daniere, A., Takahashi, L. M., & Naranong, A. (2002). Social capital, networks, and community environments in Bangkok, Thailand. *Growth and Change, 33*, 453-484. https://doi.org/10.1111/1468-2257.00206
- Derkzen, M. L., & Otter, M. (2020). De rol van bewonersparticipatie voor kleine parkjes van hoge kwaliteit: Samenvatting van de resultaten van een verkennende case studie naar relaties tussen participatie, kwaliteit en het gebruik van vijf kleine parkjes in Nijmegen. Retrieved from:

 https://www.wur.nl/en/show/Public-summary-PARTIGAN.htm
- Ferguson, R. S., & Lovell, S. T. (2015). Grassroots engagement with transition to sustainability: Diversity and modes of participation in the international permaculture movement. *Ecology and Society*, *20*(4). http://dx.doi.org/10.5751/ES-08048-200439
- Fung, A. (2006). Varieties of participation in complex governance. *Public Administration Review, 66,* 66-75. https://doi-org.ru.idm.oclc.org/10.1111/j.1540-6210.2006.00667.x
- Geczi, E. (2007). Sustainability and public participation: Toward an inclusive model of democracy. *Administrative Theory & Praxis*, *29*, 375-393. https://doi.org/10.1080/10841806.2007.11029600
- Hays, R. A. (2014). Neighborhood networks, social capital, and political participation: The relationships revisited. *Journal of Urban Affairs*, *37*, 122-143. https://doi.org/10.1111/juaf.12137

- Head, B. W. (2007). Community engagement: Participation on whose terms? *Australian Journal of Political Science*, *42*, 441-454. https://doi.org/10.1080/10361140701513570
- Hendriks, C. M. (2008). On inclusion and network governance: The democratic disconnect of Dutch energy transitions. *Public Administration*, *86*, 1009-1031. https://doi.org/10.1111/j.1467-9299.2008.00738.x
- Hill, R. J. (2012). Civic engagement and environmental literacy. *New Directions for Adult and Continuing Education*, 2012(135), 41-50. https://doi-org.ru.idm.oclc.org/10.1002/ace.20025
- Howat, P., Cross, D., Hall, M., Iredell, H., Stevenson, M., Gibbs, S., . . . Dillon, J. (2001). Community participation in road safety: Barriers and enablers. *Journal of Community Health*, *26*, 257-270. https://doi-org.ru.idm.oclc.org/10.1023/A:1010304511244
- International Association for Public Participation. (n.d.). *IAP2 Spectrum of Public Participation*. Retrieved from https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print .pdf
- Jhagroe, S. (2018, June 4). Duurzaamheid is voorrecht van the happy few. *Sociale Vraagstukken*. Retrieved from https://www.socialevraagstukken.nl
- Jellema, J., & Mulder, H. A. J. (2016). Public engagement in energy research. *Energies*, 9(3), 1-19. https://doi.org/10.3390/en9030125
- Lagunas, D., Lobbrecht, C., & Heilbron, T. (2017). *Inclusieve duurzaamheid: Een verkenning naar duurzaam gedrag bij Nederlanders met en zonder migratieachtergrond.*Amsterdam, Nederland: Fawaka Nederland. Retrieved from:
 https://www.fawakanederland.nl/wp-content/uploads/2017/10/Fawaka-Nederland-Inclusieve-Duurzaamheid.pdf
- MacArthur, J. L. (2016). Challenging public engagement: Participation, deliberation and power in renewable energy policy. *Journal of Environmental Studies and Sciences*, *6*, 631-640. https://doi.org/10.1007/s13412-015-0328-7
- Macnaghten, P., & Jacobs, M. (1997). Public identification with sustainable development: Investigating cultural barriers to participation. *Global Environmental Change*, *7*, 5-24. https://doi.org/10.1016/S0959-3780(96)00023-4
- Marijnissen, H. (2018, September 7). Een groene toekomst is er alleen voor de rijken: de eco-elite. *Trouw.* Retrieved from https://www.trouw.nl
- Miao, S., Heijman, W., Zhu, X., Qiao, D., & Lu, Q. (2018). Income groups, social capital, and collective action on small-scale irrigation facilities: A multigroup analysis based on a structural equation model. *Rural Sociology, 83,* 882-911. https://doi.org/10.1111/ruso.12214
- Miller, E., & Buys, L. (2008). The role of social capital in predicting and promoting feelings of responsibility for local environmental issues in an Australian community. *Australasian Journal of Environmental Management*, 15, 231-240. https://doi-org.ru.idm.oclc.org/10.1080/14486563.2008.9725207
- Murphy, K. (2012). The social pillar of sustainable development: A literature review and framework for policy analysis. *Sustainability: Science, Practice and Policy, 8*(1), 15-29. https://doi.org/10.1080/15487733.2012.11908081
- Onyx, J., & Bullen, P. (2000). Measuring social capital in five communities. *The Journal of Applied Behavioral Science*, *36*, 23-42. https://doi-org.ru.idm.oclc.org/10.1177/0021886300361002

- Paloniemi, R., Apostolopoulou, E., Cent, J., Bormpoudakis, D., Scott, A., Grodzinska-Jurczak, M., . . . Pantis, J. D. (2015). Public participation and environmental justice in biodiversity governance in Finland, Greece, Poland and the UK. *Environmental Policy and Governance*, *25*, 330-342. https://doi.org/10.1002/eet.1672
- Pelling, M. (1998). Participation, social capital and vulnerability to urban flooding in Guyana. *Journal of International Development, 10,* 469-486.

 https://doi-org.ru.idm.oclc.org/10.1002/(SICI)1099-1328(199806)10:4<469::AID-JID5 39>3.0.CO;2-4
- Pradhananga, A. K., Davenport, M., & Olson, B. (2015). Landowner motivations for civic engagement in water resource protection. *Journal of the American Water Resources Association*, *51*, 1600-1612. https://doi-org.ru.idm.oclc.org/10.1111/1752-1688.12346
- Rowe, G., & Frewer, L. J. (2000). Public participation methods: A framework for evaluation. *Science, Technology & Human Values, 25,* 3-29. https://doi.org/10.1177/016224390002500101
- Rydin, Y., & Holman, N. (2004). Re-evaluating the contribution of social capital in achieving sustainable development. *The International Journal of Justice and Sustainability, 9,* 117-133. https://doi.org/10.1080/1354983042000199561
- Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research methods for business students*. Harlow, United Kingdom: Pearson.
- Telos. (2019). *Nationale monitor duurzame gemeenten 2019: Duurzaamheidstrends van 355 Nederlandse gemeenten tussen 2014 en 2019.* Tilburg, Nederland: Telos. Retrieved from: https://www.telos.nl/Publicaties/PublicatiesRapporten/default.aspx
- Tonkens, E., & Verhoeven, I. (2019). The civic support paradox: Fighting unequal participation in deprived neighbourhoods. *Urban Studies*, *56*, 1595-1610. https://doi.org/10.1177/0042098018761536
- World Commission on Environment and Development. (1987). *Our common future*. Oxford, United Kingdom: Oxford University Press.
- Young, I. M. (2000). Inclusion and democracy. New York, NY: Oxford University Press.
- Young, I. M. (2006). Responsibility and global justice: A social connection model. *Social Philosophy and Policy*, *23*(1), 102-130. https://doi.org/10.1017/S0265052506060043

Appendix 1: Interview guide

Concept	Example questions
Participant selection	Who is eligible to participate?
	How are participants selected or admitted?
	Are participants representative of the relevant target group(s)?
	Whose interests are represented and whose are not?
Communication & decision-making	How is the participation process organised?
	How are decisions made?
	What is the role of participants?
	What is required of participants to be able to participate?
Authority & power	What influence or authority do participants have on decisions?
	What influence or authority do participants have on policy?
	What influence or authority do participants have on implementation?
	How are decisions incorporated into policy?
	Who has the final say?
Influence of participation	How has participating influenced the participant (generally and socially)?
(general)	What has the participant gained from participating?
	Is the general influence of participating positive or negative?
Individual social capital	How does the participant participate in the local community?
and influence of participation	(How) has this been influenced by participation?
	How proactive is the participant in the social sphere?
	(How) has this been influenced by participation?
	Does the participant feel safe? Does he/she trust others?
	(How) has this been influenced by participation?
	How are the social connections within the local community?
	(How) has this been influenced by participation?
	How are the social connections with the participants friends and family?
	(How) has this been influenced by participation?
	How tolerant is the participant towards diversity?
	(How) has this been influenced by participation?
	Does the participant feel that his/her life is of value?
	(How) has this been influenced by participation?
	How are the social connections with co-workers (if applicable)?
	(How) has this been influenced by participation?
	Which of the above aspects is most relevant in terms of influence?
Relational social capital	What other persons or parties were involved in the participation process?
and influence of participation	How are these persons or parties related?
	How have these relations been influenced by participation?

Appendix 2: Interview details

Case	Interviewee	Position	Date	Duration	Medium	Reference in text
Stichting Groenkracht	Respondent 1	Participant	August 27, 2020	52 min.	Telephone	Respondent 1, August 27, 2020
Stichting Groenkracht	Respondent 2	Participant/Initiator	August 28, 2020	82 min.	Skype	Respondent 2, August 28, 2020
Stichting Groenkracht	Respondent 3	Participant	October 19, 2020	47 min.	Skype	Respondent 3, October 19, 2020
Mijn Groene Wijk	Respondent 4	Participant/Initiator	August 27, 2020	55 min.	Telephone	Respondent 4, August 27, 2020
Mijn Groene Wijk	Respondent 5	Participant/Initiator	August 27, 2020	30 min.	Telephone	Respondent 5, August 27, 2020
Mijn Groene Wijk	Respondent 6	Participant/Initiator	September 16, 2020	73 min.	Skype	Respondent 6, September 16, 2020
Kanaalzone-Zuid	Respondent 7	Participant	October 22, 2020	70 min.	Skype	Respondent 7, October 22, 2020
Kanaalzone-Zuid	Respondent 8	Participant	October 22, 2020	60 min.	Telephone	Respondent 8, October 22, 2020
Daniëlsplein	Respondent 9	Participant	October 27, 2020	63 min.	Skype	Respondent 9, October 27, 2020
Maasplein	Respondent 10	Participant	October 28, 2020	70 min.	Skype	Respondent 10, October 28, 2020
Daniëlsplein	Respondent 11	Participant	October 29, 2020	59 min.	Zoom	Respondent 11, October 29, 2020
Mijn Groene Wijk	Respondent 12	Project manager	November 13, 2020	-	E-mail	Respondent 12, November 13, 2020
Kanaalzone-Zuid	Respondent 13	Project manager	December 3, 2020	-	E-mail	Respondent 13, December 3, 2020