CYCLING HIGHWAYS AND RESISTANCE: HOW CITIZEN PARTICIPATION CAN INFLUENCE CITIZENS' RESISTANCE TO CYCLING HIGHWAY PROJECTS

Koen Schreurs

Student number: 6972551
Student email: k.schreurs@students.uu.nl
Internship email: koen.schreurs@rhdhv.com

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University thesis supervisor: Dr. Francesca Pilo', Assistant Professor, Department of Human Geography & Spatial Planning, Faculty of Geosciences

Internship company: Royal HaskoningDHV
Company supervisor: Marianne Zuur, participation expert, Smart Urban Environment

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Preface

It was June 2019 once I completed the bachelor's degree "Ruimtelijke Ontwikkeling-Mobiliteit" at Windesheim University of Applied Sciences. At the time, my graduation research was about the exploration and elaboration of the three bicycle networks from the Bicycle Vision 2040 of the Dutch Cyclists' Union. The reason for these networks were the increasingly busy bicycle paths and the increase in the number of bicycle-like vehicles in the Netherlands. Immediately after graduating, I started the pre-master's program Spatial Planning at the University of Utrecht. Here, I expanded my knowledge in the field of spatial planning and citizens' resistance. At the same time, I started an internship with the Cycling Experts Team at consultancy firm Royal HaskoningDHV, giving me the opportunity to participate in several cycling projects, including some cycling highway projects. It struck me that such projects often encounter resistance, and this phenomenon piqued my interest. When the time came to work on my master's thesis, I decided to choose this phenomenon as my graduation topic.

During the literature research process, I was struck by how little information was available on citizens' resistance to bicycle infrastructure projects, with the exception of the many newspaper articles often depicting people with banners. These banners contained texts resisting the planned cycling highway. So, I asked myself: 'But why?'. My search continued during which I came across a lot of literature on resistance to energy projects, such as wind farms. With a view to making our mobility more sustainable and the expected increase in our cycling mobility and cycling infrastructure, it seemed important to me that more attention should be paid to participation processes in these types of projects. Additionally, more attention needed to be paid to dealing with citizens' resistance to cycling highway projects. I hope my research inspires professionals and theorists to dive further into this topic and will take more time to reflect on participation and citizens' resistance to cycling highway projects, so that we can learn from it and be able to share this knowledge nationally and internationally.

Hereby I would like to thank all participants who were willing to talk to me and who made time for the interviews. I have learned a lot from our conversations and hope to be able to apply and share this knowledge during my further career. In addition, I would like to thank all colleagues at Royal HaskoningDHV for their support, hospitality and assistance during my internship and graduation process. Next, I would like to thank the university for its continued support over the past period, and I would like to thank my thesis supervisors from Royal HaskoningDHV and the University of Utrecht for their support, time, flexibility and feedback. Last but by all means not least, I would like to thank my parents for their unending (mental) support during the difficult times. Especially, I would like to thank my father for reading along and providing feedback during the last stage of writing my thesis.

To describe the whole process of this thesis, I would like to end this preface with an apt quote from Confucius:

"It does not matter how slowly you go as long as you do not stop" – Confucius (Confucius Quotes, n.d.)

Thanks to the endless support I have managed to complete this thesis, which I now proudly present to you, the reader.

Koen Schreurs

Eerbeek, June 23rd 2022

Summary

Since the last decade, cycling highways have been used as a means of combating traffic jams, but in the Netherlands these cycling highway planning projects are often confronted with public resistance (Beijnink, 2021; EenVandaag, 2019; Guit, 2021; Hellegers, 2021; Hilbers et al., 2021; Leeflang, 2021; Polman, 2018; Redactie, 2019; Savenije, 2020; Schilthuizen, 2022). In the coming years, expanding the national cycling highway network will play an increasingly important role to combating traffic jams and improving the accessibility of cities and regions, but also stimulating bicycle use in the Netherlands in general (Ministerie van Algemene Zaken, 2019). A cycling highway is geographically more complex and larger than an average location-based spatial project often running through several provinces, making it unclear who has the interest, who has the lead, and whether the right form of citizen participation is being applied. This research is set up to contribute to a better understanding of citizens' resistance to cycling highway projects, more specifically on how participatory processes change the level of citizens' resistance during the planning process of these cycling highway projects. Therefore, the following research question is formulated:

How does the participatory process during the planning process of a cycling highway change the level of citizens' resistance to the cycling highway project?

The study is set up to qualitatively analyse the views and considerations of planning officials, cycling experts, civil servants, and citizens on resistance to cycling highway projects. This is done by interviewing planning officials, cycling experts, civil servants, and citizens that have experience with citizens' resistance in planning processes. A literature review on infrastructural projects from a planning perspective and citizens' resistance forms the basis for the semi-structured interviews. Questions are asked about their experiences with resistance, citizen participation, power relations, and what can be learned from their experiences in terms of citizens' resistance to cycling highway projects. Based on the theories and concepts described in this thesis, the conceptual framework outlines how levels of participation, and levels of trust and problem-solving influence levels of citizens' resistance to location-based spatial projects. Less is known about which factors cause resistance in cycling highway planning processes and how participatory processes change the level of citizens' resistance during the planning process of these cycling highway projects. Based on multiple criteria, the cycling highway Cuijk – Mook – Nijmegen (known as MaasWaalpad) was chosen as a case study, which had resistance in several places along the trajectory: Resistance in Lierdal (Vereniging Bos en Kuil) and resistance in Cuijk.

Why do citizens resist to cycling highway projects?

Citizens resist to a cycling highway project when confronted with forced acts and when they are not fully informed at the early stages of the planning process. In case of the MaasWaalpad, this led to resistance in the initial phase of the project because the trajectory for the cycling highway had already been determined at the provincial level. At the time, local residents were not fully informed about these plans. Then, resistance was mainly about the choice for the trajectory of the MaasWaalpad and why the other available options were not chosen, which according to some residents were safer.

The analysis and literature study show that citizens want to influence decision-making so that their objections and concerns are addressed as much as possible, shifting the level and focus of resistance during the planning process towards objections to adaptations to nature and the immediate living environment of some residents. The terminology chosen also led to some resistance. By taking these points into account at an early stage, a large part of the resistance can be prevented or remedied at an early stage of the project.

Which level(s) of citizen participation were implemented during the planning process and how did this affect the level of citizens' resistance?

The analysis of the documents and interviews mainly show that a mix of levels of participation was chosen in order to guarantee the most open, transparent, and honest participatory process. This contributed to the fact that the project hardly encountered any resistance at the end of the planning process and got people to think along instead of to resist. The MaasWaalpad participatory process started with seeking advice and providing information. The focus groups were more a combination of mirroring the progress of the project, which can be seen as testing ideas and seeking advice, but also taking decisions. This gave citizens the possibility to advocate and lobby for an alternative set of proposals (Legacy, 2016). The latter is a higher form of participation where, in this case, the focus group even had the power to choose. This also contributed to making citizens part of the MaasWaalpad project and strengthened the bond between the project and citizens involved (CROW, 2014; Schweizer et al., 2016).

In case of the MaasWaalpad, consulting and informing citizens were used to tackle the resistance which the project experienced in the early stages. Higher levels of participation were deployed throughout the remaining part of the planning process, such as giving citizens the opportunity to co-decide (forms of delegated power), for example about the colour of the asphalt at part of the trajectory through Het Lierdal. Combining lower levels with higher levels of participation throughout the planning process of the MaasWaalpad, the participatory process can therefore be seen as a legitimate form of citizen participation.

How did citizens' resistance and citizen participation influence the outcome of the project?

The findings show that resistance and participation have had an influence on the actual realization of the MaasWaalpad. It did not necessarily affect whether the plan was actually realised, but it did influence the design of various parts along the trajectory. The MaasWaalpad runs through several municipalities and provinces. The trajectory was already determined at the early stages of the planning process and was not up for discussion. This caused concerns and resistance on parts of the trajectory at the early stages of the planning process. The resistance that was present at several locations had influence on the planning process, resulting in a well-considered participation process. Parts of the route have been deviated from the national guidelines for a cycling highway due to input from citizens, stakeholders, citizen initiatives, groups, and the mirror group. According to the participants, the result is a cycling highway that deviates from the national guidelines but is integrated into the landscape and meets the wishes of several residents, who have discussed their objections and concerns during the planning process.

How does the participatory process during the planning process of a cycling highway change the level of citizens' resistance to the cycling highway project?

By properly implementing a fair participation process at the beginning of the planning process, citizen resistance is reduced. As a result, citizens become part of the planning process, in which it is important that citizens have the feeling that they actually have influence and can participate in decision-making in

the project. This ensures a good participation process with ultimately a project result that everyone can agree with and accept. The case study shows that combining multiple participatory tools result in real forms of participation and lower levels of citizens' resistance to the cycling highway project towards the end of the planning process. Here it is important to notice that the process of giving citizens the space to express their objections and concerns should be part of the early stages of the participatory process. In case of the MaasWaalpad, participation resulted in several design features deviating from the original design and national design guidelines. Therefore, almost all participants look back with satisfaction on the collaboration, participation and the end result.

Key concepts

Cycling highway, resistance, split ladder of participation, NIMBY, citizen participation

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fietspad

1 Introduction

Infrastructure can improve the human living environment in several ways. Infrastructure supports the expansion of living space and promotes the share of resources around the world. Similarly, infrastructure can be used to optimize the living environment (Feng jun, 2001). New bicycle infrastructure can increase the comfort of cyclists, grow the (commuter) bicycle mode share and reduce bicycle-vehicle crashes, making successful cycling infrastructure implementation a key component to safer and more comfortable cycling environments (Robartes, et al., 2021). However, new infrastructure means not only a physical intervention on the environment, but can have additional consequences, such as noise pollution or nuisance caused by pollution from, for example, harmful emissions and wear and tear of vehicles (Bohemen & Janssen van de Laak, 2003), although this is less the case for bicycles.

Since the last decade, cycling highways have been used as a means of combating traffic jams, but in the Netherlands these cycling highway planning projects are often confronted with public resistance (Beijnink, 2021; EenVandaag, 2019; Guit, 2021; Hellegers, 2021; Hilbers et al., 2021; Leeflang, 2021; Polman, 2018; Redactie, 2019; Savenije, 2020; Schilthuizen, 2022). In the coming years, expanding the national cycling highway network will play an increasingly important role to combating traffic jams and improving the accessibility of cities and regions, but also stimulating bicycle use in the Netherlands in general (Ministerie van Algemene Zaken, 2019). Therefore, the central government, provinces and municipalities are investing in the construction of more cycling highways (Bakker, 2020; Ministerie van Algemene Zaken, 2019; Tour de Force, 2021). Consequently, it is expected that future cycling highway projects will be confronted with public resistance. This research is set up to contribute to a better understanding of citizens' resistance to cycling highway projects, more specifically on how participatory processes change the level of citizens' resistance during the planning process of these cycling highway projects.

1.1 Cycling highway projects and citizens' resistance

Cycling is considered a healthy way to get around. Pucher and Buehler (2010) examined published research on the effects of cycling on public health. Their findings show that cycling contributes to daily physical activity, cardiovascular health, and aerobic fitness, while cycling also protects against diabetes, obesity, and several other diseases. The authors concluded that the mounting evidence for the health benefits of cycling has led many government agencies, public health organizations and medical journals to advocate for more cycling. More cycling not only improves individual health, but it also reduces air pollution, carbon emissions, congestion, noise and traffic hazards, and other harmful effects of car use. In short, cycling plays an important role in encouraging and sustaining the increase in active mobility, and in achieving our global climate goals (Pucher & Buehler, 2010; TNO Kwaliteit van Leven et al., 2010). In the coming years, municipalities and provinces are continuing to invest in the construction of cycling highways, connecting cities, and increasing the share of commuter traffic by bicycle (Ministerie van Infrastructuur en Waterstaat, 2021; van de Lustgraaf, 2020). Figure 1 shows a map of existing cycling highways, cycling highways under construction, and promising cycling highway routes (Tour de Force, 2021).

Figure 1. Overview of existing and future cycling highways in the Netherlands (Tour de Force, 2021). Green lines are existing cycling highways, orange lines are cycling highway projects being realized, and grey lines are ambitions for new cycling highways or projects in the planning phase.

There is no suitable English term yet for "fietssnelweg", "snelfietsroute", "doorfietsroute" or "snelle fietsroute". Though there are not yet many cycling highways outside the Netherlands, London does have a similar principle. While the design differs, the principles are based on the Netherlands: routes that link communities, businesses, and destinations in one cycle network. Such routes have been given the name Cycleways (Matters, n.d.). Currently, there are multiple terms that could be used, such as "cycle superhighways", "greenways", "high quality cycle paths", "through cycle routes", and "fast cycle routes". Without a clear definition and especially given the variety of languages used to describe the cycling highway concept, Liu et al. (2019) argue that it is difficult to assess the performance of cycling highways as an intervention and to transfer knowledge about successes and failures, especially across countries. It also blinds us to underlying, and contested, assumptions of what cycling is, or ought to be (Liu et al., 2019). And because an English term does not fully correspond to the Dutch description, and there is not yet an

official translation, this research uses the term "cycling highway". However, the term "cycling highway" does not literally mean a highway for cyclists.

The term "cycling highway" defines spacious and comfortable cycling routes that connect urban regions. These routes provide better accessibility to commuting locations and are an important incentive for commuters to choose the bicycle instead of the car. Figure 2 visualises such a cycling highway. The advantages are abundant: fewer car traffic jams and better for nature, the environment, and health (CROW, 2014; Fietsersbond, 2021).

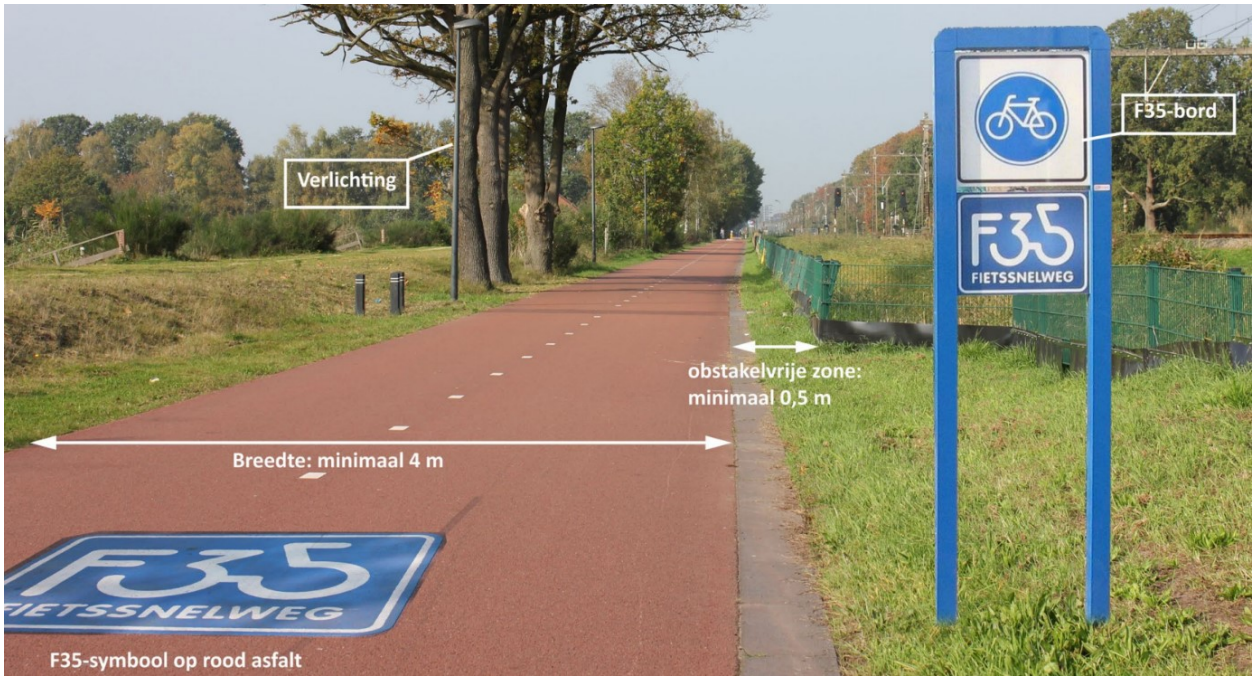

Figure 2. Example of features of cycling highway F35. Cycling highway F35 is a fast, safe, and non-stop bicycle connection of 62 kilometres from Nijverdal to the German border, with side branches from Almelo to Vriezenveen, and from Enschede to Oldenzaal. Photo: W.J. at Morsche.

Although the construction of a cycling highway is less complicated than, for example, the construction of a car connection or a railway line, it is not as simple as it may seem. After all, many parties are involved in the realization of a cycling highway. Think of governments, citizens, interest groups, companies, and so on. Moreover, when planning a new cycling highway, you have to deal with different disciplines. For example, in addition to traffic engineers, urban planners are also interested in the concept (Hendriks, 2013). Due to the high number of stakeholders involved in cycling highway projects, one of the difficulties is reaching a consensus during the planning process on the final design, which can result in resistance (Nicholls & Uitermark, 2016).

A quick online search on resistance to cycling highways shows multiple news items on resistance to the planning and construction of new cycling highways. Often, citizens address their fear for an increase in traffic accidents, substantiating that high cycling speeds are allowed on a cycling highway. After all, they state, this is implicitly implied in the name. Additionally, citizens often report there has never been equality or participation in the planning process (Schilthuizen, 2020). Looking at other news articles, similar messages from citizens can often be found (Beijnink, 2021; EenVandaag, 2019; Guit, 2021; Hellegers, 2021; Hilbers et al., 2021; Leeflang, 2021; Polman, 2018; Redactie, 2019; Savenije, 2020).

Resistance to spatial projects have usually been studied by analysing social acceptance of project results. In their research, Coppens et al. (2018) found that neighbourhoods in close proximity to a new planned highway show higher levels of protest to that specific highway plan. In other words, the authors found that neighbourhoods near the planned trajectory showed higher levels of protest to these plans. Here, social interaction at the neighbourhood level affected how individual grievances are translated into resistance. Symbols, such as window posters, flyers, or street banners, increased the collective effectiveness of the protests. This phenomenon is visible at protests to cycling highways, as for the examples shown in figure 3. Coppens et al. (2018) conclude that if we want to understand neighbourhood protest to spatial projects, NIMBY (Not In My Backyard) arguments are not sufficient, but it is necessary to understand the social fabric of neighbourhoods.

Figure 3. Two examples of resistance to plans for the implementation of cycling highways. Left: resistance in Lonneker to the F35, photo: Annina Romita. Right: resistance to extending F50 in Epe, photo: Freddy Schinkel.

1.2 Motivation

When looking at the geography of the road infrastructure, most highways (A-roads) are managed by Rijkswaterstaat (Ministerie van Infrastructuur en Waterstaat, 2022a). Most motorways (N-roads or provincial roads) are managed by the province through which the road runs. In addition, municipalities are usually the road authorities for the other roads within the municipality. This is more difficult for cycling infrastructure. Usually, a bicycle path is part of the road next to it, such as bicycle lanes or adjacent bicycle paths. The situation is sometimes more difficult for cycling highways. Sometimes the route is designed as a bicycle street, where a municipal road has been redeveloped. Sometimes the route consists of a solitary separate bicycle path. It is not immediately clear who the road manager is, while the function corresponds to that of, for example, a highway: connecting point A to B by means of a direct, comfortable connection.

It is just as complicated when a planned cycling highway project runs through several provinces. The province of Gelderland, for example, has drawn up a special memorandum for bicycle highways, which states that the province has the directing role and largely the subsidy role. Looking at citizen participation and informing citizens, these tasks lie with the municipality (Provincie Gelderland, n.d.a).

A cycling highway is geographically more complex and larger than an average location-based spatial project, such as the redevelopment of a street. In a cycling highway project that runs through several provinces, it is often unclear who has the interest, who has the lead, and whether the right form of citizen participation is being applied. For example, Fung (2015) argues that "… organizations and leaders who possess the resources and authority to create significant participatory governance initiatives can lack motivation to advance social justice through… [citizen participation]" (Fung, 2015, p. 521). Therefore, it can be argued that the challenge for those who do justice through participation is a political challenge rather than an institutional design problem. Political conditions must be created under which powerful

organizations and leaders are motivated to advance social justice. Fung (2015) concludes by arguing that "[o]nly then will those leaders be interested in learning whether and how greater citizen participation can increase justice" (Fung, 2015, p. 521). This makes properly organizing citizen participation in cycling highway projects a challenge.

However, one of the similarities between, for example, highways and cycling highways is that both are location-based infrastructural projects, which directly impact the immediate surrounding area of the planned trajectory. Yet, less is known about which factors cause resistance in cycling highway planning processes and how participatory processes change the level of citizens' resistance during the planning process of these cycling highway projects. In the coming years, the central government, provinces, and municipalities are investing in the construction of more cycling highways (Ministerie van Infrastructuur en Waterstaat, 2021; van de Lustgraaf, 2020). It is expected that future cycling highway projects will also have to deal with citizens who oppose these projects. Striving to contribute to a better understanding of citizens' resistance to cycling highway projects, and to contribute to closing the gap between theories and practice, this research specifically focuses on resistance to cycling highway planning processes.

1.3 Research questions

This research is set up to contribute to a better understanding of citizens' resistance to cycling highway projects, more specifically on how participatory processes change the level of citizens' resistance during the planning process of these cycling highway projects. This knowledge can then be used in participatory projects of future cycling highway planning projects. The following research question is formulated:

How does the participatory process during the planning process of a cycling highway change the level of citizens' resistance to the cycling highway project?

The following sub-questions have been formulated to answer the main question:

1. *Why do citizens resist to cycling highway projects?*
2. *Which level(s) of citizen participation were implemented during the planning process and how did this affect the level of citizens' resistance?*
3. *How did citizens' resistance and citizen participation influence the outcome of the project?*

1.4 Scientific relevance

Much is known about citizen participation, the most famous probably being the Ladder of Citizen Participation by Arnstein (1969). But these steps of the ladder can be misunderstood and misused by spatial planners or the government (Hurlbert & Gupta, 2015), resulting in citizens' resistance. Resistance often occurs in location-based spatial projects, such as wind energy projects, infrastructural projects or when planning cycling highways (Coppens et al., 2018; Hurlbert & Gupta, 2015; Nicholls & Uitermark, 2016; Wolsink, 2000). To describe this simply as a NIMBY-effect might be too narrowminded (Wolsink, 2000). Still largely unknown factors cause citizens to protest to cycling highways. Sometimes, this leads to time consuming and expensive processes to solve this resistance and come up with a solution that suits everyone involved (Fung, 2015; Legacy, 2016; Stapper et al., 2019). It is not fully clear to what extent participatory processes are an effective planning tool to address resistance in spatial projects, such as

cycling highway projects, or at least in which part of the planning process participation can help to prevent resistance to arise (Delgado et al., 2010; Monno & Khakee, 2012). In fact, over the last years, much research is done by scholars on governance, citizen participation and forms of resistance. But how are cycling highway projects' planning processes governed, how does resistance in these planning processes occur and how can planning tools affect forms of resistance in cycling highway projects?

This research aims to fill this gap and develop insights which can help to clarify the connection between participation and resistance in the planning process of cycling highway projects, how citizens' perspective can be better included in these planning processes, and what we can learn from this resistance for future cycling highway projects. The results of this research can be used in ongoing or future planning processes of cycling highway planning projects to better make use of citizen participation and to spend less time on resolving resistance in a later stage of the planning process. Also, the aim is to help spatial planners and governmental institutions to make better use of citizen participation and show that tokenism is not the way to deal with the actors and stakeholders affected by location-based planning.

1.5 Research design

The study is set up to qualitatively analyse the views and considerations of planning officials, cycling experts, civil servants, and citizens on resistance to cycling highway projects. This is done by interviewing planning officials, cycling experts, civil servants, and citizens that have experience with citizens' resistance in planning processes. A literature review on infrastructural projects from a planning perspective and citizens' resistance forms the basis for the semi-structured interviews. Questions are asked about their experiences with resistance, citizen participation, power relations, and what can be learned from their experiences in terms of citizens' resistance to cycling highway projects.

1.6 Reading guide

The literature review in chapter 2 first discusses literature on planning, infrastructure, and citizens' resistance (section 2.1), followed by literature on how to cope with resistance using citizen participation (section 2.2). Chapter 2 closes by introducing the conceptual framework (section 2.3). The literature review is followed by the methodology chapter (chapter 3), in which the methodological approach is described and validated. Chapter 4 introduces the case study of the cycling highway MaasWaalpad. Chapter 5 describes the analysis on why citizens resist, followed by the analysis of the participatory process in chapter 6. Chapter 7 analysis how citizens' resistance and citizen participation influenced the outcome of the planning process. In chapter 8, the methodological approach is put in perspective and the importance of increasing the knowledge on participatory processes of and resistance to cycling highway planning projects is stressed. This thesis closes with the conclusion, in which the sub-questions and main research question are answered. This is done in relation to the literature review and conceptual framework. The conclusion in chapter 9 is followed by recommendations.

Fietsen door het Lierdal

onderdeel Snelfietsroute MaasWaalpad

MaasWaalpad

U bent nu met de Snelfietsroute MaasWaalpad aangekomen in het Lierdal op de grens van Gelderland en Limburg. Het MaasWaalpad is aangelegd om het fietsverkeer tussen Cuijk en Nijmegen te stimuleren. De route start in Nijmegen bij de campus van de Radboud Universiteit, het Radboudumc en de HAN. Hij loopt verder via de bossen van Heumensoord en het Lierdal naar Molenhoek, om vervolgens via de fietsbrug de Maas over te steken naar Cuijk.

Romeinse weg

De snelfietsroute volt gedeeltelijk samen met de Romeinse hoofdweg die Noviomagus (Nijmegen) via een stenen brug over de Maas verbond met Ceuclum (Cuijk). De weg zelf is ook teruggevonden: deze was ses meter breed met greppels aan weerszijden en kasrecht. Vermoedelijk is deze weg al in de eerste eeuw na Christus aangelegd. Het was een drukke verkeersader en één van de vele wegen die naar Rome leidden. In de grond van Heumensoord zijn de contouren van een Romeinse wachtpost gevonden. Dit verdedigingswerk had als doel om de belangrijke doorgaande weg te beveiligen. De post lag precies halverwege Noviomagus en Ceuclum. Bij gevaar werden de soldaten in deze plaatsen met vuursignalen gewaarschuwd.

Grensgebied

Al vanaf het begin van de jaartelling is dit gebied een grensgebied en van strategisch belang. In de Middeleeuwen is hier een dichte grenshaag aangeplant die van de Maas naar de Rijn liep. Delen van deze haag zijn nog in het landschap terug te vinden. De haag markeerde de grens tussen het hertogdom Gelre en het hertogdom Kleef. Ook vandaag de dag is dit nog de grens tussen de provincies Gelderland en Limburg, en tussen de gemeenten Heumen en Mook en Middelaar.

Kampenlandschap

Het Lierdal had van oudsher een kleinschalige verkaveling met hagen, houtwallen, struweel en bosjes. Dit wordt een kampenlandschap genoemd. Het is een speels en afwisselend gebied met zowel vergezichten als besloten gebieden. Iets verderop ligt 'de Kuil', het resultaat van een zandafgraving. Voorheen lag daar een fruitgaard. Deze fruitgaard kwam op 24 april 1956 in eigendom van de heer Peters. Er werden voornamelijk kersen geteeld, gesorteerd en aan voorbijgangers verkocht.

MaasWaalpad

Dit bord is tot stand gekomen met bijdragen van: Samen Doen Maakt Mooj en Groen, Vereniging Ons en Kuil en Kelten Willen.

2 Literature review

The following sections present the debates to which this thesis is contributing. The first part expands both on literature in planning and infrastructural change and shifts towards the resistance part in cycling highway planning processes, elaborating on why citizens resist, the different motivations, and the types of resistance. Then participation is introduced as a way to deal with resistance, enlarging on the discussion about participation, the different meaning of participation, and the limits of it. The chapter ends by introducing a conceptual framework of citizens' resistance to location-based spatial projects, more specifically to cycling highway projects.

2.1 Planning, infrastructure, and citizens' resistance

After the Second World War, the focus in planning laid on government-led land-use planning and involved a top-down hierarchical perspective (Tisma & Meijer, 2018). At that time, the Netherlands had (and still has) three levels of government, namely national, provincial and municipal, each with its specific tasks. At that time, one of the most important planning instruments was land use, which used zoning maps and land-use regulations. These instruments offered the government the possibility of preventing undesirable forms of land use (Tisma & Meijer, 2018). According to Van der Valk (2010), this form of planning is called development control planning, with an emphasis on control, making spatial plans of that period to be considered as blueprints (Tisma & Meijer, 2018).

According to Tisma and Meijer (2018), it became clear that, by the end of the 1980s, traditional practice of national government-led land-use planning no longer provided an answer to the forces of the contemporary fluid and extreme mobile network society. By the end of the 1990s, development control planning encountered growing resistance from society, leading to some of the nationally applied polices being accompanied by financial compensation. This resulted in a more flexible development planning style, invented by the national government (Tisma & Meijer, 2018). According to Van der Valk (2010), this planning style was taking into account the dynamics within society, decentralised implementation, and citizen participation. This planning style had more attention for concrete projects than for abstract plans and focussed on the cooperation between public and private actors. Yet, this planning style still contained many elements of hierarchical governance (van der Valk, 2010).

Due to decentralisation of responsibilities and tasks from the national to provincial governmental level, the role of provinces in policymaking and planning projects increased during the 1990s. This meant that the provinces started acting as mediator between national policy design and local policy implementation, gaining a permanent role in planning projects crossing municipal border. As a result, citizens, NGOs and market parties were more and more involved in the planning processes, leading to a more networked way of governance (Tisma & Meijer, 2018).

Research into the development of planning methods in the Netherlands shows that each spatial planning strategy in the Netherlands had its own high time, and followed and adjusted to political, economic and societal context (Tisma & Meijer, 2018). Wolsink (2003) argues that:

> A variable distribution of planning responsibilities should be introduced, including centralised powers in cases of national projects, with the purpose of an effective deliberation of spatially relevant variables. The primacy of spatial planning should be restored, and for that purpose the current centralisation tendency and the project-led approach, with its focus on fitting in

> infrastructure, should be abandoned. Participation in spatial decisionmaking has to be reevaluated to establish a system of stakeholder planning. (p. 720)

Therefore, it seems to be a good development that "*the welfare state with a centralised spatial planning system supported by 'hard' (financial and regulation) instruments gradually transformed into a decentralised planning system with 'soft' (guidelines and stewardship) planning instruments*" (Tisma & Meijer, 2018, p. 19).

To simplify the scattering and spread of environmental legislation over numerous laws, the national government currently works on the new Environment and Planning Act (Tisma & Meijer, 2018). This new Act seeks to modernise, harmonise and simplify currently distributed rules and integrate them into one legal framework. In the Environment and Planning Act, participation plays an important role (Ministerie van Infrastructuur en Waterstaat, 2022b). According to Dieperink (2017), this can be seen as a result of the collaborative turn in spatial planning and the paradigm shift from object- and process-oriented to a more context-oriented way of planning. The goal is to increase social support and social acceptance, to improve decision making, and to decrease lead times of procedures. To reach this, the new Act states that participation should involve stakeholders at an early stage in the decision-making process (Boeve & Groothuijse, 2019; Dieperink, 2017). According to Boeve and Groothuijse (2019) it means that citizens should be involved before formal decision-making procedures take place in the planning process of a project.

However, it remains the question if this new Act leads to more citizen empowerment. Governmental authorities still have the option to dismiss the input of participation to protection the public interest. According to Boeve and Groothuijse (2019), these authorities are responsible to take into account not only the interests of those who have participated, but to take all interest into account. Therefore, it can be argued that in the new act, succeeding in the goals of participation and using it as a tool to deal with citizens' resistance will depend on the weight governing bodies will assign to participation. Therefore, it can be argued that in the new act, succeeding in the goals of participation (and using it as a tool to deal with citizens' resistance) will depend on the weight governing bodies will assign to participation.

But what are the reasons that citizens still resist new spatial planning projects? Resistance can be defined as the act of fighting against something that is attacking you, or refusing to accept something ('Resistance', n.d.). Within the scope of this thesis, citizens' resistance to cycling highway plans can be described as citizens refusing to accept these plans. In other words, citizens refusing to accept the implementation of a planned cycling highway. Looking more specifically to the forms of citizens' resistance, Wolsink (2000) described four types of NIMBY (Not in my Backyard) resistance, which were originally described for waste incineration plant and a genetic modification facility adapted to a wind energy context. These four types of NIMBY resistance show why and how someone resists a spatial planning project. According to Mansbridge (2007), the end result of infrastructure projects, such as cycling highways, and the decision-making processes thereof have a major impact on the living environment of citizens. These projects and processes can directly affect citizens living nearby the new trajectory to be planned, resulting in the NIMBY effect (Wolsink, 2000). However, it is argued that solely using the NIMBY-effect to seek explanation of the occurrence of resistance to cycling highways would be too simpleminded (Brown & Glanz, 2018; Wolsink, 2000). According to Brown and Glanz (2018) there are also people supporting cycling highway plans, an effect which the authors describe as YIMBY (yes in my backyard). Other authors argue that, besides the NIMBY effect, the neighbourhood effect influences the level of resistance and can be described as

emergent properties of the neighbourhood and are contextual effects, as they cannot be defined at the individual level (Coppens et al., 2018; Thijssen & van Dooren, 2015). Examples are symbols in the form of window posters or street banners (Coppens et al., 2018) with negative texts against, for example, a cycling highway project.

In recent years, reports have regularly appeared in local newspapers about citizens resisting the plans for a new cycling highway (Redactie, 2019; Schilthuizen, 2022). Sometimes, this leads to time consuming and expensive processes to solve this resistance and come up with a solution that suits everyone involved (Fung, 2015; Legacy, 2016; Stapper et al., 2019). Schweizer et al. (2016) found that almost all of the resistance against new infrastructure projects in recent years have shown three typical characteristics.

First, citizens are expected to give up personal comforts against a temporary deterioration in their living conditions in favour of an alleged benefit to the community at large. Think not only of the construction of a new cycling highway, but also of the direct consequences of this new infrastructure for the local nature and aesthetics of the immediate surroundings along the new trajectory.

Second, the claimed advantage to the community is a matter of debate. Schweizer et al. (2016) argue that in our globalized and individualized society, it is becoming increasingly difficult for project planners to convince citizens of the community benefit in such a way the citizens will accept. The failure to persuade citizens to support public welfare-oriented projects is simply not a matter of bad communication, but rather a symptom of a society characterized by a wide variety of values and preferences. Therefore, the use of the most sophisticated communication strategies would simply not be enough to win over the citizens.

Third, and perhaps most leading to resistance, are the citizens directly affected by the new infrastructure project. Schweizer et al. (2016) argue that citizens often see the decision-making process as being non-transparent, inscrutable, or in the worst case corrupt. Margin (2007), as cited by Legacy (2016), defines that governments sometimes create a perception that they are doing their due diligence to ensure that citizens voice their concerns, rather than really transforming the decision-making process and who is involved in making the decisions. Additionally, the author argues that participatory processes are employed by governments as tools to help legitimise and achieve political 'buy-in' for infrastructure projects, that may have already been predetermined by the politics or do not challenge a dominant planning orthodoxy (Legacy, 2016).

According to Fung (2015) politics can also influence citizens' resistance in cycling highway projects. The author argues that *"… organizations and leaders who possess the resources and authority to create significant participatory governance initiatives can lack motivation to advance social justice through…* [citizen participation]" (Fung, 2015, p. 521). Therefore, it can be argued that the challenge for those who seek justice through participation is a political challenge rather than an institutional design problem. Political conditions must be created under which powerful organizations and leaders are motivated to advance social justice. Fung (2015) concludes by arguing that *"[o]nly then will those leaders be interested in learning whether and how greater citizen participation can increase justice"* (Fung, 2015, p. 521). Here, the question can be raised regarding the role of the different governmental levels within the planning process of cycling highways, as mentioned in section 1.2.

When citizens start to question their degree of power and opportunities for active decision-making, Legacy (2016) opts this might cause those active citizens to step outside the government-provided participation

processes and to oppose the planned development and sometimes the planning process through informal campaigning. According to Legacy (2016), participatory planning should be a tool to support not only the generation of an outcome of the plans opposed, but the constricted and regimented processes of participatory planning can also serve to prevent any emerging citizens' resistance. The author continues by arguing the expression of participation by citizens itself may be a form of interventionist planning. This form of planning emerges when formal participatory planning processes are deemed exclusive to only some selected stakeholders, limit the breadth of deliberation to within defined parameters, or are not available or closed entirely (Legacy, 2016).

Focussing more on the social relations aspect, Healey (2003) argues that power is a relation, not a 'thing', and all social relations have a power dimension. Just as social relations operate on several levels at once, so are power relations expressed in the dynamics of interaction between specific actors, in the deliberative processes through which some actors seek to dominate the way others work (for example through politics), and finally in the deeper level of cultural assumptions and practices. Healey then argues that power relations involve the exercise of 'power over' others as well as the 'power to' make things happen and believes that "... these relations are continually in a dialectic and 'restless' flux, due to struggles in various arenas at various levels at once" (Healey, 2003, p. 113). Building on the 'power over' others, Coppens et al. (2018) found that social interaction at the neighbourhood level affects how individual grievances are translated into protest actions. It can be hypothesized that highly regarded people within a neighbourhood or of known status have a higher persuasiveness to incite other citizens to resist, while their beliefs may (partly) not be true. The same could be true for, for example, celebrities. This seems plausible, but due to limitations of the data used by Coppens et al., the authors were unable to analyse this process by which individuals are recruited to protest activities. Hence, it remains an open question whether protest is the result of face-to-face contacts with local activists or whether it is mediated through symbolic or collective efficacy (Coppens et al., 2018).

Here, neighbourhoods can be described as social systems wherein the proximity and friendly contact between neighbours create the basis of the modest and most basic form of association, making a neighbourhood the basis of political control (Park et al., 2019). These social systems describe the connections among individuals. Herein, social capital refers to these social networks and the norms of reciprocity and reliability that arise within. Social ties are important in developing trust and shared norms among neighbours. Different studies show that they also add to developing a sense of community, establishing informal social control, and exchanging important information within neighbourhoods (Cantillon et al., 2003; Caughy et al., 2001). This makes social networks important channels of political mobilization (Dalton et al., 2009; Klandermans, 1997; North, 1998), especially for networks that are based on social relations, and can thus be used but to increase citizens' resistance. Here, face-to-face recruitment via private networks is the most effective strategy for political mobilization (Snow et al., 1980). Citizens are, according to Lim (2008), faster motivated to participate in political or civic activities when they are encouraged by someone with whom they have a personal connection.

In addition, Legacy (2016) notes critics warn that a focus on 'consensus' evades the political in planning, preventing citizens from confronting and challenging discourse and prevailing orthodoxy about the way their neighbourhoods should be made. This raises important questions about the effectiveness of participatory planning and its political formation. It shows how decisions to engage citizens in prescribed ways induce other sorts of citizen's participation through politics and how these appearances garner a

pervasive and influential trajectory to reshape participatory planning (Legacy, 2016). This raises the question how citizen participation is arranged for infrastructural projects.

2.2 Coping with citizen resistance using participation

The coming years, participation will play a more important role in spatial planning projects (Ministerie van Infrastructuur en Waterstaat, 2022b), which Dieperink (2017) argued can be seen as a result of the collaborative turn in spatial planning and the paradigm shift from object- and process-oriented to a more context-oriented way of planning. Castell (2016) argues that we are currently in a post-collaborative era, in which it is acknowledged that participation comes with complex challenges. This does not mean the potential of participation is denied, but a critical look at the conditions, forms and outcomes of participatory processes in relation to their context is needed, which Castell (2016) describes as politicizing participation. Looking at specifically cycling highway projects, Oldenziel and Albert de la Bruhèze, as cited by Bruno (2020), state that participation from cyclists (the end users) is needed to counter the projected users imagined by transportation engineers that often undervalue the needs of people riding bicycles. But the motivations why citizens want to participate can differ. For instance, Legacy (2016) argues that citizens may advocate and lobby for an alternative set of proposals, in this case making changes to some parts of the trajectory of a cycling highway or changing some design aspects, whilst citizens participating outside formal participatory planning channels may be motivated to change a planning proposal or cancel the plan altogether, resulting in resistance to a new cycling highway in its entirety. Here, communication is seen as the key to creating support and obtaining sufficient commitment from all parties involved in the planning process of an infrastructural project (CROW, 2014).

However, forcing projects through can be risky and might result in overwhelming disenchantment with politics. This is because communication strategies lack effectiveness. Therefore, Schweizer et al. (2016) argue that increased opportunities for participation can help, giving affected citizens a chance to decide for themselves whether or how much the earlier addressed factors of concern are to be addressed. Nevertheless, citizen involvement changes the planning process. Communication is often used as a strategy to make the citizens affected to agree with the plans proposed. Using this tool, planners hope that the citizens will approve the plans or at least tolerate them. However, Schweizer et al. (2016) continue to argue that "…citizen involvement in open and inclusive planning processes [make] it incumbent upon the involved citizens to create and evaluate planning options based on their own ideas, values, and preferences within statutory and policy limits" (Schweizer et al., 2016, p. 207).

The degree of influence citizens can exercise in a spatial planning process can be tested by means of Arnstein's ladder of participation. This is a hierarchy of forms of participation arranged according to the degree to which participation is possible within a planning process. Increasing information flows and iterative processes of involvement are required to build trust among stakeholders involved in, for example, cycling highway projects (Huntjens et al., 2011; Hurlbert & Gupta, 2015; Pahl-Wostl, 2009). However, informing the citizens and calling this a participatory process is described by Arnstein as tokenism. According to Arnstein (1969), real participation starts in the upper three segments of the Ladder of participation, in the forms of partnership, delegated citizen power or even the citizens being in full control of a project (Arnstein, 1969). This shows that simply informing citizens about plans for a new cycling highway should not be seen as involving the citizens or applying citizen participation. If planners want to try to influence and achieve greater acceptance of cycling highway projects, it is important to funnel the points of interests above in information and campaigns. However, Schweizer et al. (2016) address that the effectiveness of communication strategies in influencing public acceptance is extremely limited,

concluding that citizen participation is the most promising way forward, better resulting in decision making. Arnstein (1969) emphasizes that lower levels of participation should always be combined with higher levels of participation in the timespan of a project to become legitimate forms of participation. Fung (2015) argues that participation is believed to improve legitimacy of authorities, effectiveness in governance and justice.

The question remains how planners can facilitate a more positive response to new infrastructure plans in addition to citizen participation. Schweizer et al. (2016) argue that citizens need to understand and accept the need for a new infrastructural project. Therefore, it is important to get all citizens involved at the same information level. The author continues that it is important to show citizens involved what the benefits are for them (Schweizer et al., 2016). If the common good is raised, it needs to be expressed in the form of concrete advantages to those who will use the new cycling highway. However, this can be harder for a cycling highway, because the citizens living next to the new trajectory are not always the direct target group of the new cycling highway (CROW, 2014). Besides, citizens tend to reject change if they believe that their personal range of options or their personal freedom is negatively affected, which can result in resistance. Schweizer et al. (2016) argue that the loss of control and the perception of domination by others are powerful threats to self-efficacy and autonomy. On top of that, change always means interventions in one's way of life. If change is seen as something alien in a neighbourhood, it is likely to be rejected. Making citizens part of the project can strengthen the bond between the project and citizens involved (CROW, 2014; Schweizer et al., 2016). For example, letting citizens join a public competition to name a new cycling highway.

In their study, Hurlbert and Gupta (2015) theorise that sometimes stakeholder participation may not quickly lead to consensus outcomes and argue that "…it requires an understanding of the nature of the policy problem and the dynamics of the disagreements surrounding the problem" (Hurlbert & Gupta, 2015, p. 104). According to the authors, past policy problems can offer insights and be compared across places, contexts, and times. This "… can be used to assess how stakeholder participation was developed in specific situations and whether the modalities of participation were in line with the nature of the problem and desired results" (Hurlbert & Gupta, 2015, p. 104). The authors emphasize that it "… requires policy makers to consider and acknowledge the importance of what learning is required and/or desired in order to make public participation count" (Hurlbert & Gupta, 2015, p. 104).

In conclusion, including participatory elements in decision-making processes should create transparency and acceptance (Fung, 2015), but as well can improve the quality of the outcome by incorporating local citizen knowledge. Besides, an increased level of local citizen participation can improve the robustness and integrity of the resulting arrangements. And last, involving citizens at an early stage in the planning and decision-making process makes it possible for future consumer behaviour to be directly integrated into the process (Schweizer et al., 2016). However, it remains important that the level(s) of participation involved should be in line with the nature of the problem and level of problem solving (Arnstein, 1969; CROW, 2014; Hurlbert & Gupta, 2015; Schweizer et al., 2016).

2.3 Towards a conceptual framework

The previous chapters introduced several factors that, if not in a combined form, can lead to citizens' resistance to spatial projects. Participation is a planning tool which can help to increase acceptance and limit resistance to a project, let citizens get involved in the planning process, and can serve as a tool to entail power relations. Based on the literature review, it is expected that the occurrence of citizens' resistance can be caused by multiple factors. Part of these factors can (either positively or negatively) be affected by citizen participation.

Table 1 shows the types of resistance by Wolsink (2000, p. 57), which for this thesis have been adapted to the cycling highway concept. These four types of NIMBY resistance forms can be used to better understand the reasons behind citizens' protest to (planned) cycling highways. According to the type of resistance, planners can examine which level of participation can be used to govern the resistance.

Table 1. Four resistance types adjusted for cycling highway projects. Own elaboration based on Wolsink (2000)[1].

Resistance type	Description
A	A positive attitude towards cycling highways, combined with opposition to the construction of a cycling highway anywhere in one's own neighbourhood. This attitude-behaviour combination reflects the only true NIMBY standpoint.
B	Rejection and opposition to a cycling highway in the neighbourhood because one rejects them in general. This position is sometimes called 'NIABY', or Not-In-Any-Backyard. This kind of opposition is based on concerns about the general consequences of cycling highways on the scenery.
C	A positive attitude towards cycling highways, which becomes negative as a result of the discussion surrounding the proposed construction of a cycling highway. This type shows the significance of the dynamics in attitudes, as it reflects a NIABY attitude resulting from changing risk perceptions during the decision-making process.
D	Resistance created by the fact that particular projects are considered faulty, without a rejection of cycling highways as a whole. This type advocates the positive aspects of cycling, but only under some conditions. This opposition is particularly limited to proposed cycling highways on specific locations, as it is based on concerns about the consequences of a cycling highway, on primarily the scenery and, to a lesser degree, on interference and nuisance. People here may be unconvinced about the suitability of the selected trajectory. They may expect interference, or they may consider the landscape on the chosen location too sensitive, especially when other available locations nearby are considered more suitable.

Based on Arnstein's ladder, Hurlbert and Gupta (2015) created the split ladder of participation, see figure 4. This split ladder of participation can be used to study policy problems with a history and where participatory processes have been used. Consequently, the split ladder builds on Arnstein's original ladder. With this split ladder, past cycling highway projects can offer insights and be compared across places, contexts, and times. Here, the split ladder can function as an evaluation tool which can be used to evaluate how citizen participation was formed in cycling highway projects and whether the modes of participation were in line with the nature of the problems and desired results (Hurlbert & Gupta, 2015). In short, the

[1] The model is an own elaboration based on the works of Wolsink (2000), with an adaptation of forms of resistance to a cycling highway context. Here, the terms wind farms and wind power have been replaced by either cycling or cycling highways, both being location-based spatial projects.

bottom right end of the split ladder allows for the inclusion of structured policy problems, where little disagreement exists on science, values and norms, and decisions are largely made and implemented by technocrats. The bottom left quadrant of the split ladder coincides more closely with low levels of trust, participation, one-way communication flows, placation, and manipulation, which can be compared to the lower steps of Arnstein's ladder (Arnstein, 1969; Hurlbert & Gupta, 2015). Figure 4 visualizes an own elaboration based on Hurlbert and Gupta (2015) of the split ladder of participation[2].

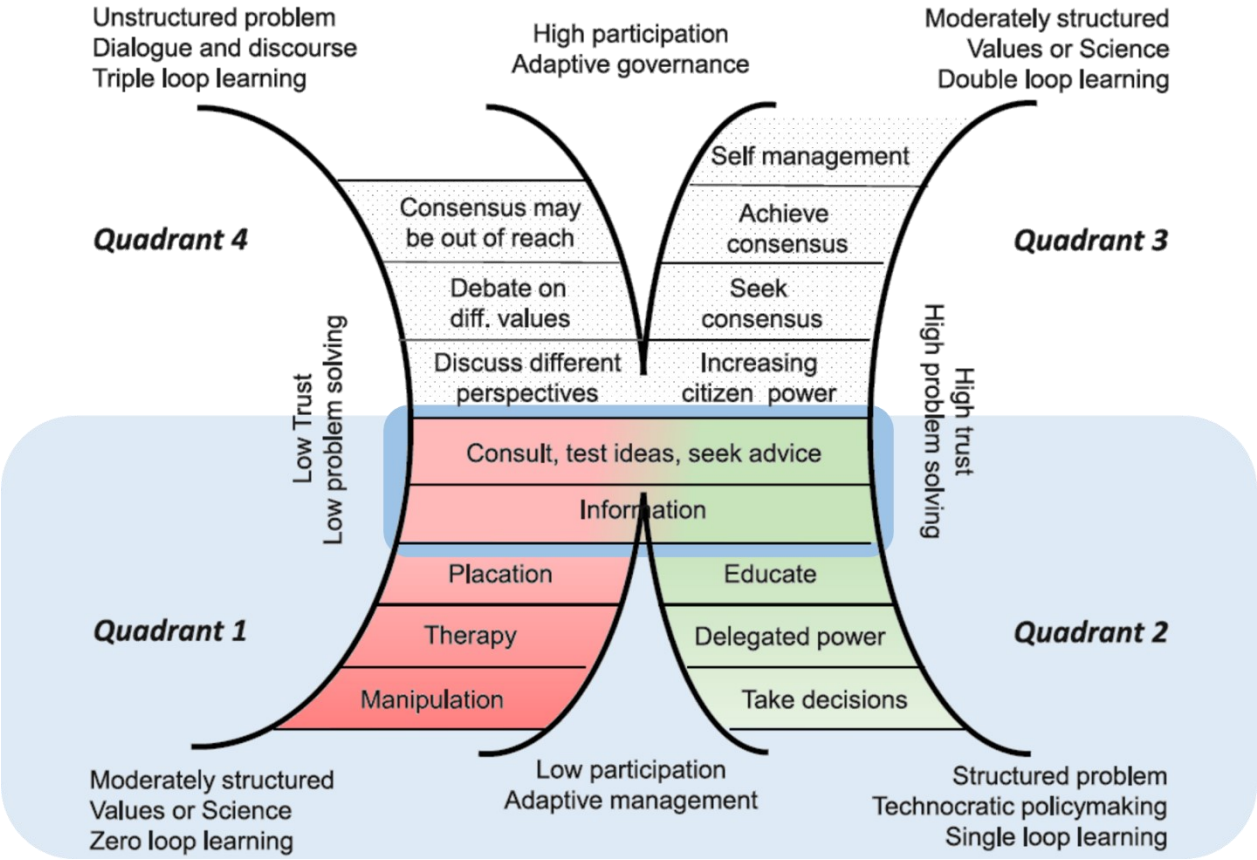

Figure 4. Hypothesizing the placement of problems associated with cycling highway projects within the split ladder of participation. Own elaboration based on Hurlbert and Gupta (2015).

How can this split ladder of participation be linked to problems associated with cycling highway planning processes? Based on the previous chapters and paragraphs, it can be conceptualized that the problems associated with the planning process of cycling highways can be placed somewhere in quadrant one or two, visualized by the light blue rectangle in the figure above. Here, the biggest differences are in the level of trust and problem solving. The red part in the figure above shows the forms of participation that are used to influence citizens, corresponding to the lower rungs of Arnstein's ladder of participation. In contrast, the green part shows the forms of participation where, according to Arnstein (1969), citizens do experience forms of "real" participation. The darker blue rectangle in the middle of the figure above focusses on the part of the split ladder of participation where a shift is possible from low forms of trust

[2] The use of colour emphasizes which forms of participation for the conceptual framework have a positive influence on resistance (green), which forms of participation are not seen by Arnstein (1969) as full forms of real participation (red), and which parts of the split ladder of participation are used for the conceptual framework (blue). No textual changes have been made.

and problem solving, towards high levels of trust and problem solving, and vice versa. Theoretically, this would therefore be the place in the split ladder of participation where participation can influence problems surrounding the planning process of, in this case, cycling highways. In addition, the green building blocks in the figure offer possible levels of participation that can be used in cycling highway projects.

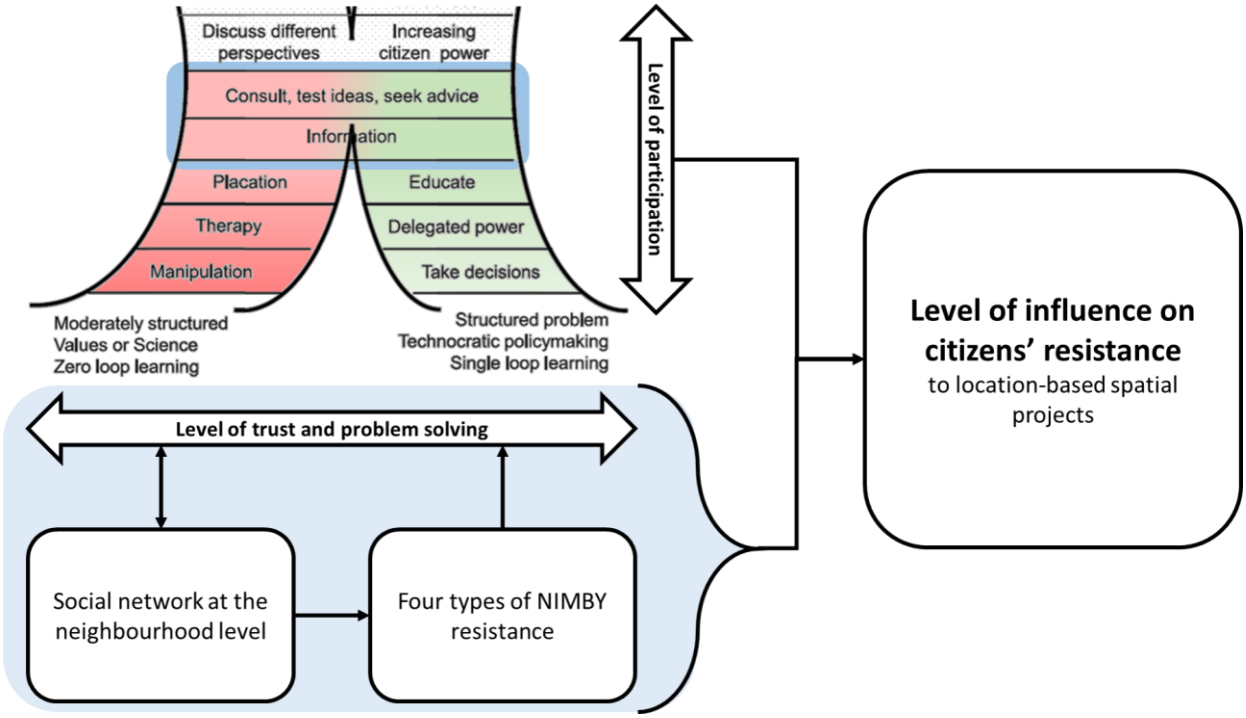

Figure 5. Conceptual framework of citizens' resistance to location-based spatial projects.

The figure above visualizes the conceptual framework of this thesis, based on the literature review. It hypothesizes that the level of citizens' resistance to location-based spatial projects, such as cycling highway projects, can be influenced by the level of participation applied during the planning process and by the level of trust and problem solving during the planning process of these projects. At the bottom left of the conceptual model above, the block 'Social network at the neighbourhood level' describes that neighbourhoods can be influenced by social networks (as described at the end of section 2.1). The conceptual model posits that social networks can influence the type of NIMBY effect at the individual level. Thus, by talking to neighbours, an individual citizen can change their NIMBY resistance type. In turn, this affects the level of trust towards the planning process of a particular location-based spatial project, such as a cycling highway project. However, the extent to which citizens and neighbourhoods are willing to participate in solving the problems can be affected as well. Together (the elements in the light blue rectangle in figure 5) this in turn influences the degree of citizen resistance.

Conversely, the discussion within the social network can also be influenced by the level of informing people, in other words by applying a certain level of participation (as illustrated in the part of the split ladder of participation in the figure above). As the level of trust in the project increases, this conceptual model theorizes that citizens (and neighbourhoods) are more willing to participate. Conversely, during the project, citizens must be given the opportunity to participate (the green steps of the split ladder of participation in figure 5) by implementing the right levels of participation through the use of the right planning tools. The way in which participation takes place thus influences social networks and the level of

trust, which in turn indirectly influences the NIMBY resistance type of the individual. Based on the theories and concepts described in this chapter, the conceptual framework outlines how levels of participation, and levels of trust and problem-solving influence levels of citizens' resistance to location-based spatial projects. This conceptual framework is the input to arrive at the codes used for the analysis. In addition, the conceptual framework, together with the literature study, was used to answer the sub-questions and the main research question.

3 Methodology

This chapter discusses the research methods. Section 3.1 describes the methodological approach used. Section 3.2 defines the way in which the data for this study was collected. Section 3.4 then describes the methods used to analyse the data. The chapter concludes by discussing the validity and reliability of the methods used in section 3.5.

3.1 Methodological approach

This research is set up to contribute to a better understanding of citizens' resistance to cycling highway projects, more specifically on how participatory processes change the level of citizens' resistance during the planning process of these cycling highway projects. This knowledge can then be used in participatory projects of future cycling highway planning projects. The following research question is formulated:

How does the participatory process during the planning process of a cycling highway change the level of citizens' resistance to the cycling highway project?

The following sub-questions have been formulated to answer the main question:

1. *Why do citizens resist to cycling highway projects?*
2. *Which level(s) of citizen participation were implemented during the planning process and how did this affect the level of citizens' resistance?*
3. *How did citizens' resistance and citizen participation influence the outcome of the project?*

To answer this research question, a qualitative research approach using a case study was carried out. To be able to answer the questions, qualitative data was needed about why citizens resist to infrastructural projects in general, and to cycling highway projects more specific. Additionally, qualitative data was needed about citizens resistance and participatory processes, and about dynamics in power relations during the participation processes of infrastructural projects. Furthermore, qualitative data was needed about the citizens' attitude towards cycling highway projects, and towards the applied participatory processes. The data which is analysed is collected using semi-structured interviews (Bryman, 2016) with experts, officials, and citizens, based on a case study. In addition, a document analysis was carried out[3]. The emphasis in this research is on the process and answering the 'why' behind the above research questions. Thus, making the explorative nature of qualitative research a suitable research method (Bryman, 2016).

Resistance is a sensitive subject. Here, a semi-structured interview can be of more use since semi-structured interviews provide the interviewer a handhold with predefined questions, but also offers the interviewee sufficient opportunity to give elaborate answers on which the interviewer can respond (Bryman, 2016). Using elaboration prompts prevents the conversation from coming to a standstill and makes the conversation more dynamic (Schaffer, 2015).

However, it must be noted that whatever is being said in semi-structured interviews is at all times part of a social dimension (Bogner & Menz, 2009). Hence, the results from the interviews cannot be interpreted

[3] See Appendix B for an Overview of documents used for document analysis.

as pure, situation-independent, and context-independent statements. Here, document analysis can largely balance this effect. Documents are stable and provide 'non-reactive' data. Once they have been published, they do not change over time. This way, document analysis can strengthen the interview data, but also strengthen the preparation of the interview itself (Bowen, 2009; Hajer, 2006). Documents, such as policy documents, news articles and project reports, can provide information for finding the right experts or citizens to interview and can lead to additional insights or questions which can be used to prepare the interviews (Bowen, 2009; Hajer, 2006). Therefore, the interview results are compared with information collected from the document analysis to see if they differ and why.

3.2 Case study

A case study was used to answer the research questions. However, Flyvbjerg (2006) and Hajer (2006) address that the answers found to a research cannot be generalised on the basis of a single case. Therefore, a set of case requirements have been determined. Based on this set of requirements, similar cases which meet all the requirements can be better compared. To be able to compare findings with future similar research, the following criteria of the case study are defined:

- The cycling highway project involves some level of citizen participation;
- The cycling highway project involves some level of resistance;
- The planning process of the cycling highway project is completed;
- The cycling highway has sufficient citizens who showed levels of resistance to interview;
- The cycling highway has a long route with resistance in several places along the route;
- The cycling highway project has accessible information, to conduct document analysis and find the right interviewees and experts (Flyvbjerg, 2006; Hajer, 2006).

Based on these requirements, an exploratory conversation with a Royal HaskoningDHV cycling expert was held. During this conversation, multiple cycling highway projects were discussed and compared with the requirements set for the case. The cycling highway Cuijk – Mook – Nijmegen (known as MaasWaalpad) met all of the requirements, including resistance in several places along the trajectory: Resistance in Lierdal (Vereniging Bos en Kuil) and resistance in Cuijk. Therefore, this cycling highway project was chosen for the case study.

3.3 Data collection

Data is partly collected through semi-structured interviews with Royal HaskoningDHV experts, provincial and municipal officials, and citizens. The first interviewees were collected through the professional network of the project leader of the MaasWaalpad cycling highway. The experts within Royal HaskoningDHV were collected using the professional network of the interviewer. After the first interviews, interviewees were asked to recommend other possible interviewees. This snowball effect for collecting interviewees was stopped when either interviewees started giving the same kind of answers to the interview questions resulting in data saturation, or when recommended interviewees started declining the invitation because they indicated they had nothing more to add. In total, 12 interviews were held with 13 participants[4], see table 2.

[4] Two citizens wanted to conduct the interview together on location, so that they could show what they were talking about. During that one interview, two people were interviewed. As a result, a total of 12 interviews were conducted with 13 participants.

Due to the COVID-19 pandemic, most interviews were conducted using Microsoft Teams. The interviews were recorded, so the focus could be solely on the interview and interviewee. This way, the conversation could be more dynamic (Schaffer, 2015) and the interviews could be transcribed. Some of the interviews were hold at a later stage, where the COVID-19 measures were less strict. These interviews were conducted in person on location and recorded using an audio recorder. Each interview was between 60 and 90 minutes long, giving enough time and space to discuss the different viewpoints in detail, getting answers to all the semi-predefined questions, and leaving enough space for the interviewee to give elaborate answers on which the interviewer could respond (Bryman, 2016).

First, expert interviews on citizens' resistance to infrastructural projects were held. The interviewed Royal HaskoningDHV employees are experts on either citizen participation in infrastructural projects or on (governing) cycling highways all over the Netherlands. Parallel to the expert interviews, interviews with officials were conducted. They were all involved in the planning process of the case study. These interviews were used to prepare for the citizen interviews. Second, citizens who showed resistance during the planning process of the MaasWaalpad were interviewed.

The former research sub-questions (section 3.1) formed the basis for the questions that were asked during the semi-structured interviews. The more general questions focused on the origin and influence of power relations, the underlying factors and causes that lead to resistance, and the timing and level of citizen participation. The additional questions that were asked to the interviewees involved in the planning process of the MaasWaalpad addressed their involvement and role, the underlying reason for the project, the stakeholders involved in the participation process, how the participation process was documented, how the level of resistance has changed during the process, and how the resistance has influenced the planning process and end result. During all interviews, questions were also asked about how citizens have influenced the planning process, and what the learning moments have been for citizens, experts, and officials. The answers to these questions were used during the analysis to answer the sub-questions of the research, which in turn connect to the various parts of the theoretical framework. Together, this answers the main question.

Table 2. Overview of interviewees.

Date	Role	Location	Context	Organisation	Reference in text
30-3-2021	Municipal official	Microsoft Teams	Involved in the planning process of the MaasWaalpad	Municipality of Nijmegen	Official #1
31-3-2021	Expert at consultancy firm	Microsoft Teams	Involved in the planning process of the MaasWaalpad	Royal HaskoningDHV	Expert #1
1-4-2021	Provincial official	Microsoft Teams	Involved in the planning process of the MaasWaalpad	Province of Gelderland	Official #2
20-5-2021	Expert at consultancy firm	Microsoft Teams	Expert in the field of participation and environmental management	Royal HaskoningDHV	Expert #2
27-5-2021	Municipal official	Microsoft Teams	Involved in the planning process of the MaasWaalpad	Municipality of Heumen	Official #3
27-5-2021	Expert at consultancy firm	Microsoft Teams	Behavioural expert	Royal HaskoningDHV	Expert #3
3-6-2021	Municipal official	Microsoft Teams	Involved in the planning process of the MaasWaalpad	Municipality of Cuijk	Official #4
4-6-2021	Expert at consultancy firm	Microsoft Teams	Expert on participation and facilitation	Royal HaskoningDHV	Expert #5
17-6-2021	Expert at consultancy firm	Microsoft Teams	Expert on participation and facilitation	Royal HaskoningDHV	Expert #6
22-6-2021	Municipal official	Microsoft Teams	Involved in the planning process of the MaasWaalpad	Municipality of Mook en Middelaar	Official #5

4-10-2021	Citizen	Malden	President of a citizens' initiative	Lierdal Actief	Citizen #1
18-10-2021	Citizen	Malden	Member of citizens' association	Vereniging Bos&Kuil	Citizen #2
18-10-2021	Citizen	Malden	Member of citizens' association	Vereniging Bos&Kuil	Citizen #3

3.4 Data analysis

The recorded interviews were transcribed manually by playing back the recordings and typing out what has been said. Then, using NVIVO, the interview transcripts and collection of documents were coded and analysed using a structured, computer-assisted way. The literature review and conceptual framework were used to draft coding schemes, including codes, categories and themes, which were used to answer the sub-questions (Bowen, 2009; Hajer, 2006). According to Bryman (2016) coding means that text fragments are linked with 'labels' that may have theoretical significance or may be relevant to the subject under investigation. Text fragments were coded that are related to the topics from the theoretical framework, which is called open coding (Bryman, 2016). For example, the literature and conceptual framework described different levels of resistance. Therefore, resistance was used as a topic to code multiple text fragments being about (different levels of) resistance.

Concepts can be regarded as building blocks of a theory (Bryman, 2016). However, theory building is not the focus of this research. Providing insight into how participatory processes change the level of citizens' resistance during the planning process of a cycling highway projects does. Therefore, in addition to open coding, the method of selective coding has also been used (Bryman, 2016), which means that a number of main categories have been developed based on the theoretical assumption from the conceptual framework. For example, the conceptual framework included resistance and participation, which were used to form categories during the analysis. In addition to this approach, text fragments were also chosen intuitively, which means that text fragments were first selected and then codes or themes were developed. Then, categories are developed through the process of open coding and compared to the theming. For example, some interviewees discussed themes being very specific about the case study of the MaasWaalpad. Therefore, 'Aspects regarding the case study of the MaasWaalpad' was chosen as a separate theme.

The initial codes can be found in Appendix A. Figure 6 provides an overview of the thematic framework used to analyse the documents and interview transcripts. The themes and coded text fragments were analysed to find answers to the sub-questions. Text fragments linked to the theme 'Citizens' resistance to (cycling highway) projects' were analysed and used to answer sub-question 1. Text fragments linked to the theme 'Type(s) or level of participation' were analysed and used to answer sub-question 2. Text fragments linked to the theme 'Aspects influencing the planning process' were analysed and used to answer sub-question 3. As described above, text fragments linked to the theme 'Aspects regarding the case study of the MaasWaalpad' were analysed and used to reconstructs the planning process of the MaasWaalpad, including an overview of stakeholders and parties involved in chapter 4.

Figure 6. NVivo thematic framework, based on the literature study and conceptual framework.

3.5 Validity and reliability

The choices made for this research methodology have certain implications which can affect the validity and reliability of the research outcomes. This paragraph discusses the research implications and explains how the research results should be interpreted.

First, it must be noted that the researcher can misinterpret or colour the interpretation of the motivations and considerations of the interviewees due to the ideological or political views of the researcher (Bryman, 2016), raising the ethical question whether the researcher has been neutral. Therefore, the researcher tried to describe the used research method as extensive as possible[5]. This has been done to prevent this research to appear unreliable and to make the research more transparent. During the interviews, the interviewer summarized the motivations and considerations of the interviewees as much as possible in his own words and asked if the interviewees agreed with this interpretation.

Second, this research focusses on finding out the origin of citizens' resistance to cycling highway projects and seeks how participation and resistance influence the planning process outcome. Therefore, a case study was used, and semi-structured interviews were held. Infrastructural projects are location based, so

[5] **The interview recordings, documents, transcripts, and NVivo files are available on request.**

are cycling highway projects. However, it must be noted that cycling highway projects are geographically complex compared to, for example, a road redesign project. A cycling highway project is often divided into multiple parts, as described in chapter 4. However, in terms of geographical properties (such as trajectory length and complexity) those individual parts come closer to the average location-based spatial project. This makes it possible to interpret the conclusion and findings on a wider scale, keeping the previous point in mind. In addition, the case study was chosen on the basis of predefined criteria, making it possible to compare the findings of this thesis with other cycling highway projects meeting the set of criteria.

Third, due to the worldwide COVID-19 pandemic, almost all interviews were held using online tools. On the one hand this means interviewees talk to the person they see on their screen, making the experience less personal. On the other hand, using digital tools, these interviews could be recorded (with permission), where full attention could be focused on the interviewee.

Fourth, by interviewing both citizens who showed levels of resistance during the cycling highway project, citizen participation experts and cycling highway experts/planners, viewpoints of both sides have been analysed. Hereby, an attempt was made to prevent a certain bias from predominating in answering the research questions and tackling the research from a wider non-judgmental viewpoint.

And last, most interviews will be held in Dutch, this has to do with the people being interviewed and with the words associated with the problem being investigated. In consultation with colleagues and experts, the correct English terms are chosen after conducting the analysis. To guarantee the privacy of the interviewees, the Dutch interview transcripts and NVivo analysis are available on request.


Bosweg
1-3
Bosweg
5

4 Cycling highways: The story of MaasWaalpad

Before diving into the reasons behind citizens' resistance and the levels and influence of participation, this chapter introduces the case study. First, the chapter starts with the underlying reasons for a cycling highway, followed by the MaasWaalpad project. Second, based on the provided documents and conducted interviews, this chapter reconstructs the planning process of the MaasWaalpad, including an overview of stakeholders and parties involved.

4.1 Why a cycling highway?

The introduction of this thesis (section 1.1) briefly described what cycling highways are. The main purpose of cycling highways is to encourage cycling from home to work or study. Many people drive by car from home to work or study over short distances. This car use contributes to daily traffic jams. Fast cycle paths offer a healthy and pleasant alternative to daily car journeys. This was also the goal for the bicycle connection from Cuijk to campus Heyendaal: The MaasWaalpad. These type of bicycle connections have been implemented since around 2006, mainly as a means for combating congestion (de Boer, 2020). Only since the last years, cycling highways are increasingly seen as a broad mobility solution that serves multiple social goals. More cycling improves individual health and reduces air pollution, carbon emissions, congestion, noise pollution, and other harmful effects of car use. Accordingly, cycling, including the necessary infrastructure such as cycling highways, shifted from a means to combat congestion towards a means to encouraging and sustaining the increase in active mobility, and in achieving our global climate goals (de Boer, 2020; Pucher & Buehler, 2010; TNO Kwaliteit van Leven et al., 2010). Not only has the cycling highway concept changed as a result itself, but so has the naming. The initially frequently used term 'fietssnelweg' (freely translated as 'cycling highway') appealed to politicians and policymakers, but local residents associated this term with high speeds, nuisance, and danger. The term changed to 'snelfietsroute' (freely translated as 'fast cycle route') but is increasingly being replaced by 'doorfietsroute' (freely translated as 'through cycling route') for the same reasons (de Boer, 2020; CROW Fietsberaad, 2022).

In addition to the change in the use of cycling highways as planning tools and its naming, the academic perspectives and attention in cycling highways also changed. In recent years, cycle highways have been analysed from a few scientific perspectives in academic literature worldwide. For instance, Skov-Petersen et al. (2017) analysed Copenhagen cycle highways in the framework of induced travel demand, cyclist satisfaction and competition for funding. From the physical design perspective, Kristjánsdóttir and Sjöö (2017) provides a technical review of European cycle highway standards, focusing on engineering criteria. From a public health perspective, Buekers et al. (2015) estimated health impact of modal shift due to two cycle highways in Flanders, Belgium. Whereas Liu et al. (2019) gave insight into an understanding of how practitioners define cycle highways and how they conceptualize users, experiences, and design in relation to cycle highways. Less is known about involving the environment and local residents in a cycling highway planning process for a cycling highway, when and if local residents should be involved in these plans, and what their view is on plans for a new cycling highway close to their living environment.

4.2 The case of the MaasWaalpad

In 2014, the Arnhem-Nijmegen City Region released a factsheet about the MaasWaalpad (Stadsregio Arnhem Nijmegen & van Duren, 2014). In that factsheet, the City Region indicated that it expected a strongly growing need for mobility: The traffic on the roads was increasing and the region was facing more and more traffic jams. Despite the construction of new infrastructure, the City Region predicted that the

pressure on the existing river crossings and the important employment areas will increase. According to the factsheet, the City Region had invested heavily in improving and expanding the current (car) infrastructure in order to improve the accessibility, competitive position, and attractiveness of the region. In addition, the City Region wanted to change the modal shift, whereby car use is limited as much as possible and replaced by other forms of travel, such as public transport and bicycle (Stadsregio Arnhem Nijmegen & van Duren, 2014). In that same factsheet, the City Region stated that it pursued an active bicycle policy to persuade commuters to stop using their cars. Part of this is the construction of a high-quality network of cycling highways, which will improve the competitive position of the bicycle in commuter traffic. This high-quality cycling network consists of multiple cycling highways, which form a direct bicycle connection with few infrastructural obstacles, as much priority as possible for cyclists, little hindrance from other traffic, and smooth asphalt. These connections offer the user the opportunity to cycle safely from A to B with as little delay as possible.

Mentioned above are some of the reasons why the City Region decided to build the MaasWaalpad cycling highway (Stadsregio Arnhem Nijmegen & van Duren, 2014), located between Cuijk and Nijmegen. According to the factsheet, this cycling route connects Cuijk, Mook, Molenhoek and Malden with Nijmegen in a high-quality way. The old bicycle connection via the A73 bridge was over 3 kilometres longer, illogical, and not attractive for cyclists. The alternative via the ferry was over 1.5 kilometres longer, whereby cyclists had to wait for the ferry (which does not run in the evening, at night, or at extremely high/low tide). In addition, the old connection along the N271 and N844 was unattractive for cyclists because of the large amount of car traffic and the various traffic lights (Stadsregio Arnhem Nijmegen & van Duren, 2014).

The MaasWaalpad (figure 7) contributes to a fast, safe, and comfortable bicycle connection from Cuijk to Nijmegen (Stadsregio Arnhem Nijmegen & van Duren, 2014), and is therefore more attractive for commuters to travel to work by bicycle. The MaasWaalpad connects to the largest work location in the province of Gelderland: The Heyendaal campus. In 2014, motorists from the south experienced daily delays due to traffic jams and congestion on the access roads to/from Nijmegen. Because the bicycle route was considerably shortened and cyclists now have priority almost everywhere, it became possible to cycle from Cuijk to the Heyendaal campus in 30 minutes by (electric) bicycle. An important part of the project was the new bicycle bridge over the Maas, the MaasOver. The bicycle bridge was realized by making smart use of existing structures, such as the existing railway bridge. This bridge greatly shortens the cycling distance between Cuijk and Mook, but also creates additional tourist cycling connections. Cycling a 'detour' via the

Figure 7. Trajectory cycling highway MaasWaalpad ([[Snelle fietsroute MaasWaalpad]], 2020).

bicycle bridge and the ferry between Cuijk and Middelaar is an example of this (Stadsregio Arnhem Nijmegen & van Duren, 2014).

Expert #1[6] explained that the project was an elaboration of the 2010 City Region bicycle vision, which corresponds with the factsheet (Stadsregio Arnhem Nijmegen & van Duren, 2014). But on paper the reason for the MaasWaalpad was to improve and strengthen the accessibility of the campus. At the time, there were very large programs on rush hour avoidance and traffic management to make the region more accessible. At sixty points, all traffic control installations and intersections were adapted to allow more cars to drive through, increasing traffic handling capacity of those junctions. In order to claim regional funds, the project had to be framed using the same language and term at use. According to expert #1, this meant framing the project as to improve the accessibility of the campus, describing the new cycling connection in terms as a fast, attractive, through cycling route with a lot of time savings for cyclists. Thus, the project had to be framed using a certain language and writing style in order to be eligible for government subsidies, but that was not the only goal of the MaasWaalpad. According to expert #1 the whole idea of the MaasWaalpad is that cyclists do not have to stop anywhere if they cycle unhurriedly, which is profitable for cyclists. Official #2, who works at the Province of Gelderland and involved in the planning process of the MaasWaalpad, adds that more cycling and less car traffic is good for the environment, which is one of the underlying reasons to implement a cycling highway, which is in line with the findings of Pucher and Buehler (2010), as described in section 1.1.

In short, the MaasWaalpad:

- tempts the car driver to cycle more often: More cyclists mean less car traffic, less noise and air pollution;
- improves urban and regional accessibility: The route connects residential, work, shopping, and recreational locations with each other and thus ensures better accessibility of the region in a healthier environment;
- offers cyclists a high-quality connection: Not only do new users benefit from the fast, direct, comfortable, and safe connection, current cyclists also benefit;
- adds quality to the living environment through the high-quality design of the cycle route and better accessibility of facilities;
- focuses on the further growth of the use of (electric) bicycles, as this makes it easier for cyclists to cover longer distances.

4.3 Reconstructing the planning process of the MaasWaalpad

The previous paragraph described the underlying reasons for constructing the MaasWaalpad. Based on the provided documents and conducted interviews, the remainder of this chapter attempts to reconstruct the planning process of the MaasWaalpad, including an overview of stakeholders and parties involved.

According to several interviewees, the planning process for the MaasWaalpad started at the end of 2010. At that time, a cost-benefit analysis was first carried out to determine the feasibility of the cycling highway. In 2011, the design of the trajectory of the cycling highway was announced, and in 2012 the construction of the bridge over the Maas was announced. In 2013, stakeholders were told that the planning process

[6] Expert #1 is a cycling expert at a consultancy firm and involved in the planning process of the MaasWaalpad.

could move faster than previously thought, but that the project group had no further developments to report. From a report of a members meeting of the Bos&Kuil association (an interest group involved in the project) on 17 June 2014, it appears that at the beginning of 2013 there was a consultation requirement in which the board was involved. The board then agreed with the route over the Kuilseweg but did make reservations. At the request of two members of the Bos&Kuil[7] association, a members' meeting was convened at the time to discuss the subject (Vereniging Bos en Kuil, 2014), which resulted in resistance to the plan for the cycling highway. A report with objections to the route of the cycling highway shows that some local residents had a meeting with members of the project's steering committee on 27 January 2014 (M. Alink & A. Brouwer, personal communication, August 10 2014). From this, it became clear that the steering committee established the draft trajectory for the cycling highway on 6 June 2013 and that it was agreed to make regional co-financing available, without communication to, for example, local residents. On this basis, the period 2011 to 2014 can therefore be described as the run-up to the development of resistance to the cycling highway and a run-up to the participation process.

From 2015, the project was at a stage in which there were concrete plans to come out with, and the participation process had been started. At that time, however, the project was already encountering resistance on several trajectory parts of the planned cycling highway. During that same year, the provinces, municipalities, and interest groups involved signed a cooperation agreement. Involved were the Municipality of Nijmegen, Heumen, Mook en Middelaar, Cuijk, the Province of Noord Brabant, Gelderland, Limburg, Cyclists' Union, project 'Fiets filevrij', Arnhem Nijmegen City Region, ProRail, Rijkswaterstaat, Water Authority Peel en Maas, Water Authority Rivierenland, and Water Authority Aa en Maas (#3; #5; Gemeente Heumen, 2016; Stadsregio Arnhem Nijmegen & van Duren, 2014).

In March 2016, the municipalities of Heumen and Mook en Middelaar together started the design phase of the part of the cycling highway on their territory. In 2017 a name contest was held in which everyone could participate. The jury nominated three names from nearly 800 names submitted: MaasWaalpad (because of the nearby river Maas), Snelfie (a combination of "snelfietsroute" (cycling highway) and "selfie") and De Romeinse Baan (a hint at the Roman history surrounding the area). MaasWaalpad was chosen as the most favourite name via a poll on Facebook (Provincie Gelderland, n.d.b). In mid-December 2017, part of the MaasWaalpad cycling highway was completed. A session was organized on April 4 2018, in which experts from various disciplines took part to critically review the entire trajectory, to discuss the most frequently heard points from stakeholders, to formulate official advice on those points, and to make process agreements about the follow-up. The entire route was completed in mid-September 2020. Since then, cyclists have been able to cycle from Cuijk to Nijmegen via the MaasWaalpad over the MaasOver bridge (Gemeente Heumen, 2018).

The total construction costs of the MaasWaalpad were € 21.9 million. The fast cycle route was financed by the municipality of Nijmegen (€ 400,000), Cuijk (€ 400,000), Heumen (€ 200,000), Mook en Middelaar (€ 400,000), the province of Limburg (€ 1.8 million), Noord Brabant (€ 3 million) and Gelderland (€ 8 million) (Provincie Gelderland, n.d.b).

This paragraph attempted to reconstruct the planning process of the MaasWaalpad, including an overview of stakeholders and parties involved. The next chapter dives deeper into resistance to cycling highways,

[7] More information about of the Bos&Kuil association can be found on their website.

and discusses how resistance to the MaasWaalpad arose, what the underlying reasons were, and what we can learn from this. Subsequently, chapter 6 discusses the participation process in more detail.


uitgezonderd

5 Why citizens resist to cycling highway projects

Section 2.1 introduced citizens' resistance as part of the literature study. The conceptual framework described in section 2.3 theorised how levels of participation, and levels of trust and problem-solving influence levels of citizens' resistance to location-based spatial projects. Based on the provided documents and conducted interviews, this chapter analyses the findings for first research sub-question:

Why do citizens resist to cycling highway projects?

During the interviews, participants and experts were asked about resistance which occurred during the planning process of the MaasWaalpad cycling highway, and in similar planning projects participants have been involved in. The first section of this chapter discusses the findings on how resistance generally arises. The second section summarizing the initial findings in relation to the first research sub-question.

5.1 The reasons behind citizens' resistance

Expert #3[8] explained three types of resistance which often are recognized in similar infrastructural projects. Firstly, there is reactions. This occurs there is a threat that their freedom will be hindered and feel limited in their possibilities. As pointed out in chapter 2.1, Schweizer et al. (2016) described this form of resistance to occur when citizens are expected to give up personal comforts against a temporary deterioration in their living conditions in favour of an alleged benefit to the community at large. Expert #2[9] adds that people often look very purely at their own interests, adding to what Schweizer et al. (2016) described as an effect of our individualized society. In case of a cycling highway project, it is often not about someone being against the cycling highway as a whole, but against having a bicycle path right behind their backyard or through their front yard, which according to Wolsink (2000) can be described as the only true NIMBY standpoint. This can also be a direct impact on their freedom, for example when a frequently used parking space needs to make place for the new cycling highway. Expert #2 adds that after that, all kinds of reasons are put forward to ensure that the plan might be cancelled in its whole, or that the trajectory will not be going over that one specific piece of land. What really matters to the people themselves is almost always about where they themselves are directly affected.

Secondly, there is scepticism which, according to expert #3, occurs when people do not (want to) believe the message or information they are being told. They doubt the sincerity of the message or information, or its source, adding to what Schweizer et al. (2016) described as citizens seeing the decision-making process as being non-transparent, inscrutable, or in the worst case corrupt. According to expert #2, a bad history of a past project or a bad experience with a previous planning process can also lead to this type of resistance. People are then not necessarily against the new project, but show resistance because of bad experiences with, for example, the municipality that is initiating the project. This is about communication and trust, which also effects the level of trust people have in the information or message provided by this source. Expert #2 indicates that communication is important when it comes to (preventing) resistance.

And thirdly, there is inertia, which, according to expert #3, arises when people are not supportive towards or interested in change. But according to expert #2, it is not always due to poor communication or self-

[8] Expert #3 is a behavioural expert at a consultancy firm.
[9] Expert #2 is an expert in the field of participation and environmental management.

interest. The question often asked is: 'Is this project really necessary?'. These findings are consistent with the fourth type of NIMBY resistance (Wolsink, 2000), described as resistance created by the fact that particular projects are considered faulty, without a rejection of cycling highways as a whole. This type advocates the positive aspects of cycling, but only under some conditions. This opposition is particularly limited to proposed cycling highways on specific locations, as it is based on concerns about the consequences of a cycling highway, on primarily the scenery and, to a lesser degree, on interference and nuisance. People here may be unconvinced about the suitability of the selected trajectory. They may expect interference, or they may consider the landscape on the chosen location too sensitive, especially when other available locations nearby are considered more suitable. Adding to the three types of resistance stated in the beginning of this paragraph, expert #3 concludes by stating:

> ***"It's actually a kind of change that people have no influence on. So, people are faced with a change that they didn't actually ask for. If people see the benefit of certain change, it is easier to accept than when people don't like it at all or when it affects their value system. Even if, for example, people believe that the planned trajectory [of a cycling highway] goes through a nature reserve, that's what they cling to: A piece of nature is at the expense of the plan. Then you can try convincing them by shouting arguments such as "yes, but that is not the case!", which of course only arouses more resistance. You really have to connect with the feelings people have, have to understand them."*** – Expert #3, own translation.

Looking more specifically at the case of the MaasWaalpad, several underlying factors can be recognized that led to resistance. One of the underlying factors that led to resistance to the MaasWaalpad were the negative aspects of change to the existing environment, and the citizens' fear of changes in the immediate living environment, which corresponds to the findings as described above.

An example of this is the modification of an unpaved path that ran through nature reserve 'Het Lierdal' (see figure 8). Official #3 explained there was an unpaved path along the trajectory of the newly planned cycling highway, which had a certain historical value for some of the people. According to official #1[10] resistance existed to the plans to change this part of the trajectory into a cycling highway. This resistance not so much came from the people who lived there, they were especially bothered by the unpaved path because it created a lot of dust in the summer, and a lot of mud in the fall. According to official #3, the residents living next to the unpaved path were happy that it was going to be paved. But other people were against the plans to pave this part of trajectory. For example, the Heritage Platform, a citizens' initiative that creates all kinds of walking paths in the area, and all kinds of people who just like to walk there, indicated they thought it was a shame that it would be paved, because it affects the landscape experience and the historical context of the area. They were also afraid that there would be insufficient space for tourists to walk safely along this path once it was turned into a cycling highway. This type of resistance seems to be in line with earlier discussed points by experts #2 and #3.

[10] Official #1 is a municipal official at the municipality of Nijmegen and also Involved in the planning process of the MaasWaalpad.

Figure 8. Bosweg, Malden. Above: unpaved path in 2016. Below: paved path as part of the MaasWaalpad in 2021. Photos: Cyclomedia.

Official #5[11] was less nuanced when asked about the resistance to the paving of the unpaved path. According to him local residents were inconvenienced by the unpaved, sandy path and it was therefore positive that it would be paved:

> ***"I knew those residents were done with that unpaved path; they were all gathering dust. And in winter there were potholes and puddles. So, I knew that this group [showing resistance against the plans] shouts all kinds of things, but they don't live there. They live a little further away. The local residents did see the positive sides: we can put asphalt in a certain colour, we can make the area greener. So that was quite a hassle, and then you also have to have the politics behind you to keep standing your ground. So, coming back very specifically to your question about what there was resistance about: the rural area, in order to retain that character."*** – #10, own translation.

In addition to resistance to the paving of the unpaved path, official #2 together with citizens #2 and #3[12] explained there were also objections to installing lighting on parts of the route of the MaasWaalpad. Largely because lighting would negatively affect the wildlife in the area during the night. Furthermore, they explained there were concerns that once changes to the area were made, this would lead to multiple other new projects and changes. But also, the historic value of the area should be respected. This was also

[11] Official #5 is a municipal official at the municipality of Mook en Middelaar and involved in the planning process of the MaasWaalpad.

[12] Citizens #2 and #3 are both members of citizens' association Bos&Kuil and were involved in the participation process of the MaasWaalpad.

recognized by citizen #1[13]. He explained that during the planning process a few officials demanded the realisation of four-meter-wide red asphalt to be applied. A lot of effort was put into getting that plan off the table, which in the end succeeded, according to citizen #1.

There were also concerns at other places on the trajectory of the planned MaasWaalpad about adjustments to people's immediate living environment. According to official #2, people in the municipality of Mook en Middelaar were quite passionately against redesigning that road there. Official #5 adds they have experienced similar forms of resistance in Malden, where people did not like the plans to transform their street into a bicycle street design. Citizens also went up the barricade at Molenhoek in the forms of signature actions and citizens manifesting themselves at meetings, an expression of resistance as previously described by Coppens et al. (2018) and Thijssen and van Dooren (2015). According to official #5, some people were even spreading misinformation to get others to resist to the plans as well. Some citizens were afraid of what their street will look like in the future, adding to the reactions type of resistance introduced by expert #3.

There was also resistance about the felling of trees, which can be seen as a change to nature in the direct neighbourhood:

> ***"Why in God's name had so many trees to fall for this fast cycle path. Very beautiful old thick trees all had to be cut down for the cycling highway. And in our opinion, more than half was unnecessary. They also created a lot of resistance among people in that municipality, in Mook [en Middelaar]. Why in God's name do so many of those beautiful trees have to go? We didn't get involved in that. We've seen those bits in the newspaper. That also applied again, the trees had already been cut, it was only then that people spoke up."*** – Citizens #2 and #3, own translation.

But there were also concerns about removing parking spaces, thus taking away some comfort from people who lived there and want to be able to park close to their homes, according to official #4[14]. This kind of resistance can be seen as an example of the type of resistance mentioned by experts #2 and #3 in the beginning of this chapter.

In addition to concerns about the impact of the MaasWaalpad on the immediate living environment, expert #1 (cycling expert at a consultancy firm), together with officials #1, #2 and #3 pointed out there were concerns about the uncertainty about the increase in traffic on the route, and that citizens worried about the consequences this would have for road safety. Citizens #2 and #3 even emphasized that if there ought to happen a serious accident on the cycling highway, they would sue the government:

> ***"The number of near misses in an hour, well, I think about 3 or 4 in an hour. And then it still goes well, but what we don't know is whether it always went well on the entire route. If it is a minor accident, then you read nothing about it. But I do remember that at the beginning we said 'if we warned you about the road safety situation and an accident would happen, you might even be able to hold the government liable for a wrongful act'. Because they have been warned a hundred times, and they have not taken sufficient measures to really make the situation safer. Then one day something happens, I would go to a personal***

[13] Citizen #1 is the president of a citizens' initiative Lierdal Actief committed to preserving the nature reserve Het Lierdal.

[14] Official #4 is a municipal official at the municipality of Cuijk and involved in the planning process of the MaasWaalpad.

> ***injury lawyer. Then I would say 'go hold that government accountable'."*** – Citizens #2 and #3, own translation.

In connection to road safety, there were concerns about an increase in speed on the route. According to official #2, some people had the idea that a cycling highway would be used as a kind of racetrack and users would cycle with high speeds on the MaasWaalpad. Citizens #2 and #3 also raised concerns about increasing speed, but also about mopeds that caused road safety issues. In addition to concerns and resistance about road safety, expert #1 and official #4 told there was also uncertainty about the consequences of the new connection for the social safety of people's immediate living environment. Part of the MaasWaalpad consisted of a new section of bicycle path to be constructed behind a few houses, where there was previously no bicycle path. Here, citizens were afraid this new connection would give thieves an easier way to reach the back of their gardens and house, increasing the risk of theft.

There was also disagreement about why the MaasWaalpad cycling highway had to follow this specific trajectory, focussing more on the fourth form of NIMBY resistance (described on page 41, or see table 1). Citizens #2 and #3 explained they were not against cycling highways, but that they had many objections to the realization of the MaasWaalpad at that specific location, with the alternatives that were available. They emphasized the options to optimize the possibilities that were available. Here, citizens #2 and #3 also addressed the resistance that arose due to poor communication towards residents and the fact that the plans for the MaasWaalpad had already been established at an early stage, without residents being aware of this.

And at last, according to officials #1 and #5, the terminology used also caused the necessary resistance to the project:

> ***"And an important thing to mention is that we as a municipality also run into the confusing terminology of the term cycling highway. Because that already gives a kind of qualification in advance, while it is not the intention that you have to cycle fast there all the time. The idea is that you create a comfortable bicycle route that invites people to take the bicycle more easily instead of the car. So actually, you should just stop using the term 'cycling highway', but it is also called 'efficient cycling route' or 'through cycling route', I believe in Utrecht. That is a better terminology than cycling highway, because using that terminology actually already generates some resistance in advance."*** – Official #1, own translation.

5.2 Initial findings in relation to the first sub-question

Based on the interviews it can be concluded that the resistance to the MaasWaalpad partly arose because residents found out that there were plans for the cycling highway, where the choice of trajectory had already been determined. Subsequently, concerns arose about the uncertainty of the changes that the MaasWaalpad caused to the immediate living environment of local residents and to nature in the area. Residents and action groups did not want the historical value of the area to be adversely affected by the arrival of the MaasWaalpad. People wondered why this route had been chosen and were concerned about what this would mean for road safety and social safety around their immediate living environment. When citizens start to question their degree of power and opportunities for active decision-making, Legacy (2016) opts this might cause those active citizens to step outside the government-provided participation processes and to oppose the planned development and sometimes the planning process through informal campaigning. In this case, citizens were not properly informed yet and felt they had to take action in order to protect their living environment, causing citizens to show levels of NIMBY resistance (Wolsink, 2000).

This also corresponds to documents that were written at the time. In a presentation given by members of the Bos&Kuil association resisting the plan for the MaasWaalpad in 2014, it appears that some members disagreed with the decision of the board and a motion was submitted by the members of the Bos&Kuil association. At the time, the consideration of the members was that the board should have immediately distanced itself from encroachment on the area by a four-meter-wide asphalt road, that the members should have been heard at the time, and that the original, untouched, unpaved, beautiful natural path, should not be replaced by a tightly asphalted cycling highway (*Snelfietsroute Cuijk-Mook-Nijmegen*, 2014). A report with objections to the trajectory of the cycling highway by local residents underlines the points made by the participants once again, showing their story has not been changed in recent years (M. Alink & A. Brouwer, personal communication, August 10 2014). A letter from 2015 from the Bos&Kuil association to the Municipal Executive of the Municipality of Heumen and the Municipal Executive of the Municipality of Mook en Middelaar also raises the same points that emerge from the interviews (Vereniging Bos en Kuil, 2015). Points mentioned in a response note from 2016 also correspond to what participants answered when asked about resistance, such as concerns about road safety and the hardening of the unpaved path through Het Lierdal (Gemeente Heumen, 2016).

6 The level of citizen participation

Section 2.2 introduced citizen participation as part of the literature study. The conceptual framework (section 2.3) theorised those citizens must be given the opportunity to participate during a project and that the way in which participation takes place influences social networks and the level of trust. Based on the provided documents and conducted interviews, this chapter analyses the findings of the second research sub-question:

Which level(s) of citizen participation were implemented during the planning process and how did this affect the level of citizens' resistance?

During the interviews, officials, experts, and citizens were asked about citizen participation which occurred during the planning process of the MaasWaalpad cycling highway. The first section of this chapter discusses the findings on citizen participation implemented during the planning process of the MaasWaalpad, followed by the second section reflecting on the level of participation (section 6.2). The third section (section 6.3) analyses the effect of participation on the level of citizens' resistance, after which the chapter closes by summarizing the initial findings in relation to the second research sub-question (section 6.4).

6.1 The participatory process of the MaasWaalpad

At the time of the MaasWaalpad (around 2010), provinces had a mediator role between national policy design and local policy implementation (Tisma & Meijer, 2018). According to expert #2 this means that the governmental institution is responsible for providing the information outwards. But expert #2 emphasises there are multiple ways one can share information at the beginning of a planning process. Some institutions share information when they only have a vague idea of what they are planning to do before they start making the plans more concretely. This can raise ambiguity, uncertainty and questions among citizens. Others share information at the stage in which plans are already made, giving more certainty about the project and planning process. However, this can lead to resistance because citizens experience that they are informed too late, have the idea that the plans have been worked out behind their back and that they have nothing more to contribute to. Thus, both ways of information sharing can be vulnerable. Expert #2 stated that participation starts by choosing whether or not to inform people, being the first step of the participation process.

Furthermore, expert #2 indicates that in the initial phase of a project, the research or exploration phase, it is not very logical to have residents actively participate on the end result. At this stage of the planning process, it is more about picturing which bottlenecks, opportunities or solutions citizens have. Here, newsletters, press releases in local newspapers, or (digital) information meetings can be used as a means to involve citizens. However, expert #6[15] warns that the first participatory step is not always informing residents. Expert #6 explains that if residents have first been able to refuse the plan and ask questions, only then will citizens be open to receive new information. This can come across as resistance, and it seems as if citizens do not want the plan at all. But expert #6 explains if that is not the case, citizens are simply not ready yet to receive information at that stage of the planning process. According to experts #2 and #6,

[15] Expert #6 is an expert on participation and facilitation at a consultancy firm.

it all comes back on being open, honest, and transparent as the leading governmental institution about the planning process ahead.

Looking at the documents, a file from the Molenhoek Village Council shows that the first information meeting about the plans for the cycling highway was held on October 1st of 2014. Residents living near the planned trajectory, various authorities, and associations involved were invited to the meeting. During this evening, all arguments for and against the Bosweg, Beukenlaan and Bissetsebaan trajectories were discussed. As a result of this evening, a trade-off was made for both trajectories. It was presented on 26 January 2015 at a second meeting to which the same group was invited. During that meeting, the steering committee was advised to choose the Bosweg trajectory as the main route (Dorpsraad Molenhoek, n.d.).

In March 2016, the municipalities of Heumen and Mook en Middelaar organized a participation meeting in three sub-areas, because each area had its own dynamics, qualities, and issues. The three areas consisted of Heumensoord, Het Lierdal (including the Kuilseweg), and Middelweg. Official #3 explained they wanted to inform the citizens of all three areas with the same level of information, within the same timeframe in order to ensure that everyone had the same information available to them in the foreseeable future. During the first meetings, an inventory was made of which opportunities and bottlenecks the cycling highway entailed.

In May, the project group organized a mirror group in each sub-area in which the first ideas for the design were discussed. The mirror groups consisted of a selection of residents, plot owners and stakeholders. The main goal was to check whether the design process was developing in the agreed and desired direction (Gemeente Heumen, personal communications, November 17 2016). In the initial phase of the project, the subject was very sensitive. According to official #3, it was extra important to involve citizens closely in the planning process. Therefore, fixed mirror groups were used to be able to mirror the progress of the planning process at all times. To guarantee an open and transparent planning process, official #3 explained that every time a step was taken in the design process, this was discussed with the mirror group.

The project group found it important that involved citizens could read back their contributions anonymously. Therefore, the project group made sure all contributions and questions were gathered in a response note, in which the project group included their reaction on how they dealt with it, what their answer was, and how it was implemented (or why not) in the design. One of these response notes shows that the second series of participation meetings took place just before the summer of 2016. During these meetings, the design proposal was presented for each sub-area. Participants were able to reflect on the designs and suggest areas for improvement. According to the same response note, the project group subsequently elaborated the design proposals. In November 2016, the progress of the design was again discussed with the mirror groups from each sub-area. The final design was then drawn up and presented during the third series of participation meetings in January 2017. The final designs formed the end result of the design and participation process (Gemeente Heumen & Gemeente Mook en Middelaar, personal communications, February 7 2017).

An invitation from 2016 also shows that the project group organized two walk-in meetings on 11 and 12 January 2017 to share the final designs with interested parties. It was indicated that no new designs were presented, but that the previously presented designs had been worked out in more detail. During the meeting, members of the project group were present to answer questions (Gemeente Heumen, personal communications, December 19 2016). The documents and interviews thus show that there have been several meetings with different levels of citizen participation.

In addition, official #3 pointed out that a separate meeting had been organised on the felling of trees in Heumensoord. Cutting down trees is always a sensitive issue, therefore official #3 explicitly included citizens in this process. They also invited Natuurmonumenten to explain the process of felling trees, as did the landscape architect involved. Besides, official #3 pointed out that it was explicitly stated that all trees that had to be cut would be compensated elsewhere.

6.2 Reflecting on the level of participation

But how did the participants reflect on the participatory process of the MaasWaalpad? During the interview, citizens #2 and #3 indicated that, according to them, the plans for the cycling highway came out of nowhere. Once they became aware of the plans, it seemed as if everything had already been decided:

> ***"At one point we heard that there were plans for a cycling highway. Everything was already thought out. The route had been determined and Haskoning had worked out exactly the pros and cons ... We could really only talk about the preconditions then."*** – Citizens #2 and #3, own translation.

However, citizen #1 is a bit more nuanced and looks back positively on the participation process. Citizen #1 explained that at the beginning of the planning process, the project group realised it had to involve local residents one way or another, and the project manager was well aware of this. And according to citizen #1, there was a good collaboration between citizens and the project group right from the start leading towards the final design of the MaasWaalpad:

> ***"We actually had a good collaboration right from the start to arrive at the design of the cycling highway."*** – Citizen #1, own translation.

Citizen #1 added that the participation started with an informative meeting where the tone was set, followed by some smaller meetings to discuss the design choices. Based on the conceptual framework (see Figure 5 in section 2.3) and the literature study (section 2.2), this can be described as lower levels of participation: consulting and informing citizens. Some fieldtrips were held with the presence of a designer, to discuss the choice of the asphalt colour of a part of the trajectory. According to citizen #1, there was consultation at every moment when something had to be decided that would affect the final design of the MaasWaalpad. However, citizens #2 and #3 pointed out that they did a lot of work to ensure good participation. Remarkably, this completely contradicts what citizen #1 indicated:

> ***"… it's because [citizen #2] happened to find out there were developments. They were not brought to the public. [Citizen #2] found out that there were developments around this cycling highway. Then we had to pull strings to get the report to the surface. And the citizen participation that has been here, I think I can put it that way, was not created by politics, but created by us. We have created citizen participation. And we have been pulling at that municipality and parties for just as long... We also attended action meetings. We have created citizen participation in all kinds of ways. And then, slowly but surely, the municipality also came up with initiatives."*** – Citizens #2 and #3, own translation.

Meanwhile, official #3 looks back positively on the participation process, adding to the comments made by citizen #1. According to official #3, the focus throughout the planning process was heavily on participation, being the number one priority. The design process, including the mirror groups, was specifically thought out. Official #2 added that during the meetings, effort and time was really taken to provide tailor-made solutions for some of the citizens involved. That is why, according to official #3, not everything had been determined and drawn up in advance resulting in a ready-made plan, but the choice was made to start the design process completely blank. Though, according to officials #3 and #5, with the

boundary condition that the cycling highway had to be realized, including clear principles that had to be met. But above all, citizens were invited to indicate where they saw opportunities and risks, which would be taken into account as best as possible.

> ***"We have made a real effort to be very open and transparent and even if things were not possible, we also stated this honestly. For me, that was the most important thing for the entire process, that the participation was simply well organised."*** – Official #3, own translation.

All officials mentioned they were very happy and satisfied with the cooperation between the provinces and municipalities involved. Official #3 even goes further by stating that the success of the participatory process is largely due to the close cooperation between the various government agencies. Official #1 emphasized that it was a difficult project because the bicycle highway runs through several provinces. If it stays within one province, it is also difficult, because then a project can run through several municipalities. But if the project runs through several provinces, it only makes it even more difficult: On the one hand, administratively, because how hard is each government willing to work for that project. On the other hand, according to official #1, there are also cultural differences between municipalities and provinces.

Expert #1 adds that it has been important to the success of the project that municipalities have held together and worked closely together. It also helped that the city region ensured that there was a lot of contact at official and administrative level between all parties, so that when there was a setback somewhere within the project, the government authorities could support each other. According to expert #1 and official #1, this resulted in better collaboration throughout the planning process. Official #3 adds that it is quite unique that the municipalities have collaborated so intensively. Normally when a bicycle highway project crosses a municipality, agreements are made about who does what. But for the MaasWaalpad it involved an integral project team, which means that, according to official #3, the project did not stop at the municipal border. In this way, the various municipalities also knew from each other what was happening in terms of resistance and participation on different sections of the route, and here too they could support each other in the process where necessary. Official #5 also indicated that they saw the entire project as one integral whole.

6.3 Effect of participation on the levels of citizens' resistance

Expert #2 made a number of recommendations on how participation can change the level of resistance. For instance, if resistance is present or rising, it is advised to talk to those citizens as quickly and as effectively as possible. Using this kind of participatory tools, citizens can express their concerns creating space to continue the conversation. According to expert #2, a good substantiation and preliminary research of a project is also important, also in the legal field. If a plan is missing a well-researched substantiation, citizens will notice that and may use it to resist the opposed plan or project. Expert #3 adds it is important to recognize resistance at an early stage, in order to find the right participatory tools suiting the level of resistance at hand. Furthermore, expert #3 explained it is important to enter into a conversation to investigate what is actually going on with people, how they feel, how they think about the project, and how this manifests itself.

But how did participation change the level of resistance to the MaasWaalpad? Adding to experts #2 and #3, official #1 states that in order to decrease the level of resistance to the MaasWaalpad, it was important to have a good discussion about the usefulness and necessity of the cycling highway. It was important to find the balance on the public interest and the private interests that play a role. This ties in with the story

of expert #2, stating that it is important to start a conversation. Expert #6 summarizes it in the following way:

> ***"First of all, you have to listen: that's the stage when people are confused, angry, and have a message. As a government, listen to what residents have to say. Just listen, just be there. Because this already helps residents to take it a step further. And only when they have finished talking, you as a government can ask questions and share information. Look at the needs of the residents, the trick is to find out what is going on. People are especially angry when they feel involved too late. Then they feel compelled to act."*** – Expert #6, own translation.

Subsequently, expert #3 indicated that transparency about the integrity of the project gives people confidence in the project and that they can feel connected to it. Expert #5 adds that clear communication towards residents, openness and independence in the project are also important to increase resistance. In case of the MaasWaalpad, official #3 describes this as follows:

> ***"In the beginning, a lot of attention was drawn to all kinds of risks or obstacles. And that gradually decreased. And I think that's because there was a certain amount of confidence that we wanted to approach the project in a careful way. And that it wasn't like 'we're going to build that road here, period'. But that we did have a good ear for what was going on among citizens and those associations."*** – Official #3, own translation.

However, citizen #1 makes critical points about how municipalities generally involve citizens in a project, pointing out the best way for a municipality is to start involving citizens at a very early stage of a project, asking citizens for their advice on a problem. According to citizen #1, this would result in a completely different conversation at the stage before resistance even arises, but not all municipalities would be comfortable enough to work this way. Official #5 indicates, however, that a good strategy and an intensive process have actually contributed to dealing with resistance and increasing the levels of resistance to the MaasWaalpad. According to official #5, the extensive participatory process, which took almost a year, resulted in the involvement of residents and associations, decreasing the level of resistance. Besides, including an external project leader and an external facilitator at some of the meetings emphasized the impartiality and openness of the project team towards the residents, resulting in more trust towards the project and less resistance. Official #5 further indicated that there was a lot of resistance to the plan in the beginning, but that the participation process ensured that the resistance was reduced by discussing the actual design and giving citizens involved the option to choose and co-decide, for instance, on the colour of the asphalt at a part of the trajectory.

> ***"The position of the resistance was initially 'no cycling highway through Het Lierdal, and no asphalt'. If you then stick to a four-metre-wide red asphalt path, politics won't go along either with the original plan."*** – Official #5, own translation.

The plans for a wide red asphalt cycle path therefore led to resistance at the time. Citizen #1 describes conversations and participation changed this. Citizen #1 described that the project group listened to the objections to the initial wide red asphalt design, resulting in a yellow asphalt design instead. But there were objections to the design at other parts of the trajectory as well. But because the project group listened to the objections and sought suitable solutions together with the involved citizens, resistance changed into good collaboration.

6.4 Initial findings in relation to the second sub-question

In the previous sections, several participants indicated that they wanted to go through an open and fair participatory process. It was clear that there would be a cycling highway. But in addition to a few preconditions, the design was blank at the start of the participation process. Residents and stakeholders were able to share their concerns and input with the project group during the meetings. Here, lower levels of participation were used: informing and consulting citizens. A mirror group (focus group) was used to mirror the progress of the project and to make certain choices for the design of the route, such as choosing the colour of the asphalt for the part of the route through Het Lierdal. Here, higher levels of participation were implemented in forms of delegated power and even some degree of decision-making. In order to reach high levels of trust among citizens and interest groups, participation was used to improve legitimacy of the authorities involved and improve the effectiveness in governance and justice. Including participatory elements in decision-making processes therefore created transparency and acceptance (Fung, 2015), but as well improved the quality of the outcome of the design of the MaasWaalpad by incorporating local citizen knowledge.


LIERDAL
OPEN GROEN
voor mens en natuur
WONINGBOUW
SPORTVELDEN
LEVEN IN HET
LIERDAL
Samen doen
maakt mens en groen

7 Influencing the outcome of the planning process

The conceptual framework (section 2.3) theorised that participation can influence the level of citizens' resistance. But to what expend does resistance and participation influence the outcomes of the planning process? Based on the provided documents and conducted interviews, this chapter analyses the findings for the third research sub-question:

How did citizens' resistance and citizen participation influence the outcome of the project?

The next section describes how participation and resistance influenced the MaasWaalpad planning process, after which the chapter closes by summarizing the initial findings in relation to the third research sub-question.

7.1 How participation and resistance influenced the project

Chapter 6 ended by stating that participation changed most of the resistance into citizens thinking along with the project, even giving them the power to decide specific parts of the design. Therefore, the MaasWaalpad has not become a 4.5-metre-wide red asphalt cycle path throughout the whole trajectory, but on several parts of the route the cycling highway has been integrated into the landscape character thanks to participation.

In the previous chapters, multiple participants noted the project faced strong resistance in the early stages of the project. Citizens #2 and #3 noted that the project group had to deal with their resistance, because of the well documented way they put forward their objections. According to citizens #2 and #3, this way the project group could not avoid their objections. So, the objections needed to be channelled on both sides. Therefore, citizens #2 and #3 proposed a lot of alternative solutions towards their objections, including an alternative for the use of red asphalt and ensuring safety for pedestrians, among others. According to officials #1 and #5, part of the trajectory of the MaasWaalpad running through Het Lierdal has been fitted with nature coloured asphalt, including hiking trails separated by hedges parallel to the cycling highway, enhancing the development of the quality and attractiveness of Het Lierdal and meeting the demands to guarantee safety for pedestrians. Official #3 explains that this involved intensive collaboration with interest groups and associations:

> ***"'Samendoen maakt mooi en groen', that was the citizens' initiative. They implemented all kinds of hiking trails there and they were very keen to take it upon themselves, which they did. And they have been very intensively involved. I also kept them on board the whole time about what steps we have taken and often asked for their opinion. And at the end of the process, they did say that it was an example of how government should cooperate with citizens. So, they were very satisfied. … And the asphalting of the unpaved path has taken place, which people found very difficult. But by opting for a look that suits a sandy road, where we have tried as much as possible to match the colour and coarseness of the structure of the original sandy road. Because we also handled that part very carefully, I think there was much less resistance. And I also have the idea that at least part of the Bos&Kuil association can look back on that design process with great satisfaction."*** – Official #3, own translation.

According to official #3, the participatory tools implemented resulted in no official objections to the plan at the end of the participatory process. According to official #3, the extended participatory process resulted in not a single objection being lodged during the entire permit process of the MaasWaalpad. Informing citizens duly about having to change multiple permits in order to be able to realise the project, resulted in zero objections. But maybe one of the biggest influences that the participation process has had is the actual integration on some parts of the trajectory. Official #1 noted that the project group has fulfilled adjustments to the design asked for by residents as much as possible, for example whether or not to remove a specific tree. However, official #1 also noted not all wished could be granted and not everyone could be satisfied, according to official #1:

> ***"… some people don't want anything, so you can't deliver custom work. But as far as possible, we have provided customization."*** – Official #1, own translation.

In addition to integrating the plan into the environment, changes have also been made on other parts of the route. For example, expert #1 and official #4 describe that the design has been slightly modified on part of the trajectory, so that residents would experience less nuisance. According to expert #1 and official #4, some residents objected to the MaasWaalpad, because there was a pendulum in the road design, resulting in the road coming too close to their homes. To allay their concerns and objections, the road design has been modified and the pendulum in the road has been moved further away from their homes.

Resistance even led to adjustments outside the scope of the cycle highway plan. According to official #3, some residents at Bosweg insisted that a small stretch of road would be widened. They saw many near-traffic accidents and wanted something to be done before one day the situation would lead to real injuries. If the project group would not meet their requests, they were prepared to make an official objection. At the time, official #3 indicated that the adjustment initially was not part of the scope of the project, but if the municipal executive and province agreed, and if it was financially possible, it could be implemented in the project. Which, according to official #3, succeeded in the end. Citizen #2 pointed out, however, that these adjustments were only made at places residents had objected and shown resistance:

> ***"… the municipality had promised to make my exit two meters [wider], so that I can drive the car with the nose out without being immediately on the bike path. So, they have moved the cycling highway slightly. But that neighbour didn't complain about that, and they didn't apply it there."*** – Citizen #2, own translation.

Other design choices have been changed due to resistance. According to officials #2 and #5, Staatsbosbeheer and Natuurmonumenten objected to the implementation of streetlamps at the parts of the trajectory crossing nature reserves. During the night, this lightning would cause negative aspects on nature and wildlife. According to officials #2 and #5, the plans were not pushed through, but it was decided not to install any streetlamps, except at some intersections to safeguard the road safety and prevent accidents to happen at those intersections at night.

Expert #1 concluded that the resistance and participation had a significant effect on the final design of the cycling highway. Citizen #1 indicates that preserving the natural character of the area has been very important, but concludes by indicating that good contact with the municipality has facilitated the process:

> ***"Read the landscape and adapt to the landscape. And don't pretend that landscape isn't there. … what also helped is that the province of Gelderland covered the Gelderland part. The province of Limburg covered the Limburg part. And the province of Brabant covered the Brabant part on the other side of the***

> ***Maas. So, you already had more counterplay. And so, you had our municipality here that covered everything in Gelderland. So, then you had a one-on-one relationship with the province about this, so that made things easier."*** – Citizen #1, own translation.

Above, citizen #1 touches slightly upon the coherence of cooperation between the different levels of government, concluding that the municipality was in direct contact with the province, which had a positive effect on cooperation and participation.

7.2 Initial findings in relation to the third sub-question

The analysis shows that resistance and participation have had an influence on the actual realization of the MaasWaalpad. It did not necessarily affect whether the plan was actually realised, but it did influence the design of various parts along the trajectory. Resistance in the early stages of the planning process led to combining low levels of participation with high levels of participation (Arnstein, 1969) creating a legitimate form of citizen participation. Besides, the participation further improved legitimacy of the governmental authorities involved (Fung, 2015). The result is a route that is integrated into the landscape, which most participants look back on with satisfaction.


Maasvallei pad
Cuijk

8 Discussion

In this chapter, I review my methodological approach and stress the importance of increasing the knowledge on participatory processes of and resistance to cycling highway planning projects. Especially in the light of the expansion of the number of cycling highways in the coming years and the fact that citizen participation will play a greater role after the introduction of the Dutch Environment and Planning Act.

First, I want to address the lack of scientific literature on resistance to cycling infrastructure projects, compared to the scientific literature available on, for example, energy projects such as windmill farms. The geographical complexity of cycling highways makes direct comparisons with other location-based spatial projects difficult. The geographical properties of a cycling highway are more complex than an average location-based spatial project, mainly because in cycling highway projects the resistance is spread over different locations. This complexity makes it difficult to make a direct link between location-based spatial projects and cycling highway projects. During the writing of the literature review, this made the process of finding suitable comparisons between existing scientific literature difficult. However, this was ultimately successful.

Different methods were used for the interviews. Most of the interviews were conducted online via Microsoft Teams. When an interview is conducted online, one is dependent on a stable internet connection and working equipment at both parties. This did not go smoothly with every interview. For example, the connection sometimes dropped, or the image or sound sometimes did not work for one of the parties. Besides, I would like to point out that it is difficult to interpret body language and facial expressions in online meetings. It is unclear what the effect of this is on results. By communicating clearly about the digital flaws and scheduling enough time for the interview, it was tried to remedy these aspects for most cases.

When the Covid-19 measures were largely released, it was possible to conduct the interviews with the citizens on location. The advantage of this is that they could immediately point out things they were talking about, and more context was created for the environment. However, this made it more difficult when listening to the interviews and transcribing them: Often the interviewee referred to a location or dangerous point by using words like 'here' and 'there'. Only people who were present at the interview are able to put this into context. To keep the transcripts as transparent as possible, this context has been added between [ ] when transcribing.

Of the twelve interviews conducted, one interview was conducted during which two participants were interviewed simultaneously. At the time of the invitation to participate in the interview, they indicated that they would like to do this together. On the one hand, this gave the participants the opportunity to complement each other and to respond extensively to the interview questions. On the other hand, this made it difficult to transcribe and analyse the interview afterwards. Besides, I would like to point out that it is unclear whether and how the participates influenced each other their answers in a negative way. For follow-up studies, it is recommended to conduct interviews with a maximum of one person at a time. In exceptional situations, it should be taken into account that participants may influence each other their answers and transcribing and processing interviews with multiple participants takes extra time. This should be taken into account when planning the research.

Because the case study has been chosen in a methodological way, the findings can be compared with cycling highway projects that meet the same requirements. The participants looked back with satisfaction

on the planning process of the chosen case. This can therefore serve as a good example for future cycling highway projects, with the same complexity. However, the role of the different government levels on the participation process in cycling highway projects can be further investigated in follow-up studies, so that it can be compared with more general planning projects to contribute to knowledge gathering and sharing in the field of participation and resistance in cycling infrastructure projects.

The way in which the social network at neighbourhood level influences trust in a project and the different resistance levels, as described in the conceptual framework, are less prominent in the chosen case. However, the literature study shows that this can be a factor in the development of resistance to a planning project. In the case of the MaasWaalpad, resistance was shown through citizen action, mostly within their citizens' organisation and in contact with the municipality. Maybe these citizens could be seen as a form of affecting the social network at the neighbourhood level. I must emphasize that I find it a pity that this was not clearly apparent in the chosen case, while this is apparent from the literature study. I am therefore curious to see how this is reflected in other studies and cases. Follow-up research into comparable case studies is needed to support and substantiate this finding, thereby testing and adapting the conceptual framework where necessary.

I am curious how our knowledge in the field of participation in and resistance to bicycle infrastructure projects will develop in the coming years, especially for cycling highways. Compared to other countries, the Netherlands leads the way when it comes to facilitating cyclists and the quality of our (national) cycling network, and other countries often use this knowledge. I therefore see the Netherlands as obliged to continue to develop its knowledge in, among other things, the planning processes related to the bicycle theme, so that we can disseminate this knowledge at both a practical and scientific level.

9 Conclusion

To contribute to a better understanding of citizens' resistance to cycling highway projects, this research focussed on how the participatory process during the planning process of a cycling highway changes the level of citizens' resistance to the cycling highway project. This chapter answers the sub-questions and main question (section 9.4) based on the analysis, literature review, and conceptual framework (section 2.3). This chapter concludes by presenting recommendations for future cycling highway projects.

9.1 Why do citizens resist to cycling highway projects?

When looking at location-based spatial projects in general, the analysis in chapter 5 showed that resistance arises against plans that affect the immediate living environment of local residents or nature. Resistance also arises because of incorrect communication with residents. Bad experiences in the past in the field of citizen participation can also lead to resistance to a new project. In addition to self-interest, the methods used of informing and communicating influences the development of resistance to a plan.

Based on the analysis in chapter 5, it appears that the resistance to the MaasWaalpad initially arose because the trajectory for the cycling highway had already been determined at the provincial level. At the time, local residents were not fully informed about these plans. Then, resistance was mainly about the choice for the trajectory of the MaasWaalpad and why the other available options were not chosen, which according to some residents were safer. At a later stage during the planning process, this resistance changed towards objections to adaptations to nature and the immediate living environment of some residents. The terminology chosen also led to some resistance. By taking these points into account at an early stage, a large part of the resistance can be prevented or remedied at an early stage of the project.

Looking at the types of NIMBY resistance presented in the conceptual framework (section 2.3), some types of NIMBY resistance were present in the case of the MaasWaalpad, mostly reflecting the only true NIMBY standpoint (Wolsink, 2000) and the level of NIMBY where citizens consider particular projects or decision-making choices faulty without rejecting the cycling highway concept as a whole. Some resistance described in section 5.1 touched upon citizens seeing the decision-making process as being non-transparent, inscrutable or even corrupt (Schweizer et al., 2016), resembling the level of trust and problem solving described in the conceptual framework (section 2.3). However, how the social network at the neighbourhood level influenced the level of trust and level of resistance is less visible in case of the MaasWaalpad. Some of the participants slightly discussed how individual citizens or civil organizations influenced the level of resistance, but none of the participants spoke clearly about forms of use of banners or posters against the cycling highway. Resistance mostly showed itself through presentations and reports by active citizens.

To conclude, the literature study (section 2.1), conceptual framework (section 2.3) and analysis of the interviews and documents (chapter 5) show that citizens resist to a cycling highway project when confronted with forced acts and when they are not fully informed at the early stages of the planning process. In case of the MaasWaalpad, this led to resistance in the initial phase of the project. The analysis and literature study show that citizens want to influence decision-making so that their objections and concerns are addressed as much as possible, shifting the level and focus of resistance during the planning process.

9.2 Which level(s) of citizen participation were implemented during the planning process and how did this affect the level of citizens' resistance?

Chapter 2.2 addressed planners sometimes use communication as a tool hoping that citizens will approve their plans or at least tolerate them. Arnstein (1969) argued that solely informing citizens and calling this a participatory process can be seen as tokenism and real participation can be recognized in forms of partnership and delegated citizen power. However, multiple officials expressed the importance of getting all citizens involved at the same information level using communication, which helped making citizens understand the need for the cycling highway project, corresponding the arguments of Schweizer et al. (2016).

Several participants indicated that they wanted to go through an open and fair participatory process. It was clear that there would be a cycling highway. But at the start of the participatory process, in addition to a few preconditions, the design was blank. Residents and stakeholders were able to share their concerns and input with the project group during the meetings. A mirror group (focus group) was used to mirror the progress of the project and to make certain choices for the design of the route, such as choosing the colour of the asphalt for the part of the route through Het Lierdal. In order to reach higher levels of trust among citizens and interest groups, participation was used to improve legitimacy of the authorities involved and improve the effectiveness in governance and justice. Including participatory elements in decision-making processes therefore created transparency and acceptance (Fung, 2015), but as well improved the quality of the outcome of the design of the MaasWaalpad by incorporating local citizen knowledge.

The analysis of the documents and interviews mainly show that a mix of levels of participation was chosen in order to guarantee the most open, transparent, and honest participatory process. This contributed to the fact that the project hardly encountered any resistance at the end of the planning process and got people to think along instead of to resist. The MaasWaalpad participatory process started with seeking advice and providing information. The focus groups were more a combination of mirroring the progress of the project, which can be seen as testing ideas and seeking advice, but also taking decisions. This gave citizens the possibility to advocate and lobby for an alternative set of proposals (Legacy, 2016). The latter is a higher form of participation where, in this case, the focus group even had the power to choose. This also contributed to making citizens part of the MaasWaalpad project and strengthened the bond between the project and citizens involved (CROW, 2014; Schweizer et al., 2016).

Paragraph 2.3 introduced the conceptual framework of this research, describing an adaptation of the split-ladder of citizen participation. When the conceptual framework is compared with the findings from the analysis, it seems that the chosen levels of citizen participation implemented in the participatory process of the MaasWaalpad fall in the green part of the ladder (see also figure 5). It also showed that no form of 'fake' citizen participation (the red part of the conceptual framework, figure 5) has been used to manipulate citizens in believing they were participating, in order to push the project through, resulting in a decrease of citizens' resistance throughout the planning process.

Arnstein (1969) emphasized that lower levels of participation should always be combined with higher levels to become legitimate forms of participation. Looking at the conceptual framework (figure 5) in section 2.3, this means combining levels of participation from the following forms: consulting, informing, educating, delegating power, and taking decisions. In case of the MaasWaalpad, consulting and informing citizens were used to tackle the resistance which the project experienced in the early stages. Higher levels of participation were deployed throughout the remaining part of the planning process, such as giving

citizens the opportunity to co-decide (forms of delegated power), for example about the colour of the asphalt at part of the trajectory through Het Lierdal. Combining lower levels with higher levels of participation throughout the planning process of the MaasWaalpad, the participatory process can therefore be seen as a legitimate form of citizen participation.

9.3 How did citizens' resistance and citizen participation influence the outcome of the project?

Resistance and participation influenced the planning process. According to the participants, formal power lay with the steering committee and project group during the entire process: the plans for the cycling highway were present and eventually realized. It does appear from the answers of the participants that in the beginning there was a lot of informal power with the people who resisted the plans. During the participation process, the focus group was also largely empowered, because they could actually make choices that influenced the end result. By working together, a shift of power back to the project group was provided. Looking at the bottom part of the conceptual framework (section 2.3, figure 5), a shift from lower levels of trust towards higher levels of trust in the project and planning process can be recognized, thanks to the combination of multiple forms of citizen participation. Furthermore, this resulted in lower levels of citizen resistance at the end of the planning process of the MaasWaalpad.

The findings show that resistance and participation have had an influence on the actual realization of the MaasWaalpad. It did not necessarily affect whether the plan was actually realised, but it did influence the design of various parts along the trajectory. The MaasWaalpad runs through several municipalities and provinces. The trajectory was already determined at the early stages of the planning process and was not up for discussion. This caused concerns and resistance on parts of the trajectory at the early stages of the planning process. The resistance that was present at several locations had influence on the planning process, resulting in a well-considered participation process. Parts of the route have been deviated from the national guidelines for a cycling highway due to input from citizens, stakeholders, citizen initiatives, groups, and the mirror group. According to the participants, the result is a cycling highway that deviates from the national guidelines but is integrated into the landscape and meets the wishes of several residents, who have discussed their objections and concerns during the planning process.

9.4 How does the participatory process during the planning process of a cycling highway change the level of citizens' resistance to the cycling highway project?

Although cycling highway planning projects are often confronted with public resistance (Beijnink, 2021; EenVandaag, 2019; Guit, 2021; Hellegers, 2021; Hilbers et al., 2021; Leeflang, 2021; Polman, 2018; Redactie, 2019; Savenije, 2020; Schilthuizen, 2022), all officials involved in the planning process of the MaasWaalpad look back satisfied on the cooperation between the provinces and municipalities involved. Using a mix of levels of participation guaranteed the most open, transparent, and honest participatory process. This contributed to the fact that the cycling highway project hardly encountered any resistance at the end of the planning process and got people to think along instead of to resist. Citizens' resistance changed from objecting the trajectory of the cycling highway towards objections to adaptations to nature and the immediate living environment at a later stage of the planning process. Resistance and participation have had an influence on the actual realization of the MaasWaalpad. The result is a route that is integrated into the landscape, which most participants look back on with satisfaction.

Looking at the types of NIMBY resistance presented in the conceptual framework (section 2.3), some types of NIMBY resistance were present, mostly reflecting the only true NIMBY standpoint (Wolsink, 2000) and

the level of NIMBY where citizens consider particular projects or decision-making choices faulty without rejecting the cycling highway concept as a whole. However, how the social network at the neighbourhood level influenced the level of trust and level of resistance was less visible in the case study. Comparing the conceptual framework with the findings from the previous sections, it seems that the chosen levels of citizen participation implemented in the participatory process of the case study fall in the green part of the ladder (see also figure 5). It also showed that no form of 'fake' citizen participation (the red part of the conceptual framework) has been used to manipulate citizens in believing they were participating, in order to push the project through, resulting in a decrease of citizens' resistance throughout the planning process. Looking at the bottom part of the conceptual framework, a shift from lower levels of trust towards higher levels of trust in the project and planning process can be recognized, thanks to the combination of multiple forms of citizen participation. Furthermore, this resulted in lower levels of citizen resistance at the end of the planning process of the MaasWaalpad.

By properly implementing a fair participation process at the beginning of the planning process, citizen resistance is reduced. As a result, citizens become part of the planning process, in which it is important that citizens have the feeling that they actually have influence and can participate in decision-making in the project. This ensures a good participation process with ultimately a project result that everyone can agree with and accept. The case study shows that combining multiple participatory tools result in real forms of participation and lower levels of citizens' resistance to the cycling highway project towards the end of the planning process. Here it is important to notice that the process of giving citizens the space to express their objections and concerns should be part of the early stages of the participatory process. In case of the MaasWaalpad, participation resulted in several design features deviating from the original design and national design guidelines. Therefore, almost all participants look back with satisfaction on the collaboration, participation and the end result.

9.5 Recommendations

This research gives some useful insights for future cycling highway projects on how citizens' resistance can influence the planning process in a positive way through collaboration during the participatory process. Following are some recommendations based on the findings described in the previous sections.

The success of the planning process of a cycling highway project depends on a good participation process. Development of the participation process must be part of the planning process, in which the government authorities involved organize and implement this together as a whole. Therefore, it is important that during the entire planning process, officials should look beyond their own municipality or provincial border. Hence, it is recommended to have a clear division of roles between the provinces and municipalities involved, especially in the area of citizen participation. Here, it is important that government bodies reinforce and help each other, resulting in high citizen involvement through fair participatory process with a supported end project result.

When it comes to the implementation of the participation process, it is recommended to combine different levels of participation throughout the planning process so real participation is achieved. In particular, at the start of the project it is important that sufficient space is given to involved citizens and stakeholders to express their concerns and objections. Only when space has been given for this, can one start to participate about solutions.

Furthermore, it is important to learn from already completed cycling highway planning processes how and if participatory processes dealt with citizens' resistance. By looking at what went well and what went badly

during the participatory processes of completed cycling highways, mistakes can be avoided, leaving more time and money for a good planning process.

Finally, it is important to note that national design guidelines are not laws, and it is therefore possible to deviate from them (with justification). By ensuring that the cycling highway is locally integrated into the landscape, while retaining the cycling comfort, attractiveness, directness and safety of the route, a lot of resistance can be counteracted without this having a negative effect on the end result and the function.

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Appendix A Initial coding scheme NVivo

Initial codes

Name	Files	References
Underlying reasons for resistance	15	50
Participatory process MaasWaalpad	18	43
Planning process	12	25
Influence of participation	10	23
Dealing with resistance	9	20
Resistance MaasWaalpad	6	17
influence of resistance	9	13
involved people and parties	9	12
Underlying reasons for the project	5	12
Involvement MaasWaalpad	6	11
bridge	4	10
fear of road safety	5	10
infrastructural adjustments	5	9
power relations	6	9
Trajectory	5	9
cooperation governments	5	8
Example resistance	3	6
fear of speed	3	6
openness and honesty	4	6
citizens' initiative	2	5
decreasing resistance	4	5
Function	5	5
collaboration	2	4
finances and design	4	4
mirror group	4	4
NIMBY	4	4
Reporting the participation process	4	4
Terminology leading to resistance	4	4
Dealing with change	2	3
Joseph Campbell - A Hero's Journey	1	3
landscape elements	3	3
level of participation and resources to be deployed	2	3
preliminary planning process MaasWaalpad	3	3
process approach	3	3
resistance	2	3
signage	2	3
snowball effect	1	3
Terminology	3	3
variant study	3	3
approachability	1	2
COVID-19	1	2
Example participation process	1	2
fear of increased insecurity	2	2
Historic Roman Route	2	2
History	1	2
influence on decision-making	2	2
Preperation planning process	2	2
recognize resistance	2	2
Roger's Curve	1	2
story	2	2
4 kinds of people	1	1
afraid of change	1	1
available negotiating space	1	1
bad preliminary	1	1
Change in resistance	1	1
Deep Democracy Method	1	1
design guidelines	1	1
Different execution by contractor	1	1
Environmental management and cycling	1	1
Fitting into the landscape	1	1
have a good conversation	1	1
History and treats Lierdal	1	1
influence of history	1	1
legal aspect	1	1
putting interests in perspective	1	1
resistance quote	1	1
restrictions around track	1	1
structural vision	1	1
subsidy	1	1
traffic safety junction	1	1
types of resistance	1	1
way of approachability and contact	1	1
When to involve and inform stakeholders	1	1

Appendix B Overview of documents used for document analysis

Name	Type	Size
20140521 Snelfietsroute-Cuijk-Mook-Nijmegen.pdf	Adobe Acrobat Document	38.275 KB
20140617 BK-ELV-v2-concept.pdf	Adobe Acrobat Document	158 KB
20140810 Bezwaren tegen voorkeurstracé.pdf	Adobe Acrobat Document	7.571 KB
20140901 Factsheets Cuijk-Mook-Nijmegen.pdf	Adobe Acrobat Document	2.296 KB
20150413 BenWHeumenMM2.pdf	Adobe Acrobat Document	77 KB
20160000 Dossier Snelfietsroute Cuijk-Mook-Nijmegen.pdf	Adobe Acrobat Document	597 KB
20160317 uitnodiging stakeholdersoverleg.pdf	Adobe Acrobat Document	389 KB
20160321 Heumensoord Kern Malden.pdf	Adobe Acrobat Document	2.192 KB
20160321 Uitnodiging aanwonenden snelfietsroute definitief.pdf	Adobe Acrobat Document	288 KB
20160513 uitnodiging Snelfietsroute tweede bijeenkomst.pdf	Adobe Acrobat Document	227 KB
20160622 Reactienota 1.pdf	Adobe Acrobat Document	650 KB
20160627_Poster Middelweg_3.pdf	Adobe Acrobat Document	201.885 KB
20160629_Poster Lierdal_def.pdf	Adobe Acrobat Document	12.111 KB
20160711_Poster Malden-Oost_def.pdf	Adobe Acrobat Document	47.888 KB
20161104 Uitnodiging spiegelgroep deelgebied Lierdal.docx	Microsoft Word Document	5 KB
20161104 Uitnodiging spiegelgroep deelgebied Middelweg.docx	Microsoft Word Document	5 KB
20170111_eindpres_sfr_malden o en lierd_v2_def.pdf	Adobe Acrobat Document	47.657 KB
20170111_eindpres_sfr_middelweg_v2_def.pdf	Adobe Acrobat Document	12.834 KB
20170207 Reactienota 2.pdf	Adobe Acrobat Document	587 KB
20180703 Reactienota 3.pdf	Adobe Acrobat Document	412 KB
persbericht 1 BOK SFR start.docx	Microsoft Word Document	6 KB
uitnodiging presentatie DO spiegelgroepen en stakeholders.pdf	Adobe Acrobat Document	785 KB