Steps towards understanding perceived manipulation in environmental government communication

A preliminary study

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Date of submission:	May 28th, 2024
Date of defence:	June 12th, 2024

TU Delft

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By

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in partial fulfilment of the requirements for the degree of

Master of Science
in Engineering and Policy Analysis

at the Delft University of Technology,
to be defended publicly on Wednesday June 12th, 2024 at 3:00 PM.

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This thesis is confidential and cannot be made public until June 13th, 2024.
An electronic version of this thesis is available at http://repository.tudelft.nl/

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Preface

Starting my academic journey with a bachelor's degree in "Medische Natuurwetenschappen" at the Vrije Universiteit Amsterdam, I initially focused on the beta sciences. However, my interest gradually shifted towards the gamma side of research. My current master's program in "Engineering and Policy Analysis" sparked my interest in grand challenges, such as the energy transition, and allowed me to blend analytical skills with philosophical and psychological approaches in this thesis.

My interest in one of the domains of my master's thesis was sparked by the EPA course 'Intercultural Relations and Project Management' by Gerdien de Vries. This course demonstrated how psychological phenomena can explain historical moments intercommunications as well as everyday interactions. I have always had a desire to study psychology, and I am deeply grateful to my first supervisor for enabling me to pursue this interest towards the end of my studies. Gerdien, thank you for your keen insights into making my thesis measurable and feasible in time. Your approach to research and work, as well as your career path, are inspiring for my own potential future.

My academic horizon was broadened greatly by making this thesis. Without any philosophical background, I initially found it challenging to understand philosophical perspectives on the central concept of my thesis. However, I am grateful to my second supervisor, Michael Klenk, for taking the time to explain various intriguing philosophical perspectives. Michael, it was very inspiring to be able to do this thesis under your guidance, because your enthusiasm really increased my interest in the ethics of manipulative sources, and significantly showed how much more work needs to be done. Thank you for this inspiring approach.

Furthermore, I greatly appreciated the discussion with Matthijs Beemsterboer, which served as a stepping stone in understanding why manipulation is interesting from a philosophical perspective. These conversations helped me take the first steps and left me with the question 'What makes a tree a tree?'

Finally, I would like to thank those around me for their support during the making of my thesis. A special thanks to Veerle; your great interest in my research, our engaging conversations, and our friendship mean so much to me. I am also grateful to my dear friends Daphne and Maaike for always being there and sharing fun moments. Additionally, I want to thank my friends Anne and Luna for always staying in touch and supporting me in my research. Thanks to my dear mother, with whom I can always share everything, and thanks to both my parents, Maren, Nick and Emma for your support, patience and the many critiques on my questionnaire. A special thanks to my grandfather Joop, for being so interested in my academic journey.
Reflecting on the starting point of my master's journey, I question whether I would have dared to take these steps and reach this point without your support, Yousef. I am proud of us and supportive.

A personal takeaway from this thesis is: if you want somebody to do something, then at least provide them reasons for your intended goal.

Fabiën Dekker

Delft, May 2024

Executive summary

Mitigating climate change necessitates shifting citizens' behaviour towards more sustainable practices. Integrating psychological insights into public communication can significantly influence this behavioural change, while also potentially increasing perceptions of manipulation. In the current era of high distrust in governments, understanding the characteristics of manipulation is crucial to ascertain whether government communication is perceived as manipulative. Given the lack of established measurements to identify and gauge perceived manipulation, this thesis takes an exploratory step in searching for the determinants of perceived manipulation in Dutch public communication using both quantitative and qualitative methods.

Drawing on the philosophical, psychological, and psychiatric literature on manipulation, this study identifies potential determinants and biases that influence perceived manipulation. The four potential key determinants of manipulation include bypassing rationality, covertness, trickery, and indifference. Potential biases such as source scepticism, individualism versus collectivism, climate change scepticism, negative attitudes towards the campaign, and opposition to climate action are identified. Literature also indicated that the perceived manipulation might impact the acceptance of manipulative communication, therefore an approach to evaluate the acceptance of manipulative communication based on philosophical perspectives including the perceived morality, harm and autonomy-loss relationships with manipulation was taken.

A conceptual model illustrating potential relationships of the described potential determinants, biases and evaluation items guided the survey design. The determinants were translated into measurable items formulated by the author based on the literature review, enabling empirical testing. To validate these measurements, a quantitative survey was conducted. A fictitious campaign using social norms to influence energy use behaviours was developed and tested, resulting in 100 valid responses from Dutch citizens. The quantitative data were analysed using reliability analysis, ANOVA, and correlation analysis in SPSS.

The quantitative findings revealed high internal reliability for questions related to perceived bypassing rationality, perceived trickery and indifference. While perceived trickery and indifference were measured on four and three items, respectively, bypassing rationality was measured on only two items questioning the validity.

The quantitative analysis indicated that perceived trickery and covertness were not significant predictors of perceived manipulation in this example case. Nevertheless, it is crucial to maintain the association of these constructs with the concept of perceived manipulation, as the qualitative data of the experiment indicated that participants often describe manipulation using elements from the constructs of trickery and covertness.
Importantly, perceived bypassing rationality and indifference emerged as empirically supported determinants of perceived manipulation, indicating that public communications that bypass logical reasoning, avoid factual information and fail to provide reasons for intended behaviour to the manipulatee are likely to be perceived as manipulative.

Contrary to other research, this study found that the source, whether government or energy supplier, does not impact perceptions of manipulative campaigns using social norms and acceptance of manipulative communication. Notably, campaigns that do not provide reasons for the goal increase perceived indifference and covertness by the campaign-makers but do not increase perceptions of manipulation.

This research contributes to both societal and scientific domains. By identifying determinants of perceived manipulation, the study provides policymakers with a quantitative tool to measure perceptions of manipulativeness in their communications. This foundation can help policymakers assess perceived manipulation and create ethical guidelines for the growing use of social influences. Scientifically, the study bridges philosophical, and psychological perspectives, contributing to a comprehensive understanding of perceptions of manipulation in public communication. It introduces and validates novel constructs for measuring perceived manipulation, providing empirical evidence on the roles of bypassing rationality and indifference, which can inform future theoretical developments and practical applications in communication strategies.

The research faced limitations including a small sample size and the use of a convenience sample, which may not fully represent the general public. The high educational level of participants might have influenced the perception of manipulation. Additionally, the internal consistency between scales was not always robust, impacting the reliability and validity of the measures.

Future research should broaden the scope of this study by incorporating more complex issues. By doing so, we can ascertain if the effects of perceived manipulation and its determinants vary with the novelty of the subject matter. This may shed light on why certain suggested determinants of perceived manipulation, such as the level of covertness and trickery aspect, did not demonstrate a significant association with perceived manipulation in the current study.

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List of Abbreviations

Abbreviations	Definitions
ANOVA	Analysis of Variance
CBS	Centraal bureau voor de statistiek
COM-B	Capability, Opportunity, and Motivation Model of Behaviour
ELM	Elaboration Likelihood Model
EPA	Engineering and Policy Analysis
HREC	Human Research Ethics Committee
SDG	Sustainability Development Goals
STT	Socio-Technical Transition
SPSS	Statistical Package for the Social Sciences

1. Introduction

The approximately one-degree Celsius rise in the average surface temperature since the preindustrial era may seem modest, but it leads to regional and seasonal temperature extremes, reduces snow cover and sea ice, intensifies heavy rainfall, and changes the habitat of flora and fauna (Lindsey & Dahlman, 2024). Although 98.7 per cent of climate experts indicate that this global warming is caused by human activity (Myers et al., 2021), only 60 per cent of Dutch citizens agree it is caused by humans (CBS, 2023). Nevertheless, 82 per cent of Dutch citizens consider it important for the government to engage in climate policy, with 44 per cent feeling that current climate policies do not sufficiently address global warming (CBS, 2023).

Climate policies can be implemented across macro, meso, and micro levels, encompassing a broad spectrum of strategies to mitigate climate change's impacts. Governments increasingly recognise the need for multi-dimensional approaches to address this global challenge, from large-scale international agreements to local community initiatives. However, bridging the gap between policy development and changes in behaviour seems difficult (De Vries, 2019). This recognition underscores the urgent need for policymakers to adopt innovative and effective tools to facilitate sustainable behavioural change. While previous approaches to climate policy heavily depended on incentives and appeals targeting individuals' extrinsic motivation (e.g. monetary incentives), there is a current shift towards influencing intrinsic motivation to achieve long-term pro-environmental behaviours (Steinhorst & Klöckner, 2017). Strategies such as effectively harnessing emotional incentives to promote pro-environmental action (Lohmann et al., 2024), implementing green nudges, which are psychologically informed tools designed to promote sustainable behaviour change (Schubert, 2017), and leveraging psychological insights in public communication (De Vries, 2019) are indicated as useful for achieving pervasive sustainable behaviour change.

For climate policies to achieve their intended impact, they require public support, which not only provides political legitimacy but is also crucial for effective implementation (Linde, 2017). However, the strategies focussing on intrinsic motivation can be perceived as biased communication that influences people towards the desired behaviour, giving the impression that individuals' freedom to make choices is under threat. This perception can hinder effective implementation and lead to the boomerang effect, wherein people exhibit behaviour opposite to what is advocated in communication (De Vries, 2016). For example, the use of emphasis framing, which emphasises one aspect over another, was indicated to be perceived as manipulative by participants in the study by De Vries et al. (2015). Also, debates have arisen regarding the ethical implications of nudges, particularly those operating on automatic thinking, given their influence on behaviour predominantly without individuals' awareness (Lin et al., 2017).

One reason manipulation may be considered undesirable is that it seems to undermine autonomy (Noggle, 2021). When information essential for making real-world decisions is subtly presented, people may unconsciously make choices beyond their conscious control, raising questions about perceived freedom of choice (Osman, 2020). This fact explains why concerns about manipulation arise in discussions of “nudges” that are meant to improve people’s decision-making without coercion. Even if nudges benefit their targets, they may be undesirable on the balance if they involve autonomy-undermining manipulation.

However, there is limited research investigating the general views people hold regarding the application of psychological insights on the unconscious (Osman, 2020), and claims linking the pervasive and effective influence of government climate communication to manipulation have not been extensively substantiated empirically. This poses a problem because claims of manipulation in public communication in the context of climate change can mostly be made on purely conceptual grounds thus far.

Existing assertions about the manipulativeness of government communication rely solely on assumptions about necessary conceptual links between the concept of manipulation and more fundamental concepts like autonomy and harm. However, these connections are not essential. For instance, manipulative interactions do not necessarily compromise autonomy (Klenk & Hancock, 2019). Furthermore, there is no universally accepted definition of manipulation, with different philosophers offering varying perspectives (Jongepier & Klenk, 2022, p. 16-21). Of course, it could *be* that government communication is manipulative, but no such claim follows from the concept of manipulation itself. Consequently, little is known about the links between the influence exerted by public communication and perceived manipulation.
It remains uncertain whether influence on citizens truly constitutes manipulation and, if so, whether it is particularly problematic. It could be problematic if it is perceived as governmental greenwashing. De Vries et al. (2013) found that corporate greenwashing was perceived when an energy company communicated an environmental motive for its environmental policy. This often results in accusations of greenwashing. Therefore, the government must avoid these perceptions to maintain public trust and ensure the effectiveness of its climate communication strategies.

1.1 Academic and societal relevance

Tackling the challenges posed by the climate goals of the Paris Agreement is a grand challenge for the participating countries, requiring effective strategies to influence public sustainable behaviour. Incorporating psychological insights into public communication represents a potential solution to navigate these challenges. However, negative perceptions of such strategies may undermine trust in governmental actions, leading to scepticism and distrust in government impartiality and legitimacy (Bowler & Karp, 2004). The feeling of manipulation can trigger a backlash effect on sustainable behaviour due to the psychological process of reactance, where individuals resist changes perceived as threats to their autonomy (Brehm, 1966). This issue is particularly problematic in the context of climate change, where urgent change is essential. Public perception of governmental strategies as manipulative may result in reactance, manifesting as a refusal to adopt sustainable behaviours or support environmental policies. Such backlash can impede the collective action necessary to meet the climate goals of the Paris Agreement. Given the current low levels of trust in the government (CBS, 2023), this societal challenge demands careful consideration by policymakers.

How individuals perceive and respond to the use of psychological insights in public communication is of considerable importance for the chance of any publicly communicated message being effective. Understanding how perceptions of perceived manipulation are formed is therefore of great importance to designing and implementing public communication for driving sustainable behaviours and transitions.
By delving into whether the public views the incorporation of psychological insights as manipulative and how this perception shapes their evaluation of environmental communication, the boundaries within which policymakers must operate can be explored. Through this nuanced understanding, policymakers can craft policies that are both legitimate and effective in driving sustainable behaviour change. Ultimately, the primary

goal is to inform public policymakers about the determinants of the public perceptions of manipulation, empowering them to formulate policies that are not only effective but also respect and protect individuals' freedom of choice and norms.

1.2 Link with the Master program Engineering and Policy Analysis

The Master Engineering and Policy Analysis (EPA) focuses on analysing grand challenges that involve multiple stakeholders with conflicting interests. This thesis proposes to explore the ethical implications of employing psychological insights in the context of public climate policies by integrating research from the fields of psychology and philosophy. In psychology, the study will investigate the psychological factors that may influence perceptions of manipulation and examine the application of psychological insights to government communication strategies regarding climate change. In philosophy, the study aims to develop a theoretical framework for perceived manipulation and support it with empirical evidence. These two fields of research are brought together by quantifying the manipulative aspects derived from philosophy to assess the use of psychological insights for public climate adaptation policies.

The EPA curriculum includes a variety of courses, among which the "Behaviour in Transitions" course is particularly relevant to this thesis. This course provides tools for conducting a behavioural analysis of different parties, here the focus is on government communication in the context of climate change. By employing a socio-technical transition perspective, the thesis seeks to elucidate how insights from scientific disciplines can inform and enhance the formalisation of behaviour during transitions. Such an analysis provides valuable insights into how behavioural science can guide the development and implementation of effective public communication strategies.

At the core of the EPA program is an interdisciplinary approach that is also a fundamental aspect of this thesis. The aim is to foster collaboration between scholars and policymakers. Scholars contribute their understanding of how psychological insights can influence public attitudes, while policymakers utilise these insights to refine their communication tools. This collaborative effort is expected to enhance the effectiveness and sustainability of environmental policies. Crucially, this thesis will also focus on developing a methodology to quantify the degree of perceived manipulation in public communications, thereby providing a first step in a measurable framework that can be applied to other contexts and strategies.

1.3 Research objectives

The developments in using psychological insights in public communication could raise concerns about the nature of the influence exerted on the public. While persuasion and coercion are reasonably well understood, research has just been started on the nature and ethics of manipulation. More attention to manipulation is essential because new technologies amplify the role of manipulation in shaping public debate (Klenk, 2024b). Public communication could be viewed as manipulative, potentially having problematic effects on public beliefs regarding autonomy and well-being. The classification of perceived manipulation, particularly when the government is the communicator, can be problematic and greatly impact its effectiveness and the trust it garners from the public. While potentially enhancing policy acceptance and public engagement, it can lead to scepticism and resistance if perceived as manipulative. This is crucial in environmental contexts where trust and credibility are essential for the successful implementation of policies. Moreover, because environmental issues often require immediate and substantial behavioural changes, the perception that the government is

manipulating public opinion can undermine the legitimacy of its initiatives and erode public trust, making it challenging to achieve the desired outcomes.

To my best knowledge, there is limited extensive empirical evidence of perceived manipulation in public communication about climate action. Since psychological insights applied in public communication could be perceived as manipulative, this highlights the importance of establishing a method to measure perceived manipulation in a specific context. While the findings for an established method to measure perceived manipulation may not definitively resolve the debate on whether a situation is manipulative, it can be a first exploratory step in evaluating perceived manipulation in the specific context of climate and government. Individuals may detect determinants of perceived manipulation previously overlooked in the literature, opening avenues for empirical validation of the critical perspective on public communication. Conversely, people might have a biased view of government influences and view them as more manipulative than comparable influences of other sources. Before assessing these questions, an understanding of how people evaluate influences in terms of their manipulativeness is needed. This study aims to advance the understanding of how individuals perceive government influences in terms of their manipulative characteristics. Specifically, we aim to determine whether individuals perceive theoretically manipulative influences as manipulative.

Following the research objectives, the following research questions can be formulated:

“What are the determinants of perceived manipulation of government environmental communication according to Dutch public perceptions?”

Table 1 displays the research questions and respective methods central to the current thesis project. Sub-questions 1 and 3 focus on establishing a theoretical framework for analysis. Sub-questions 2 and 4 aim to test the theoretical framework in addition to important factors and outcomes in practice. The colours used in Table 1 are further applied in the thesis so that it is easy to understand which sub-question the coloured information relates to.

***Table 1**. Research questions.*

Main research question: *"What are the determinants of perceived manipulation of government environmental communication according to Dutch public perceptions?"*	
Sub-questions	**Method**
1. What are the potential determinants of manipulation?	Literature research
2. How does the context of climate change influence perceptions of manipulation?	Literature research and survey distributed amongst Dutch citizens
3. How can the acceptance of manipulative communication be evaluated?	Literature research and survey distributed amongst Dutch citizens
4. What is the difference in perceived manipulation between information sources, particularly between the Dutch government and energy companies?	A survey distributed amongst Dutch citizens

1.4 Research outline

The research flow diagram in Figure 1 provides the outline of the thesis study. The nature of this study is exploratory, aiming to provide an understanding of the determinants of perceived manipulation.

The first chapter introduces the study (Chapter 1) and its theoretical background (Chapter 2). A theoretical framework will be developed to delineate the factors contributing to the concept of manipulation, the psychological biases that might impact perceived manipulation and the approach for evaluation of the acceptance of manipulative communication in Chapter 3, after which a conceptual model appropriate for testing is created to set the current study. The findings in the theoretical background and theoretical framework demonstrate the research design in Chapter 4. The pre-test is elaborated on in Chapter 5. The final experiment with 100 participants is discussed in Chapter 6. Finally, Chapter 7 provides conclusions to the aforementioned (sub-)research questions. Lastly, Chapter 8 discusses the implications of these conclusions as well as the strengths and limitations of this study.

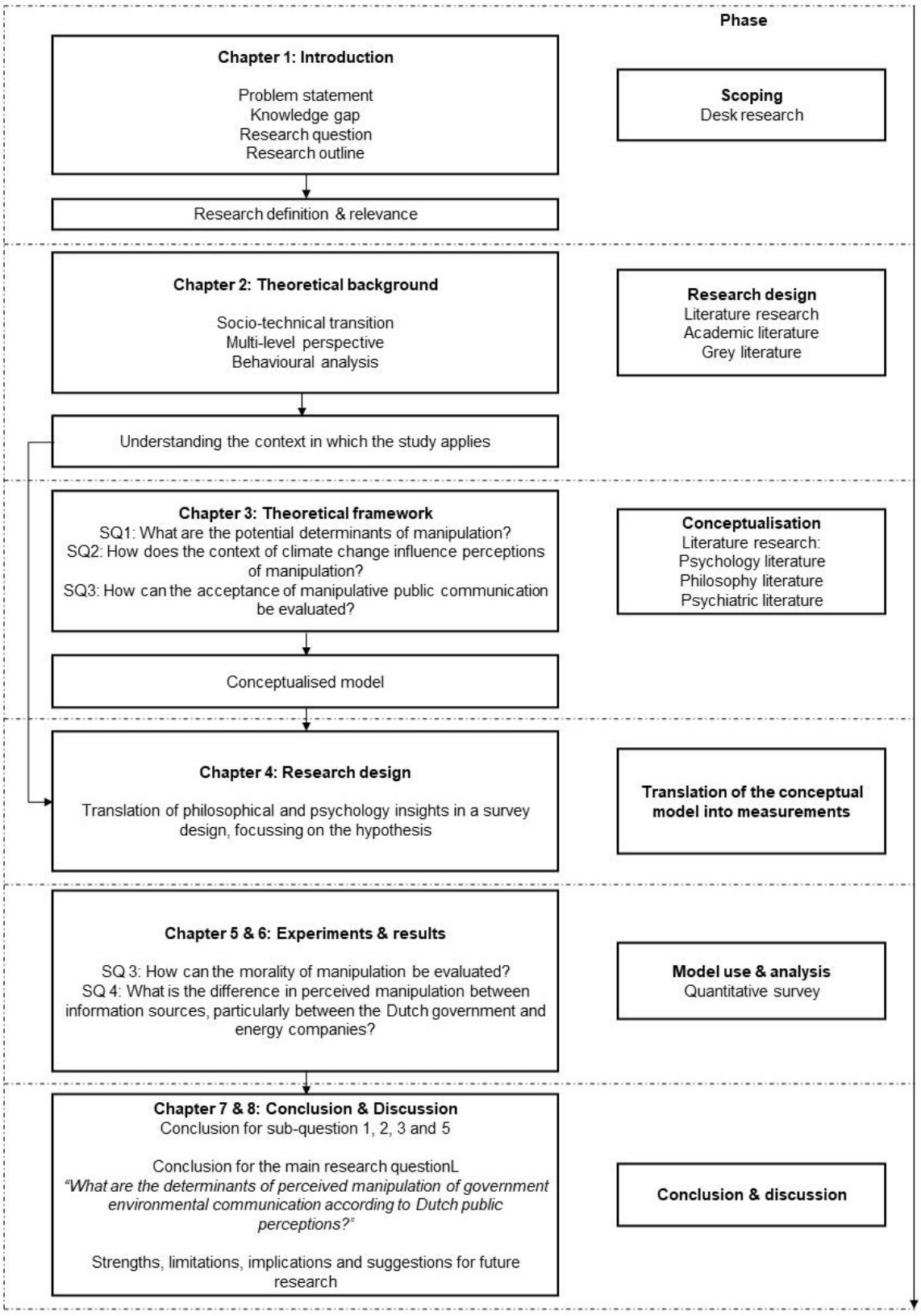

Figure 1. *Overview of the research flow diagram.*

2. Background

The following paragraphs position the thesis within its context. Initially, a psychological perspective is taken to elucidate the mechanism of social influence (Chapter 2.1). This is followed by an explanation of the various forms of social influence (Chapter 2.2). To demonstrate how psychological insights can be applied in public communication to promote the energy transition, a case study of government communication is illustrated and approached from a socio-technical perspective (Chapter 2.3). This analysis identifies factors that may affect perceptions of manipulation.

2.1 The psychology of manipulation

Insights into human decision-making and psychological tricks to influence are widely explored in bestselling books, for example, R. Cialdini (1993) has indicated six psychological principles that appear to influence behavioural compliance decisions most powerfully. When making use of these principles, one can strategically influence individuals to align with specific objectives. These principles involve (1) reciprocation, which means the tendency to return a gift; (2) consistency to prior commitments; (3) following the social proof; (4) conforming to the directives of legitimate authority; (5) accommodate the request of the ones we like; and (6) use opportunities that are scarce or dwindling in availability. This is an example that contributes to the evolving landscape of social influence.

The dual-process theory by Petty and Cacioppo (1986) explains how individuals process persuasive messages depending on their motivation, opportunity and capability to engage in cognitive elaboration. The theory is described in the Capability, Opportunity, and Motivation Model of Behaviour (COM-B model) and distinguishes between two processing routes: the peripheral route (system 1 thinking) and the central route (system 2 thinking). The peripheral route entails shallow, heuristic-based processing, whereas the central route involves deep, thoughtful consideration of the message.

The processing of information, or elaboration, depends on three factors—Motivation, Opportunity, and Capability:

- Motivation encompasses the public's readiness, interest, and desire to process information. Individuals who are highly motivated and have a specific interest are more likely to engage with information through the central route, particularly when it pertains to their area of interest (Petty and Cacioppo, 1986).
- Opportunity relates to the conditions that facilitate or hinder information processing, such as distractions or the timing of exposure to communication mediums, which can affect attention levels and thus the processing route. Under conditions of limited opportunity, individuals frequently adopt the peripheral route, resulting in rapid and instinctive processing influenced by cognitive biases (Kahneman, 2011).
- Capability refers to the individual’s cognitive skills or capabilities in processing information, including their knowledge structure (Petty and Cacioppo, 1986).

Influence strategies can function via the central or peripheral routes or both. Influence through the peripheral route typically occurs by appealing to affective cues or heuristic processes that do not require deliberate thought. This route leverages the affective or emotional aspects of communication, exploiting biases and quick judgments. For instance, cues such as the colour green evoking sustainability, trigger automatic, instinctive responses characteristic of System 1 thinking—fast and with minimal conscious effort (Kahneman, 2011). Such responses are mostly temporary and easily influenced or changed, making them a potent tool for manipulation in short-term behavioural shifts.

Conversely, the central route of persuasion can also be utilised to influence public opinion through sophisticated and seemingly rational arguments. This strategy involves presenting logically compelling yet framed information to guide public deliberation towards the manipulator's goals. For instance, a government might highlight the long-term benefits of renewable energy investments, using complex statistical data and projections to underscore economic growth and environmental sustainability, while downplaying the associated costs and disruptions. Such communication targets individuals with a high need for cognitive clarity, who prefer to process and deliberate on information deeply. By shaping the narrative to appear both legitimate and evidence-based, the government directs the public's central thinking towards supporting specific policies (Petty and Cacioppo, 1986). Influence via the central route is likely to foster attitudes that are enduring and resistant to counter-persuasion (Haugtvedt & Petty, 1992; Petty, 2014).

2.2 Social influence

Social influence itself is not inherently problematic; however, certain types of influence can be concerning. Thus, it is crucial to clearly distinguish between different forms of social influence. Public discussions are often influenced by social dynamics, and it is common to categorise influences as persuasion, coercion, and manipulation (Klenk, 2024a).

Susser et al. (2019) argue that persuasion and coercion lie at opposite ends of the spectrum: persuasion allows the individual to retain autonomy over their decisions, whereas coercion removes this autonomy. Yet, both persuasion and coercion seek to sway decisions without impairing the individual's decision-making capacity. However, it is overly simplistic to depict these concepts as binary opposites with manipulation filling up the area between them. There exists a substantial undefined space between persuasion and coercion, which is not always manipulative (Klenk, 2024b).

Understanding manipulation as a standalone concept is crucial and will be explored extensively within the theoretical framework of this thesis. This exploration aims to establish a clear understanding of manipulation, paving the way for identifying and evaluating manipulative influence for concrete design recommendations for regulatory actions against manipulative practices.

2.3 The socio-technical transition

Socio-technical transitions (STT), such as the energy transition, are technological changes that reshape societal functions (Geels, 2005). An emerging area of focus is the transition to sustainable energy systems, which involves initiating shifts from less sustainable practices across various sectors in collaboration with policymakers to effect these changes (Nesari et al., 2022).

An illustrative case relevant to energy transitions involves household energy consumption. Hu et al. (2022) reported that household energy consumption is responsible for approximately 20% of global CO_2 emissions, underscoring the necessity of adopting solar panel installations in residential settings as a critical component of the energy transition (De Vries, 2020). The uptake of solar panels by households causes congestion in the electricity grid, making it beneficial for households to use solar energy as it is generated. Load-shifting, which involves shifting energy use (e.g., doing laundry) to periods when energy is produced, is a challenge in the energy transition that necessitates changes in behaviours (Hubert et al., 2024).
To support these changes, the government could implement policies using market-based tools, regulations, and targeted public communication. This illustrative case focuses on utilising insights from social and psychological processes to enhance the effectiveness of one-way communication, as advocated by De Vries (2015), to promote residential load-shifting.
An example of a psychological principle that can be applied is social norms, defined by Abbink et al. (2017) as “the informal rules that govern behaviour in groups and societies”. Horne and Kennedy (2017) suggested that it may be possible to harness the power of social norms to shift the time of electricity consumption that facilitates increased incorporation of renewable sources. However, applying social norms in government communication could also be perceived as manipulative due to various contextual and psychological factors.

The social norm in public communication can be used for a practical scenario in the survey of this thesis, the scope focuses on the Netherlands because the convenient sample of the survey also focuses on Dutch citizens. Therefore, in the following paragraphs, a behavioural analysis will be conducted to facilitate the formalisation of the behaviour of key actors in the energy transition, with a focus on residential load-shifting. Firstly, the relevance and boundaries of the STT will be outlined in paragraph 2.3.1. Subsequently, the contextual and psychological factors influencing the perceptions of manipulation will be discussed in paragraphs 2.3.2 and 2.3.3, respectively.

2.3.1 The multilevel perspective

While various countries have signed the Paris Agreements, achieving greenhouse gas emissions reduction targets faces significant challenges, including weak policy inducements, knowledge and capacity gaps, and a lack of awareness (Noventy & Huseini, 2021). This STT and thesis can contribute to two of the seventeen Sustainable Development Goals (SDGs) of the 2030 agenda:

- SDG 13, “Climate Action” underscores the urgent need to address climate change. Climate change poses an immediate and undeniable threat to the world's population and requires coordinated efforts in education, innovation and climate commitment to climate-related goals. Through strategic interventions for energy transitions, necessary changes to mitigate climate risks can be made and safeguard the well-being of our planet for both current and future generations (The Global Goals, 2024). Using strategic public communication to increase load-shifting could add value to SDG 13.
- SDG 16, “Peace, Justice, and Strong Institutions” focuses on promoting effective, accountable, and transparent governance structures (The Global Goals, 2024). By delving into the ethical dimensions of public communication strategies, especially in the area of environmental discussions, the aim is to add value that upholds the principles of justice, transparency, and accountability. This includes not only addressing climate-related challenges but also studying the potential impact of government actions on individual freedoms and social trust.

Climate change requires transformative processes in which society fundamentally changes over generations. Governments can play a crucial role in driving structural change incrementally to advance the energy transition, both domestically and globally. The overall dynamic patterns in STTs can be conceptualised with a multi-level perspective. The perspective shows that government action impacts multiple levels, including the macro, meso, and micro levels (Rotmans et al., 2001).

At the macro level, encompassing conglomerates of institutions and organisations (Rotmans et al., 2001), governments can enact policies and regulations to alleviate grid congestion. For instance, the Dutch government plans to phase out net metering in 2025 (Ministerie van Algemene Zaken, 2024), a move that may refrain people from purchasing new solar panels. While Dutch policymakers currently focus primarily on monetary incentives, incorporating alternative communication strategies—such as campaigns with social norms for load-shifting— could stimulate the energy transition.
At the meso level, which encompasses networks, organisations, and businesses (Rotmans et al., 2001), governments could collaborate with actors to design appliances that operate during periods when solar panels generate energy. However, the focus of this STT is on public communication, therefore, the exploration of this implication is outside the scope.
At the micro level, which comprises individuals or individual actors such as environmental movements (Rotmans et al., 2001), governments can empower households to change their energy use behaviour by making use of social norms.

Recognising the crucial role of household load-shifting behaviour at the micro level, governments can effectively harness bottom-up momentum for the energy transition by addressing psychological barriers.
Psychological barriers to load-shifting as indicated by Huberts et al. (2024), highlight the importance of researching and applying behavioural insights in environmental policymaking (De Vries et al., 2019).

The field of communication using behavioural insights is still in its early stages. For example, the Dutch energy company Stedin has implemented social norms to promote load-shifting behaviour (Stedin, n.d.). Similarly, the Dutch government has introduced nudges, such as opt-out systems instead of opt-in for organ donation, where individuals are automatically enrolled and must actively opt out if they do not wish to participate which results in more people being organ donors. However, the application of these psychological tactics by the government for the energy transition lags. This may be due to concerns that public communication can be perceived as an attempt to persuade citizens to support a specific stance, which might be perceived as manipulative (De Vries et al., 2015). Such perceptions could hinder the effectiveness of public communication.

To understand whether contextual and psychological factors influence the perception of manipulation when applying a social norm to enhancing load-shifting through government communication, these factors will be explored in the subsequent paragraphs. This analysis will provide a foundational basis for the thesis, enabling an assessment of whether the government's communication strategies for promoting the energy transition could be perceived as manipulative, regardless of its manipulative intent.

2.3.2 Contextual factors

While public communication utilising social norms, could be effective in stimulating load-shifting, it is essential to consider contextual factors influencing individuals' perceptions towards implementing psychological insights in public communication from psychological research. The contextual factors are *objective* characteristics influencing behaviour determined by the context (Perlaviciute & Steg, 2014). The focus here is on the contextual factors for Dutch citizens.

Economic factors

The Dutch government stimulates the growth of solar energy by offering tax cuts to people who want to install solar panels (Ministry of Economic Affairs and Climate Policy, 2024). This incentive is often perceived positively by Dutch citizens as it provides them with an economic advantage. However, those who do not qualify for this monetary incentive might prefer public communications incorporating psychological insights, such as a social norm, to promote load-shifting (Gautier et al., 2019). It is important to consider that this public communication strategy could be expected to be cost-effective compared to alternative methods of promoting sustainable behaviour.

Social factors

Social factors influence citizens' perceptions of public communication, their attitude can reflect the broader attitude of their community. Two social processes might impact individuals' perceptions towards the implementation of social norms by the government. Firstly, there are expectations regarding the perceptions of others. Individuals tend to compare themselves with members of their "ingroup," adapting their behaviour based on perceived norms within this group. Secondly, expectations regarding the intentions of the source can play a role in determining how individuals respond to the conveyed message (De Vries et al., 2019).
The current era is also marked by the developments surrounding the trust in the Dutch government. According to social and cultural developments research conducted by the Dutch government in 2023, citizens find the gap between the government and ordinary people to be significant, and they perceive politics as unreliable. Furthermore, people predominantly express neutral or negative views regarding the fairness of the government. To achieve legitimacy in democracy, transparency is necessary (Sociaal en Cultureel Planbureau, 2023). Therefore, it can be expected that communication using psychological insights, when not perceived as transparent, will be perceived as manipulative.

Institutional factors

The current state of procedures, laws, rules, and regulations surrounding the ethics of manipulation guides policymakers in applying psychological insights in communication. For example, the European Economic and Social Committee has provided recommendations for the use of nudges, identifying methodologies and ethical rules for their application. These recommendations emphasize the importance of transparency, individual freedom of choice, the reliability of the information on which nudges are based, and avoiding any approach that makes people feel guilty (Libaert, 2024). Additionally, legislators and policymakers in the EU are now intensely focused on regulating manipulative influence in AI (Faraoni 2023). However, this thesis is part of the effort to identify and evaluate manipulation in public communication in the context of climate change, as the identification and demarcation of this type of social influence in the context have not yet been empirically evidenced. This lack of empirical evidence could increase perceptions of manipulation if governments are not perceived as serving the public interest.

Environmental factors

When people have the impression that their values and interests have not been considered in the communication approach, this could likely fuel polarization and public resistance (Bouman et al., 2021). Therefore, if the public communication about load-shifting does not align with citizens' values, this could lead to perceiving it as manipulative, regardless of the manipulative intent. The psychological factors that possibly drive citizens' perceptions towards public communication will be elaborated on in the following paragraph.

2.3.3 Psychological factors

The psychological factors include *subjective* micro-level individual characteristics that may influence how citizens perceive objective characteristics (Perlaviciute & Steg, 2014). The psychological factors that might influence citizens' perspectives on the social norm in public communication are intended to encourage load-shifting. Bögel and Upham (2018) highlight the importance of understanding individual psychological processes within STTs. The psychological factors they cite formed the foundation for this paragraph, which was then expanded to include other relevant factors and insights from empirical research on public perceptions of social influence.

Values: Individualism and collectivism

Values guide a wide range of attitudes, beliefs and preferences that define what is important to people and what they strive for in life. Values might change over time and are dependent on the context (Perlaviciute & Steg, 2014). People's beliefs and attitudes about grand challenges are shaped by cultural cognition, which refers to the influence of group values. Equality, authority, individualism and community relate to cultural cognition, and these could explain disagreements in environmental perceptions (Kahan, 2010).

People with individualistic and hierarchical values tend to prefer commerce and industry and resist scientific evidence that climate change is a serious threat. In contrast, persons who subscribe to more egalitarian and communitarian values are suspicious of commerce and industry and more inclined to believe that there are unacceptable environmental risks and should be restricted (Kahan, 2010). Egalitarians are less likely to dismiss evidence of the safety of technologies when they are made aware of their possible role in environmental protection (Kahan, 2010). Therefore, it is likely that egalitarians perceive public communication utilising social norms about load-shifting more positively if it aligns with their beliefs in environmental protection and sustainability. They may perceive the communication as less manipulative.
On the other hand, individualists are expected to be more sceptical of government communication, particularly if it proposes limitations on business activities or promotes policies perceived as hindering economic growth (Kahan, 2010). They may perceive public communication as more manipulative if they perceive it as threatening their economic interests or personal freedoms.

However, an alternative viewpoint by Sawaya et al. (2024) on psychopathic traits regarding individualism and collectivism suggests that individualism might promote deception and manipulation of others for self-advancement. This could be explained by the fact that individualism emphasises self-reliance, fostering a competitive environment which can lead to greater acceptance of manipulation as necessary for personal gain. Conversely, Sawaya et al. (2024) stated that collectivism discourages actions that oppose the well-being of the group, and manipulative actions could harm group cohesion and trust. These cultural demands, as part of cultural cognition, could also influence the perceptions of manipulation.

Trust

Trust is related to the context and based on the experience with the specific organisation. The extent to which people trust these parties is an important factor for acceptability (Perlaviciute & Steg, 2014). Terwel et al. (2009) indicated that people's trust in an organisation is based on the motives that they think underlie the policy and actions of the organisation. Organisational motives can be thought of as why an organisation engages in certain actions and initiatives (Terwel et al., 2009). Individuals could consider the motives driving governmental policies and actions in assessing government trustworthiness. These motives can vary widely, ranging from economic incentives to environmental stewardship. For example, in the realm of the energy transition, the public may perceive public communication as driven by either economic benefits or a genuine commitment to environmental sustainability. As people tend to value certain motives over others, these perceived motives significantly influence individuals' trust in certain organisations and governments and potentially perceptions of manipulation.

Siegrist & Cvetkovich's (2000) research in the field of risk perception and risk communication suggests that under conditions in which individual knowledge about a hazard is lacking, perceived risks and benefits depend on the extent to which the general public trusts the organisations involved in the issue. They suggested that people have trust in experts who share the values that they believe are important in a given situation. Conversely, when an individual has personal knowledge about a hazard and therefore does not need to rely on managing authorities, social trust is unrelated to perceived risks and benefits (Siegrist & Cvetkovich, 2000). This implies that trust in government entities plays a crucial role in perceptions towards public communication, particularly in contexts where personal knowledge about the issue is limited.

Over the past decade, trust in Dutch politics has significantly declined, particularly in political institutions, with only 25 per cent of individuals aged 15 and older retaining confidence. Especially individuals with only primary education exhibit less trust in politics, while those with a higher education demonstrate more trust in political institutions (Centraal Bureau voor de Statistiek, 2023). Beyond the COVID-19 pandemic, this drop in trust in the Dutch government may also be linked to political developments from earlier years, including prolonged government formation talks and the slow and inadequate response to the child benefits scandal (Engbersen et al., 2021). The major concerns about housing, migration, sustainability policies, persistent socioeconomic inequalities, and an increasing number of people with psychological issues in the Netherlands have decreased trust in the Dutch government further (Sociaal en Cultureel Planbureau, 2024).
In instances of low trust in the government, utilised psychological insights in public communication may be perceived as manipulative.

Dispositional scepticism

Dispositional scepticism refers to an individual's tendency to be suspicious of other people's motives and differ in the extent to which they are sceptical (Foreh and Grier, 2003). De Vries et al. (2013) found that communicated motive significantly affects perceived corporate greenwashing through suspicion of strategic behaviour among low and moderate levels of dispositional scepticism towards organisational communication. Consequently, for sceptics, it is expected that moderate levels of dispositional scepticism towards public communications impact perceived manipulation of public communication through suspicion of strategic behaviour by the government.

However, the above does not predict the perceptions of perceived manipulation by government messages for individuals with high levels of dispositional scepticism. One group for whom high dispositional scepticism towards the government can be expected are populists. Populists often frame societal issues in a binary "us versus them" context, simplifying complex issues and promoting distrust towards those in power (Schulz et al., 2018). Hameleers et al. (2021) found that individuals with populist attitudes are more likely to perceive disinformation and misinformation in the news media. Additionally, populists see political institutions as neither responsible nor capable of dealing with disinformation effectively (Hameleers et al., 2021). Therefore, it is expected that populists do not trust governments to act impartially or effectively, leading them to perceive public communications as more manipulative.

Attitude towards using social norms

Attitudes towards the use of social norms in public communication could potentially influence perceptions of manipulation. John and Mikolajczak (2022) found that public support for nudges promoting sustainable behaviours largely hinges on their perceived fairness rather than their efficacy. For instance, when a nudge is perceived as transparent, it is more likely to gain public support. Conversely, public communication involving psychological insights could lack transparency, particularly when the reasons for the intended goal are not clearly articulated. In such cases, public communication can be viewed as undesirable and affecting the perceptions of manipulation.

The attitude towards the campaign could also be impacted by the first- and third-person effect. Osman & Bechlivanidis (2022) showed that by taking a personal stance (first-person) instead of a general stance (third-person) towards manipulation of outside awareness, the rating of suspicion of unconscious manipulation increases, leading also to higher ratings of concern. In line with this research, Osman & Bechlivanidis (2020) found that when people take a personal stance towards the experience of manipulation, ratings of perceived suspicion of manipulation outside awareness increased. The more personal experiences people reported they had, the more they were concerned that their choices were unconsciously manipulated.
This highlights that personal experiences could give rise to more negative attitudes towards the social norm and perceived manipulation.

Capability and motivation

In manipulative public communication, the government's motives can be less transparent. People might either be unable or unmotivated to assess these motives. When they are unable to do so, it relates to their cognitive capacity (Campbell & Kirmani, 2000), which corresponds to the capability component in the COM-B model. When people are unmotivated, it pertains to the motivation component in the COM-B model. Consequently, they might process and evaluate public communication heuristically, following the COM-B model. As a result, their attitude towards the government can act as a cue influencing how these communications are perceived.

In addition, Maertens et al. (2021) found that by pre-emptively exposing individuals to weakened doses of misinformation techniques, they can develop a more robust defence against misinformation, leading to psychological immunity. The effectiveness of this strategy could be extended to manipulation, as it actively engages individuals in the cognitive processing of counterarguments. This process can strengthen an individual's ability to resist manipulative messages and better maintain their autonomy in the face of increasingly sophisticated attempts at manipulation. Therefore, persons who are often subjected to weakened doses of misinformation techniques could perceive less manipulation as they are psychologically immune.

Demographics

Osman (2020) found no significant variations in public perceptions regarding behaviour influenced by unconscious factors, free will, prior conscious intentions, and conscious control across different demographic factors such as age, gender, education, political affiliation, and religiosity. However, she did show that in contexts of marketing and political behaviours were judged to be under greater conscious control, made freely, and involve prior consciously formed intentions compared to professional contexts such as therapy and medical research (presumably because the techniques used in marketing and political contexts are judged to exert less influence on the unconscious).

In addition, Wang's (2009) research among Chinese citizens indicates that enthusiasm for government information, reflecting the citizens' inclination and positivity towards using government information, is significantly influenced by factors such as education, residence, profession, and income. Specifically, the application of government information tends to be higher among individuals with higher income levels. Profession categories encompass various sectors, including business, government departments, education and research agencies, other institutes, agriculture, students, and freelance occupations (Wang, 2009).

Based on this behavioural analysis, it could be assumed that the perceptions of manipulation towards public communication using psychological insights (e.g. a social norm) could be affected by the indicated contextual and psychological factors. To assess whether the application of social norms impacts perceived manipulation with possible backlash effects, the following factors could be considered: personal values (specifically individualism vs. collectivism), trust in government, dispositional scepticism, environmental values, and attitudes towards the appropriateness of using psychological insights in public communication.

3. Theoretical framework

The previous chapter elaborated on the application of psychological insights to a case study within the context of climate change adaptation. Building on this, this chapter seeks to establish a theoretical framework for measurements of perceived manipulation. This framework will be used to design a survey and collect empirical data. This effort constitutes the primary focus of this third chapter, which addresses the initial steps of the study through the following research questions (Table 1):

1. What are the potential determinants of manipulation?
2. How does the context of climate change influence perceptions of manipulation?
3. How can the acceptance of manipulative public communication be evaluated?

The theoretical framework is structured around the conceptual model depicted in Figure 2. Initially, mediator variables are identified through a literature review in the domains of philosophy and psychiatry (Chapter 3.1). These variables pertain to the potential determinants of perceived manipulation and answer the first sub-research question. Subsequently, moderator variables are outlined in Chapter 3.2, drawn from psychological research and the behavioural analysis conducted in Chapter 2, addressing the second sub-research question. The chapter concludes with a discussion on evaluating perceived manipulation, incorporating insights from both psychology and philosophy (Chapter 3.3). This part focuses on the dependent variable of the evaluation of perceived manipulation as illustrated in Figure 2, tackling the third research question. In Chapter 3.4, the overall model and hypotheses of the current study will be given. The resulting constructs from the subchapters will be used for the survey design in Chapter 4.

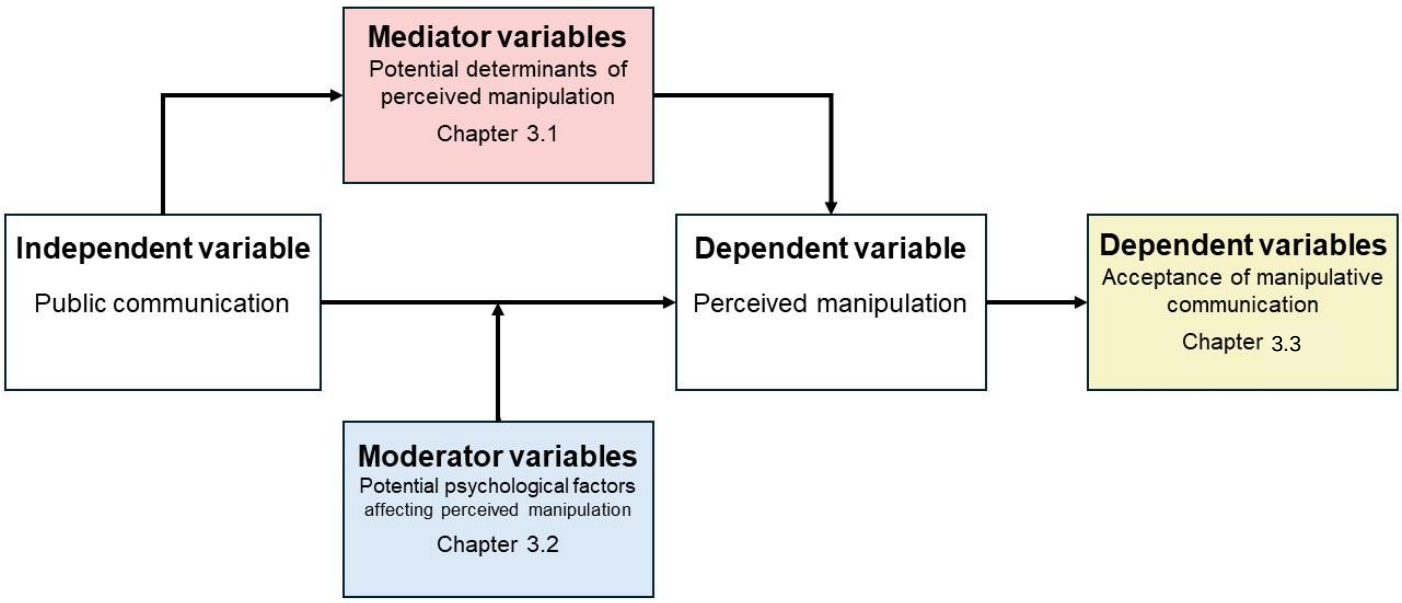

Figure 2. *Outline of the theoretical framework.*

3.1 Mediator variables for perceived manipulation

The lack of empirical investigations into the concept of manipulation presents two interrelated challenges for research on manipulation in public communication that need to be addressed. Firstly, there is no consensus on how to operationalise the concept of manipulation. Therefore, the aim is to develop an operationalisation within this theoretical framework by drawing on philosophical research on manipulation. This begins with the identification of descriptive demarcating factors that distinguish manipulative influence from other forms of interpersonal influence. Secondly, the lack of a consensus on the operationalisation contributes to difficulties in classifying a given case as manipulative in the study's questionnaire. This indicates that the external validity of the study heavily depends on the soundness of the operationalisation.

The exploration of the concept of manipulation will be guided by three overarching perspectives proposed by Jongepier and Klenk (2021): outcome views, process views, and norm views. Chapter 3.1.1 will delve into outcome views, examining how manipulation requires the achievement of specific outcomes. Chapter 3.1.2 will focus on process views, investigating the distinct methods and mechanisms used in manipulation. Lastly, Chapter 3.1.3 will explore norm views, considering how manipulation involves the violation of particular norms or ethical standards. The potential determinants for manipulation will be concluded in Chapter 3.1.4.

3.1.1 Outcome views

Manipulative influence can result in beliefs, emotions, or desires formed by the manipulated individual. Forming true beliefs, appropriate emotions, and worthy desires often align with one's self-interest. However, manipulation may directly undermine these by inducing (false) beliefs or (inappropriate) emotions, leading to doing things that frustrate a person's self-interest. The frustration of self-interest is often linked to harm, and manipulation may be said to involve harm to the manipulatee. However, nudges, in some forms, are meant to serve self-interest and seem to be manipulative. Therefore, the frustration of self-interest and harm are no determining concepts for manipulation (Jongepier & Klenk, 2022, p. 24).

In line with the focus on the direct or indirect result of manipulation, one can also regard manipulation as undermining autonomy. However, manipulation does not have to interfere with autonomy and may even enhance it (Jongepier & Klenk, 2022, p. 25). In addition, coercion can also serve to undermine autonomy (Pugh, 2022, p. 30), making the loss of autonomy not sufficient to delineate manipulation from other types of influences.

Manipulation is unlikely to be exhaustively characterised by any end state (i.e., the direct or indirect result of the influence) because having one's self-interest frustrated may be arrived at in a multitude of ways, and not all of them have to be manipulative (Jongepier & Klenk, 2022, p. 26). Therefore, manipulation should at least include features of the process through which manipulation occurs.

3.1.2 Process views

Within the process views of manipulation, attention is given to interpreting manipulation based on the characteristics of processes or modes of influence that lead to certain behaviours or actions.
Regarding the varying perspectives on the level of consciousness involved in manipulation, Chapter 3.1.2.1 focuses on the aspect of bypassing rationality, while Chapter 3.1.2.2 delves into the covert nature inherent in

the manipulation. Chapter 3.1.2.3 will explain the role of required intentionality in manipulation, while Chapter 3.1.2.4 will explore the evocation of emotions as a component of manipulative behaviour.

3.1.2.1 Bypassing rationality

The concept of bypassing rational deliberation focuses on the process of influence rather than its outcome. Both persuasion and coercion require that victims recognise and respond to reasons to succeed. Therefore, the bypassing rationality criterion holds promise in distinguishing manipulation from other forms of influence. Bypassing rationality refers to the influence that does not (adequately) engage the manipulatee's rational capacities (Jongepier & Klenk, 2022, p. 28). This means that manipulation induces psychological states by exploiting psychological mechanisms or techniques that are incompatible with the proper functioning of the manipulatee's rational capacities, generating behaviour without any input from rational deliberation (Noggle, 2022).

A significant challenge associated with the factor of bypassing rational deliberation is that many forms of non-rational influence may not necessarily appear manipulative. For example, graphic campaigns highlighting the dangers of smoking might not be immediately perceived as manipulative, even though they may appeal more to emotions than to facts (Noggle, 2022). Similarly, dressing up for a presentation to convey a certain impression to the audience can be viewed as an attempt at non-rational influence (Noggle, 2022). This highlights the importance of considering both the effects of context and intention in assessing whether a specific form of influence is perceived as manipulative.

Although reacting with emotions towards messages can suggest that individuals were relying primarily on System 1 thinking—suggesting an inability to engage their rational capacities—it is crucial to acknowledge that System 1 responses can be rational and legitimate in certain situations. For instance, emotional reactions against injustice or propaganda can be seen as rational responses. Defining "bypassing rationality" as relying on System 1 thinking challenges the notion that all such bypasses of reason are inherently manipulative. Therefore, if "Bypassing rationality" is empirically evidenced as a determinant, it must be clarified why certain emotional responses or bypassed states are considered legitimate, while others are seen as manipulative (Jongepier & Klenk, 2022, p. 29). This perspective suggests that while System 1 thinking often circumvents the slower, more deliberative processes of System 2, it is not necessarily that System 1 thinking bypasses rationality itself.

Maillat & Oswald (2009) define manipulation as the use of cognitive optimism. Individuals often assume that their spontaneous cognitive processes are highly dependable and that the outcomes of these processes do not need to be re-evaluated. Following this definition, manipulation involves trying to mislead the manipulatee by exploiting their cognitive optimism and ensuring that only a limited set of contextual assumptions is used (Maillat & Oswald, 2009). While this concept shares similarities with bypassing rational deliberation, this concept emphasises that the level of trust individuals place in their cognitive abilities impacts the extent to which a message bypasses rational deliberation. Therefore, when individuals have greater confidence in their spontaneous cognitive processes, this leads to increased manipulation. This aligns with the ELM, where low cognitive processing leads to a higher likelihood of susceptibility to manipulation.

It is crucial to recognise that when cognitive optimism plays a role in manipulation, this does not suggest that the responsibility for avoiding manipulation lies solely with the manipulatee because the manipulatee's use of its high central pathway for processing information can prevent the effect of manipulation.

3.1.2.2 Covertness

Following the process overview, manipulation involves a specific process of influence. While bypassing rationality offers a promising explanation, Susser et al. (2019) argue that defining manipulation as a hidden influence more accurately differentiates between types of nudges. For instance, consider a 'social nudge' like the application of social norms for load-shifting discussed in Chapter 2, which encourages people to do their laundry when the sun is shining. The manipulative potential of this strategy depends on how the information is presented. It could be considered manipulative because, although the information shared is true, its underlying purpose might be concealed. According to this perspective, influence is deemed manipulative if it is hidden.

While both coercion and persuasion take place out in the open, manipulators seem to operate undercover. It seems very plausible that to succeed manipulation must be hidden in the sense that the intentions of the manipulator, the process of direct or indirect influence, remain hidden from the manipulatee.
Manipulation could be described as an influence that is covert in a way that allows it to bypass reason. Certainly, if an influence is covert and thus escapes one’s notice, then it would also seem to escape any conscious reasoning process. Manipulation could be characterised as an influence on the manipulatee which is covert in the sense that the manipulatee lacks knowledge or understanding of how they are being influenced, making it unconscious influences (Jongepier & Klenk, 2022, p. 27).

It can be argued that hidden influence is not a necessary condition for manipulation. For example, when the manipulator makes it clear that if the manipulatee does Y rather than X, the manipulator will be generally displeased. However, visible influences, such as gaslighting and guilt trips, may not necessarily constitute manipulation but could be categorised as coercive influences instead (Noggle, 2022). This distinction helps to refine the understanding of manipulation by highlighting that not all forms of influence involve manipulation.

A debate may arise regarding the necessity of covertness, as revealing the hidden influence by the manipulatee could raise questions about whether the manipulation still holds. The counterfactual implication of covertness suggests that merely uncovering the manipulator's hidden influence would make the manipulation disappear. This implies that cases of manipulation could involve a moral failing on the part of the manipulatee, which may not be the correct conclusion to draw (Klenk, 2021). Hence, it might be more constructive to examine the aspect of covertness from the standpoint of what the manipulator aims to conceal, rather than what is covert to the manipulate (Klenk, 2021).
In line with this viewpoint, some may argue that manipulation requires hidden influence focussing on the manipulativeness and not on the manipulated behaviour. Perhaps it is sufficient for manipulation that the intention for influence is covert because, if the manipulator's true intentions remain unknown to the manipulatee, the manipulatee might fail to engage in rational deliberation (Noggle, 2022).

The concept of covertness also emerges in research related to psychological disorders. Both primary and secondary psychopathy involve emotional manipulation, with the former showing a stronger correlation.

Primary psychopaths, known for their lack of emotional expression, may not necessarily conceal their emotions to manipulate others effectively. In contrast, secondary psychopathy is linked to heightened anxiety, and research by Grieve & Mahar (2010) suggests that it correlates positively with emotional concealment. This indicates that for emotional manipulation by psychopaths, an emotionless demeanour, or hidden emotions, must be maintained. This can be seen as a form of covertness, centred around the concealment of emotions as a process for manipulation.

3.1.2.3 Intentionality

Manipulation generally requires manipulators to possess the capability of having or forming intentions and perform deliberate behaviour to manipulate others (following the necessary conditions of manipulation). Therefore, according to the standard conception of agency, manipulators must be agents (Jongepier & Klenk, 2022, p. 21).

In the domain of research on psychological disorders, Bowers (2003) describes manipulation as cognitive distorted behaviour which stems from cognitive distortions rather than intentional manipulation. For example, behaviours such as anger outbursts or incessant demands may be interpreted as expressions of inner pain or emotional distress rather than deliberate manipulation. Hence, it is important to differentiate between the potential reasons for perceived manipulation based on the requirement of intentionality.
The question of what type of intention is needed for an act to be considered manipulative carries practical implications when assessing the behaviour of individuals, such as those with personality disorders, where manipulativeness may be characteristic. However, it would seem counterintuitive for a theory of manipulation to suggest that e.g. individuals with personality disorders are incapable of behaving manipulatively (Noggle, 2022).

Austin et al. (2007) developed a scale to assess emotional manipulation and its association with personality traits, Machiavellism, and self-report emotional intelligence. Through ten questions structured as “I know how to use method M on person P to achieve X,” the study was able to describe a general tendency to engage in manipulative behaviours in interpersonal interactions (Austin et al., 2007). This suggests that manipulative behaviours are tactics aimed at influencing the actions of others which corresponds to the required intentionality.

3.1.2.4 Emotions evocation

Bowers (2003) explores alternative views of manipulation within the research domain of psychological disorders. One such viewpoint proposes that manipulation can arise from unconscious defence mechanisms, such as projective identification, whereby individuals project their unacknowledged traits onto others. For example, a person might project feelings of guilt or defensiveness onto others, reacting as if these emotions belong to them, despite originating from the projector's internal struggles. The attempt to evoke certain emotions in others was indicated to be perceived as manipulative by nurses (Bowers, 2003).
The evocation of emotions also emerges in research examining the stigma surrounding self-harm. Urquhart Law et al. (2009) conducted a study indicating that students who attribute responsibility for self-harm to young individuals express increased feelings of anger toward them and perceive self-harm as more manipulative. This suggests that the perception of manipulation is intricately connected to the emotions it provokes in others.

Another study on attitudes towards self-harm found that nurses with high levels of antipathy towards patients displayed judgemental attitudes and perceived manipulation in self-harming behaviour (Conlon & O'Tuathail, 2012). This underscores the notion that personal attitudes, such as antipathy, can shape the perception of self-harming behaviour, with heightened antipathy leading to a greater tendency to perceive manipulation. The concept that manipulation elicits emotions differs depending on the attitude of the recipient, thereby complicating the use of emotions as a distinguishing factor for manipulation. Therefore, this concept should specifically focus on the aspect of manipulation that evokes emotions, rather than the emotions themselves that are evoked.

3.1.3 Norm views

According to norm-based views, manipulation is associated with behaviour or actions that violate norms. What distinguishes normative views from views focused on outcomes or processes is that the norm violation is constitutive of manipulation, rather than a common or necessary side effect.
It might be argued that manipulation involves attempting to induce to breach a norm, as will be discussed in Chapter 3.1.3.1. Conversely, others propose that manipulation arises from the manipulator violating a norm of appropriate influence, as will be explored in Chapter 3.1.3.2.

3.1.3.1 Trickery

Treating manipulation as a form of trickery can be seen as another potential determinant. This determinant can be conceptually tied to deception. The evolutionary biologist Robert Trivers (1976) delves into the intricate dynamics of deception and self-deception in animal communication. He proposes that since deceit is widespread in animal communication, there is evolutionary pressure for animals to detect deception with others. As a result, the manipulators might evolve a degree of self-deception, where certain facts and motives are unconsciously suppressed to prevent revealing signs of deception through self-awareness. This evolutionary understanding enriches the trickery account of manipulation by showing that similar deceptive tactics, which create false beliefs or expectations, are used in human interactions. The evolutionary perspective highlights how manipulators might use self-deception to improve their deceptive skills, thereby making their manipulative actions more insidious and difficult to uncover.

As Rudinow (1978) observed, certain instances of manipulation may not necessarily entail deception, as seen in the case of guilt trips, he states that to accommodate such scenarios, manipulation may still occur even when the manipulator exploits the weaknesses of the manipulatee (Rudinow, 1978).
The trickery view can further be explained by associating it with behaviour or actions that attempt to violate norms. However, there are considerable differences in understanding the norm violation inherent in manipulation.

Some state that the norm-violating part of the trickery view involves attempting to make the manipulatee violate a norm by adopting faulty mental states. This adopts any faulty mental state, including beliefs, desires and irrational emotions not in their self-interest. In this perspective, the manipulator may disguise bad reasons as good or faulty arguments as sound, even though the manipulator knows these are bad reasons and faulty arguments (Noggle, 2022). Using the trickery account as a demarcating factor raises the question of how to define the faulty mental state. It prompts inquiry into whose standards determine whether the influence attempts induce the target to adopt a faulty mental state (Noggle, 2022).

Alternatively, another view on the aspect of norms in trickery posits that manipulation occurs when the manipulator violates a norm of proper influence, falling short of certain interactional norms (Jongepier & Klenk, 2022, p.30). Suggesting that manipulation occurs when the manipulator attempts to induce what the manipulator regards as a faulty mental state into the target's deliberation (Noggle, 2022).

One problem with normative views is that they have problems with contradictory examples. For example, exerting pressure or charm tactics cannot be explained by this view, even if they appear to be real cases of manipulation (Jongepier & Klenk, 2022 p. 31). This highlights the potential necessity of developing a more comprehensive understanding of manipulation that incorporates multiple determinants.

3.1.3.2 Indifference

While the common 'vulnerability view' focuses on what happens to the target, the indifference view developed by Klenk focuses on the manipulator and what could explain their method of influence (Klenk, 2023). It cannot be distinguished by what it does or contributes, but rather by what it lacks. Manipulators lack or better to say, do not care for reasons, while persuasion and coercion do (Jongepier & Klenk, 2022, p. 33). It could be said that the manipulator is not interested in educating the manipulatee but prefers to just change the behaviour. However, manipulative accounts could provide reasons, but only if this is part of their method to achieve their purpose.

The indifference view takes the following form: The manipulator aims to manipulate a person if they aim to have the person exhibit a certain behaviour through some method while the manipulator disregards whether the method reveals reasons for the manipulatee to do, think or feel as the manipulator wishes. This can be expressed in the following thinking of the manipulator: 'I want you to perform a certain behaviour, so I use a method, and I would have chosen this method even if it did not reveal your reasons for imposing the behaviour on you' (Klenk, 2020).

The question regarding the nature of negligence, particularly how manipulators fail to acknowledge or care about reasons, can influence how we define and understand manipulation. The presence of norms or duties of care determines where manipulation can occur. If there are no norms of care within a certain domain, negligent influence may be considered a mild form of manipulation or not at all. This raises questions about how we define the boundaries of manipulation and whether this definition depends on the presence of norms or duties of care (Jongepier & Klenk, 2022 p. 33).

In line with the negligence view, conscientiousness, defined as doing things carefully and correctly, becomes relevant. Monaghan et al. (2020) demonstrated that Machiavellian tactics, which are associated with strategic manipulation in psychological disorders, are negatively correlated with conscientiousness and have a non-significant relationship with dysfunctional impulsivity (Monaghan et al., 2020). Deceitfulness and exceptional manipulative abilities are the most common traits associated with Machiavellianism and they have a dispositional tendency to behave emotionally towards others to promote their interests (Watson, Biderman & Sawrie, 1994). Machiavellians, due to their low conscientiousness, may fail to provide reasons to others explaining why someone should perform a certain behaviour. This lack could explain the increased perceived manipulation of Machiavellians.

3.1.4 The potential determinants of manipulation

In light of these measuring difficulties of perceived manipulation, I operationalised the concept of manipulation by analysing what we refer to as its 'determinants'. The operationalisation is based on the framework developed by Klenk (2021). The potential determinants are derived from an analysis of the philosophical literature on manipulation as well as research on psychological disorders. Philosophical accounts highlight four potential determinants of manipulation, which we interpret as sufficient conditions for manipulation. Manipulation occurs if any of the following conditions are met:

If A intends B to do X and…

BYPASSING RATIONALITY:	… A intends to bypass B's rational capacities to recognise and act on reasons for X, then A manipulates B.
COVERTNESS:	… A intends to conceal its intentions or influence for X to B, then A manipulates B.
TRICKERY:	… A intends to induce faulty mental states in B, or violates norms of proper influence for B, then A manipulates B.
INDIFFERENCE:	… A disregards whether A provides existing reasons to B for X, then A manipulates B.

With A being the manipulator, B the manipulatee and X the intended target.

Each of these determinants can independently, or in combination with others, satisfy the condition for manipulation. The underlying assumption of this operationalisation is that manipulation necessarily involves the intentionality of the manipulator to influence the manipulatee in one of these four ways (Klenk, 2021).
This framework provides a systematic approach to studying perceived manipulation by establishing clear, structured criteria that can be quantified. Figure 3 illustrates the conceptual model with mediator variables, offering a clear operational definition of manipulativeness suitable for a quantitative survey (Chapter 4).

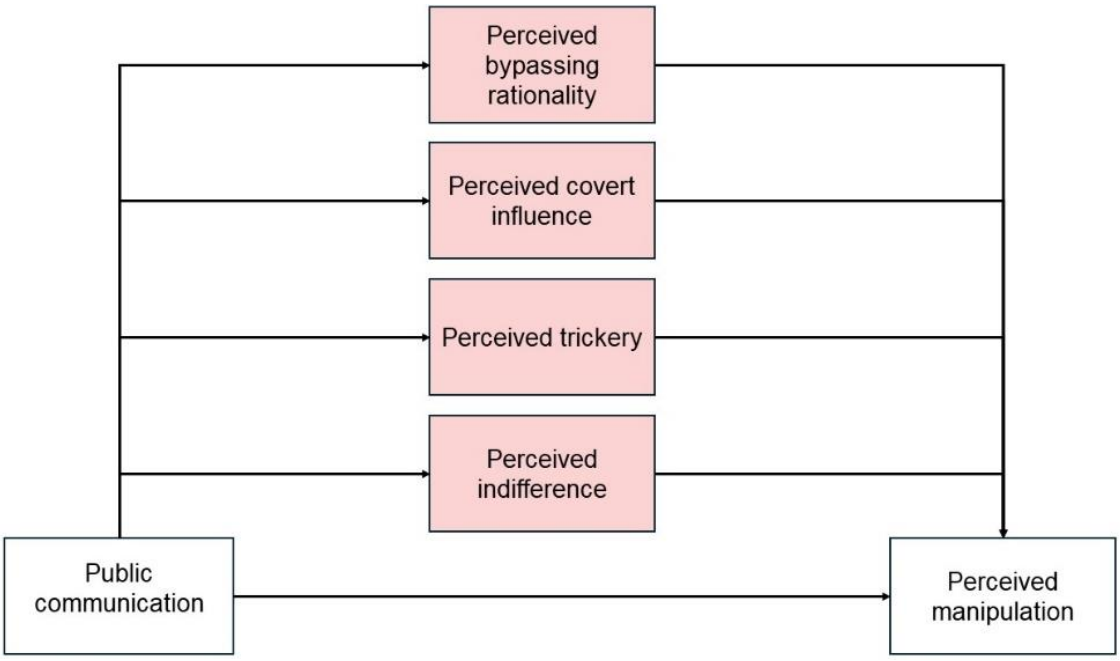

Figure 3. *Potential determinants of perceived manipulation as mediator factors.*

3.2 Moderator variables for perceived manipulation

This subchapter will focus on the second sub-research question: “How does the context of climate change influence perceptions of manipulation?” The impact of the context of climate change will be measured by moderator variables.

Moderator variables are distinct from mediator variables in that moderators affect the strength or direction of the relationship between an independent variable and a dependent variable. In contrast, the potential determinants of perceived manipulation (mediators) are suggested to explain the mechanism through which a communication is perceived as manipulative. In this study, the moderators influence how strongly or under what conditions perceived manipulation occurs, rather than explaining the process through which manipulation affects outcomes.

Based on the behavioural analysis in Chapter 2.3, it could be assumed that perceptions of manipulation towards public communication using psychological insights (e.g., a social norm) could be affected by personal values (specifically individualism vs. collectivism), trust in government, dispositional scepticism, environmental values, and attitudes towards the appropriateness of using psychological insights in public communication. Within the specific context of climate change, environmental values can be distinguished as key factors. Literature research in the field of psychology highlights two potential moderator variables.

3.2.1 Climate change scepticism

Climate change scepticism refers to the disbelief in the occurrence of climate change. This scepticism might lead individuals to suspect that the government is manipulating them into believing something about climate change that is not true.
Research by Bertolotti et al. (2021) found that climate believers tend to approve and support policies presented as means to achieve environmental gains more than climate sceptics. Conversely, climate sceptics tend to pay more attention to economic loss-framed communication, which suggests that these policies could be ineffective or even counterproductive.
Additionally, Ma et al. (2019) observed that emphasising the scientific consensus on climate change produces reactance among climate sceptics. This reactance may lead to backfiring effects on important outcomes related to climate change, such as risk perceptions, climate change beliefs, and support for mitigation policies. Furthermore, Huber (2020) highlights that populist attitudes are associated with climate scepticism. Individuals with populist attitudes often perceive a lack of representation in these issue areas and reject climate and environmental policies (Huber, 2020).

It could be expected that climate scepticism significantly moderates the perception of manipulation in the context of climate change. This suggests that individuals who are sceptical about climate change are more likely to perceive governmental communications as manipulative

3.2.2 Opposition to climate action

Petty & Cacioppo (1990) have demonstrated that persons highly involved with the issue are more motivated to systematically process persuasive messages than persons not involved. Highly involved individuals are also more likely to seek out information, critically evaluate messages, and engage in discussions about environmental topics. As a result, they may be more discerning when it comes to government

communications, considering the potential motives behind the messages and assessing their credibility accordingly. Moreover, highly involved individuals may be more inclined to challenge or resist government narratives that they perceive as manipulative or misleading, particularly if these narratives conflict with their own beliefs or values regarding environmental conservation and sustainability.
This could be illustrated by the Extinction *Rebellion*'s reaction to a Dutch government campaign urging households to be more sustainable. Extinction Rebellion, a proactive environmental movement, perceives the campaign as manipulative for diverting attention from major polluters, such as large corporations (Extinction Rebellion NL, n.d.).

It will then have to be true that people who oppose climate action may be less vigilant in evaluating government communication on environmental issues because they have little motivation to evaluate the subject. According to the COM-B model, it can be argued that they may then rely more on heuristics or preconceived ideas, which may make them more susceptible to government manipulation tactics. Consequently, the perceived level of manipulation in government communications may vary depending on individuals' level of issue involvement, with highly involved individuals being more critical and discerning in their assessments compared to those with lower levels of involvement.

Conversely, it can also be argued that high involvement might lead to greater acceptance of manipulative communication if it is perceived to serve the greater good. In such cases, the communication might not be perceived as manipulative at all.
Hornsey et al. (2018) observed that the association between ideological factors, such as conspiratorial beliefs and conservatism, and climate change scepticism was more pronounced in the United States than in other countries, given the country's heavy reliance on fossil fuel industries. Individuals with vested interests in these industries are more likely to interpret climate-related information through the lens of their ideological worldviews. This ideological opposition to climate change adaptation might lead to increased perceptions of manipulative communication.

Furthermore, Sax et al. (2018) demonstrated that users of mHealth apps exhibit significantly lower levels of scepticism compared to non-users, concurrently holding stronger beliefs in the effectiveness and are less worried about possible manipulative intent of mHealth apps. While one might assume that users are in a better position to judge manipulative intent and the interests of mHealth app providers, an alternative interpretation suggests that users may be more naive and more inclined to trust mHealth apps and not attempt to influence their behaviour in problematic ways. This second interpretation renders them particularly vulnerable, making them more susceptible to manipulation (Sax et al., 2018). Therefore, it could be posited that individuals deeply engaged in environmental issues may be more susceptible to attempts at manipulation and perceive lower levels of manipulation.

Despite contrary results in research, it could be expected that opposition to climate change adaptation is likely to moderate the perceived manipulation of government communications. Individuals not involved in climate action, particularly those influenced by vested interests, are more inclined to view government climate action messages as manipulative.

3.2.3 The potential moderators of perceived manipulation

Both of the moderators— ‘Climate change scepticism’ and ‘Opposition to climate action’—frame the perceptual lens through which individuals assess the credibility and manipulative nature of public communication in the context of climate change. They significantly influence whether such communications are seen as genuine attempts to engage the public in climate action while possibly being perceived as manipulative.

The factors dispositional scepticism and source scepticism can be analysed together because both involve questioning the motives behind communication in this thesis. Here, dispositional scepticism is a general tendency to doubt the motives of others, while source scepticism is specific to the communicator. Taking them together provides a comprehensive understanding of the effect of ‘Source scepticism' in this thesis.
Thus, derived from Chapter 2.3, the three potential moderators of perceived manipulation include ‘Source scepticism,’ ‘Individualism over collectivism’ and 'Attitude towards the campaign'. Along with the potential moderator variables ‘Climate change scepticism’ and ‘Opposition to climate action’ for perceived manipulation, the conceptual model for these relationships is depicted in Figure 4.

It could be that these five potential moderators could also function as moderators for the mediators (the potential determinants of perceived manipulation) described in Chapter 3.1.4.
Furthermore, these moderators may impact the acceptance of manipulation in government communication, which will be discussed in the subsequent subchapter. To maintain clarity and focus within the limited time of this research, the function of these moderators on other variables besides perceived manipulation will not be illustrated in the conceptual model.

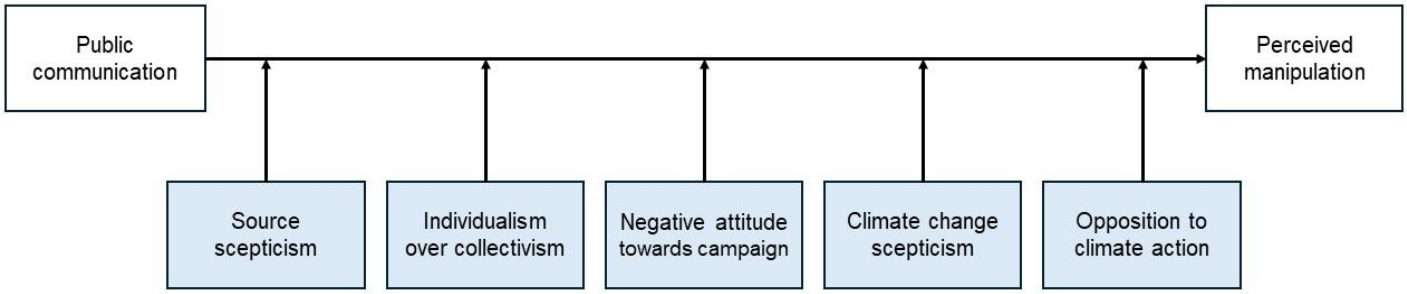

Figure 4. *Potential moderator variables influencing perceived manipulation in public communication.*

3.3 Evaluation variables for the acceptance of manipulative public communication

While Chapter 3.1 focuses on the mediating function of the potential determinants of perceived manipulation, and Chapter 3.2 examines the moderating function of variables that could amplify or mitigate perceived manipulation, this subchapter delves into the acceptance of manipulative public communication. Within the scope of this study, the ethical implications centre on how public manipulation is perceived and accepted by the public. The third sub-research question to be addressed is: "How can the acceptance of manipulative public communication be evaluated?" This question explores various criteria that could inform the assessment of manipulative communication, underlining the critical importance of public acceptance in evaluating the ethics of such practices.

To explore the acceptance of manipulative public communication, it is crucial to consider how different contexts influence public judgments. The ethical implications of manipulation not only depend on the nature of the act itself but also on how it is perceived under various circumstances. This perspective is particularly relevant when considering the role of the communicator. For instance, De Vries et al. (2015) illustrated the role of context in perceived judgments of legitimacy. In this research, participants deemed manipulation inappropriate when news agencies emphasised the advantages of CCS in their coverage. The perception intensified when oil companies highlighted these advantages, suggesting a higher level of manipulative intent attributed to corporate communicators compared to news agencies. However, in this latter case, it did not lead to judgments of illegitimacy (De Vries et al., 2015). This distinction underscores the importance of scrutinizing the source when evaluating the acceptance of manipulative communication, as the source of the message influences how the message is judged on legitimacy.

Building on the understanding that perceptions of acceptance can be influenced by source, it is important to consider the moral values associated with perceived manipulation. First of all, it could be that several features associated with manipulation have a moral value that could give the immorality value to manipulation. For instance, if deception (as an aspect of the potential determinant trickery) serves as a predictor of manipulation, and deceptiveness is prima facie immoral, then manipulation can also be stated as prima facie immoral. However, it is unlikely that there exist universally applicable determinant factors for manipulation, meaning that evaluation of acceptance cannot always be based solely on this criterion (Noggle, 2022).

While some say manipulation is always morally wrong, no matter what consequences, others might argue that manipulation is morally bad as a conceptual matter but is *pro tanto* wrong. This perspective suggests that while manipulation is inherently morally wrong, this wrongness can be outweighed by other moral considerations under certain conditions. For example, if the manipulation leads to a greater good, such as saving innocent lives, then it might be considered justified despite being inherently wrong. Also, non-consequentialist factors can be moral considerations, such as the immorality of the manipulatee's character, or the fact that the manipulatee acts on an evil desire. It is important to note that, in this view, action involving manipulation is always a moral reason to avoid it (Noggle, 2022).

Alternatively, it could also be argued that manipulation is *prima facie* (at first sight) immoral. In this view, manipulation is presumed to be immoral, but this presumption can be defeated in certain circumstances. When the presumption is defeated, manipulation is not considered wrong at all. In extreme scenarios, like

terrorist attacks, there is no moral reason for the manipulator to choose a non-manipulative method of getting their interest (Noggle, 2022).

A more plausible stance is the combination of pro tanto and prima facie. Such a view holds that manipulation is prima facie immoral, meaning there is a presumption against it, but this presumption can be defeated by countervailing moral considerations. In situations where manipulation remains morally wrong, its wrongness is considered pro tanto, meaning it can be outweighed by other moral factors. However, the presumption against manipulation is defeasible, allowing for circumstances where manipulation is considered morally justified or even preferable (Noggle, 2022).

Sometimes manipulation is harmless or even good, such as lovers, and so to allow that manipulation is not always bad or immoral. Also, parents often manipulate their young children by withholding reasoning. This suggests that norms in the context should explain how the manipulation is evaluated in terms of morality. As Klenk (2021) suggests, manipulation is less and less morally acceptable as we interact with increasingly agential interlocutors. So, one might argue that manipulation is, or at least should be, a morally neutral term without even the presumption of immorality. Here, if a given instance of manipulation is immoral depends on the context, and no presumptions should be made. It seems that the contextualised element of manipulation concerns the evaluation. In different contexts, manipulation is being used in a morally neutral way even when there is a target group for the manipulation (Noggle, 2022).

The wrongness of manipulation is associated with several other conditions, which will be addressed in the following subchapters. Chapter 3.3.1 delves into the wrongness based on autonomy, Chapter 3.3.2 focuses on indifference and Chapter 3.3.3 focuses on wrongness based on harm. Chapter 3.3.4 concludes which independent variables might be able to predict the acceptance of manipulative communication.

3.3.1 Autonomy

The wrongfulness of manipulation could be argued on the basis that it violates, undermines, or runs counter to the target's autonomy. It is commonly perceived that manipulation interferes with autonomous decision-making. Yet, manipulation could also potentially enhance the target's overall autonomy by supporting the target's autonomous choice. For instance, someone manipulating their friend not to return to an abusive ex or a teacher manipulating a student to attend class, thus potentially opening up more career opportunities. In such scenarios, it could be argued that in the short term, the manipulatee's autonomy is undermined, explaining why it is *pro tanto* immoral. However, it could also be posited that the overall enhancement of autonomy could explain why it is justified in the long run (Noggle, 2022).

In contrast, research by Osman (2020) suggests that manipulation does not necessarily impact perceptions of undermined autonomy. Instead, this study identified nuanced public perspectives on the interplay between the unconscious and volition (free will, conscious control, and prior conscious intentions) varying significantly across different contexts.
It can be argued that individuals may maintain conscious choice and free will over their actions in contexts where manipulation takes place, despite extensive psychological evidence suggesting otherwise. It might be more prudent to assume that people are keen to maintain a belief that they are consciously responsible for their actions in the contexts that matter to them (Osman, 2020).

If this premise is valid, it becomes crucial to consider the attributed underlying intentions citizens have of the government. The perceived intentions may influence the extent of conscious control individuals want to relinquish or wish to maintain following exposure to public communications. This aligns with the COM-B model, which posits that motivation impacts whether individuals employ system 1 or system 2 thinking processes.

Autonomy is strongly associated with the idea of free will, which entails the capacity to make decisions that are not predetermined. Monroe & Malle (2010) suggest that making a deliberate choice is a demonstration of having free will (and autonomy). This research on folks' beliefs of the unconscious and its association with free action shows that the preservation of choice is a strong indicator of conscious control and a critical indicator of the presence of free will. However, challenges to the existence of free actions arise because our actions can be influenced beyond our conscious awareness. Because we cannot be consciously aware of being influenced, this suggests a limitation in assessing our perceived freedom (Osman & Bechlivanidis, 2020).

Osman (2020) indicated that there is little work investigating the general views people hold regarding the application of specifically psychological research on the unconscious in daily life and acceptance. Furthermore, Osman & Bechlivanidis (2020) found no evidence to support a correlation between unconscious manipulation and free will. This demonstrates that while manipulation may operate through unconscious processes, individuals do not necessarily link this phenomenon to the concept of free will. Consequently, it could also be questioned whether individuals will link manipulation to autonomy.

The connection between manipulation and autonomy is also questioned by Buss (2005), who argues that manipulation and deception can be constructive and harmless modes of human interaction. For instance, manipulation is frequently observed in romantic relationships, where individuals acting autonomously give consent to manipulative influences. Thus, Buss argues that autonomous individuals would resist being subjected to manipulative influences. She asserts that manipulation does not deprive its victim of the capacity to make choices, refraining from depriving the target of their choices, a viewpoint consistent with the findings of Osman & Bechlivanidis (2020) regarding free choice.

3.3.2 Indifference

The negligence account by Klenk (2021) may explain why manipulation is frequently viewed as wrong, particularly under the condition that it undermines autonomy. According to this perspective, manipulation does not inherently result in a loss of autonomy, but it often does due to the methods utilised by manipulators. These methods are selected for their effectiveness in effecting change, rather than for their ability to reveal reasons. If the latter is only a secondary consideration, there is less opportunity for the manipulated person to accurately comprehend their situation and manage their affairs (Klenk, 2021).

Klenk (2021) also suggests assessing the morality of manipulation by evaluating the extent to which a manipulator respects the agency of others, specifically their capacity to respond to reasons. This method focuses on the manipulator's regard (or lack thereof) for the decision-making autonomy of others, rather than just the outcomes of manipulation.

This view can be particularly useful in exploring the relationship between perceived indifference and acceptance of manipulation, potentially without the need to assess autonomy directly, especially if the correlation between manipulation and autonomy loss proves to be non-significant.

3.3.3 Harm

Another factor to consider in assessing the unethical nature of manipulation concerns the harm inflicted upon its targets. Manipulation is often used as a means of aggression, designed to detrimentally affect those to whom it is directed. However, as previously discussed, nudging can be construed as beneficial. Nevertheless, the existence of benefits to the targets of manipulation does not singularly account for its wrongfulness. It seems more reasonable to say that when manipulation harms its target, this harm adds to why it is considered wrong (Noggle, 2022), underscoring the importance of evaluating the acceptance of manipulation.

3.3.4 The potential evaluation variables for acceptance manipulative public communication

Altogether, 'Perceived wrongness,' 'Perceived autonomy loss', 'Perceived harm' and 'Perceived indifference' might be able to explain the acceptance of manipulative public communication as illustrated in Figure 5.

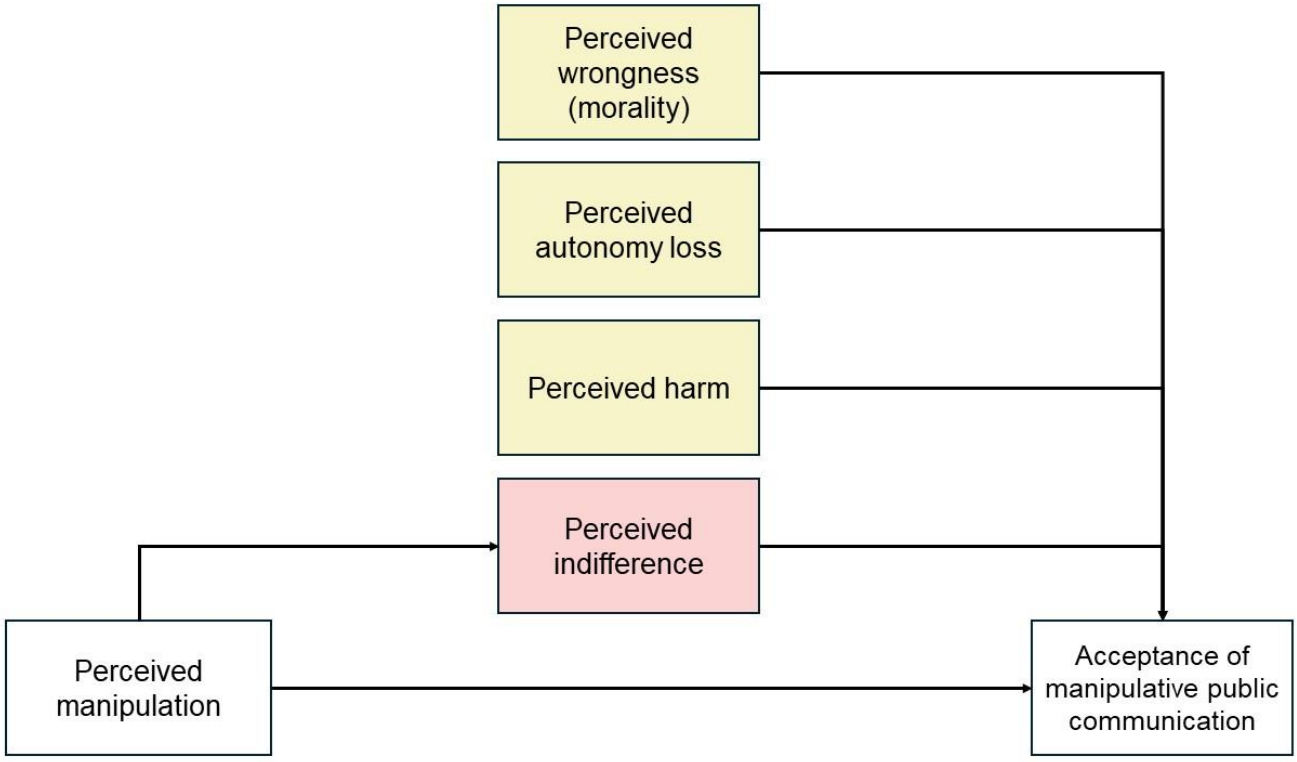

Figure 5. *Perceived manipulation as independent variable with potential evaluation variables for the acceptance of manipulative public communication.*

3.4 The current study

This subchapter focuses on transforming philosophical, psychiatric and psychological concepts into a conceptual model. This model guides the structuring of the survey to empirically assess perceptions of manipulation in public environmental communication.
In general, a conceptual model is the visual representation of the expected cause-effect relationship between independent and dependent variables, possibly with, among others, moderating variables, and mediating variables.

The conceptual model is illustrated in Figure 6 and is a combination of Figures 3, 4 and 5.

As explained in Chapter 2.1, if people process the communication via the peripheral route, the source characteristics might function as a cue that affects how the communication is perceived. De Vries et al. (2015) indicated that the source of communication significantly impacts perceived legitimacy. This distinction between various communicators and their perceived legitimacy highlights the crucial role of the source in assessing potentially manipulative communication. It could be that a source from which higher legitimacy is expected may be perceived as more manipulative in its communications compared to a source from which lesser legitimacy is anticipated. Consequently, the first hypothesis of this study is formulated as follows:

> **H1.** Communication from the government is perceived as more manipulative and less accepted compared to that from energy companies.

The first part of the model is based on the moderator variables that only impact the strength and direction of perceived manipulation. The potential moderators that could affect the perceived manipulation are described in Chapter 3.2 and include organisational scepticism, climate change scepticism, individualism over collectivism, attitude towards the campaign and involvement in climate action.

> **H2**. Organisational scepticism, climate change scepticism, individualism, negative attitude towards the campaign and opposition to climate action are moderating variables that increase perceived manipulation in public communication within the context of climate change.

Concerning the translation of the theoretical framework towards a conceptual model, it is essential to differentiate between “manipulation” and “perceived manipulation”. In this thesis, “manipulation” is described by the characteristics of manipulation’s potential determinants, whereas “perceived manipulation” relates to individuals' perceptions of the manipulativeness of communication strategies, regardless of whether it is manipulative or not.

The second part of the model delves into the potential determinants of perceived manipulation, as outlined in Chapter 3.1. Accordingly, the hypothesis relating to this part of the model is formulated as follows:

> **H3a**. Perceived bypassing of rationality, perceived covert influence, perceived trickery and perceived indifference are determinants of perceived manipulation.

A significant issue with manipulation involves distinguishing it from other forms of social influence, a challenge briefly discussed in Chapter 2.2. The accounts of bypassing rationality, covertness and trickery depend on the manipulatee’s reactions to the manipulator's actions, which can lead to conceptual challenges (e.g. revealing the covert influence, as highlighted in Chapter 3.1.2).

The indifference account could potentially demarcate manipulation from other forms of social influence by what the actor lacks - as defended by Klenk (2021). Such a framework is particularly promising if it is assumed that the source should provide justifiable reasons for their communications. Thus, the hypothesis concerning the application of the perceived indifference account is detailed as:

> **H3b.** Manipulation is perceived if and only if the manipulator does not care whether their means of influence reveal eventually existing reasons to the manipulatee.

If communications in general and in the context of climate change are perceived as manipulative, this should raise more awareness and urge for ethical guidance to predict whether perceptions of manipulation are perceived by the public. Therefore, the third and final part of the model, relating to the acceptance of manipulative communication, explored in Chapter 3.3, assesses the consequences of perceived manipulation in public communication:

> **H4a.** Perceived indifference results in lower acceptance of manipulative public communication in the context of climate change.
>
> **H4b.** The acceptance of manipulative public communication in the context of climate change can be evaluated based on perceived morality, perceived autonomy loss and perceived harm.

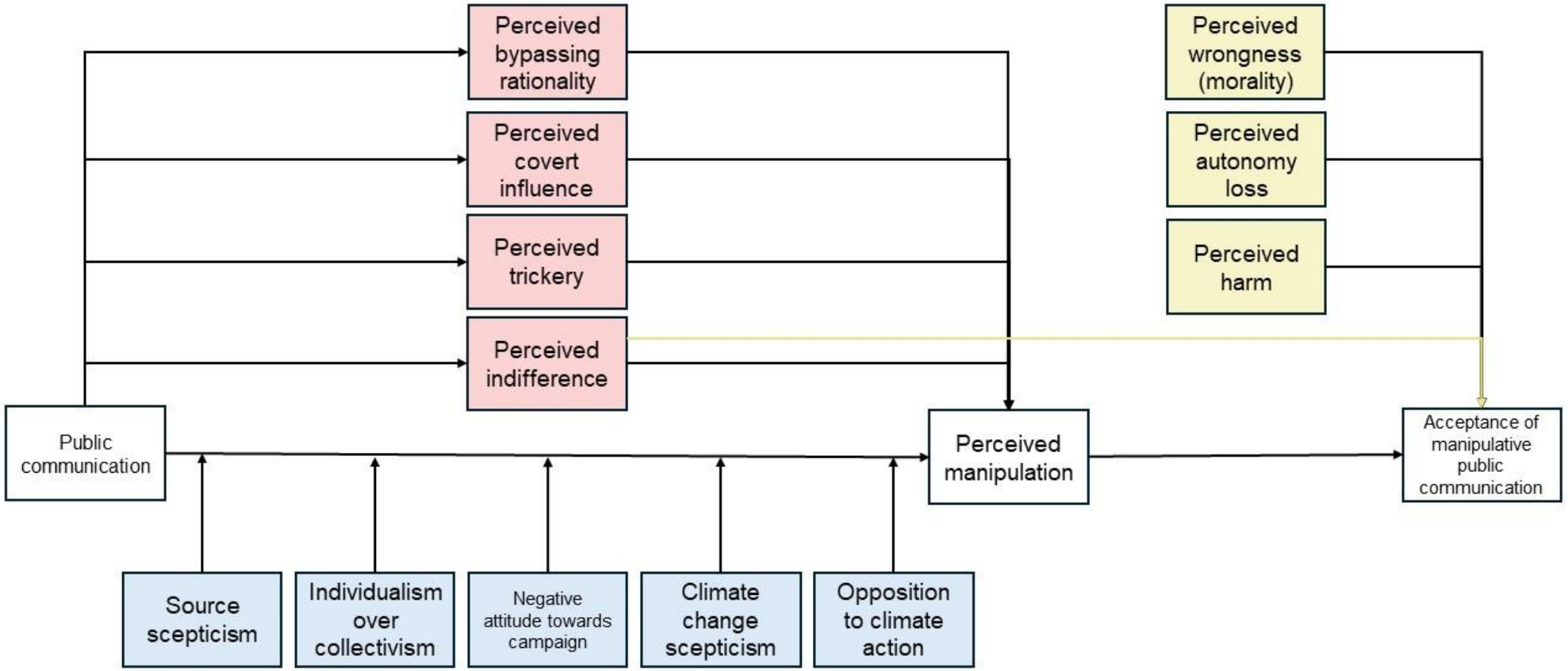

Figure 6. *The conceptual model.*

4. Research design

Now that the conceptual model has been built, displaying the constructs underlying the perceived manipulation, the model can be empirically tested. As briefly mentioned in Chapter 1, a quantitative approach will be taken for this purpose. This chapter will first provide a more detailed outline of the research, followed by a discussion of the measurements for the constructs.

Quantitative research involves collecting and analysing numerical data to identify patterns, make predictions, or examine causal relationships (Bhandari, 2021). This type of research utilises mathematically based methods, particularly statistics, to explain a broad array of phenomena (Muijs, 2010).
For this thesis, quantitative data were gathered using a survey, which is particularly suited to this research given its descriptive aim to assess relationships between variables. Surveys allow for the statistical quantification of potential determinants of perceived manipulation, biases in perceived manipulation, and the evaluation of the acceptance of strategic climate change communication.

4.1 Approval by the Human Research Ethics Committee (HREC)

The survey of this thesis study was approved by the HREC of TU Delft. The required checklist, a detailed data management plan and the informed consent materials were submitted (see Appendix A). Thus, the study's compliance with ethical and data management standards set by the HREC is confirmed.

4.2 Participants and survey distribution

To ensure the statistical power of the final sample was robust enough to draw meaningful conclusions, a minimum of 100 valid responses was required (Sapnas & Zeller, 2002). The survey was designed to be completed in no more than 15 minutes, to reduce the likelihood of participants abandoning the survey prematurely. The actual time taken to complete the survey ranged between 5 and 16 minutes.

The quantitative data were collected by distributing the survey via social media platforms, including LinkedIn and WhatsApp. The author of this thesis was responsible for recruiting the participants for this quantitative study. Clear inclusion and exclusion criteria were established as follows:

- Participants need to be at least 18 years old.
- Participants were only included if they spoke Dutch.
- Participants were excluded if they did not complete the survey until the second part (see Figure 7), which led to missing data.
- Participants were not included when they did not answer the experimental source condition correctly.

The pre-test of the survey was conducted via WhatsApp from the 25th of March to the 26th of March, during which 12 responses were collected. The main survey was subsequently distributed from the 12th of April to the 22nd of April, again through WhatsApp and LinkedIn, yielding 152 responses. After applying the inclusion and exclusion criteria, the number of participants qualified for this phase totalled 100.

4.3 Survey building

Given the limited timeframe of this study, a survey facilitated the efficient collection of a sufficient sample of responses. The survey was constructed using Qualtrics, a widely recognised web-based platform for survey creation. The survey is designed by the author of this thesis, with input from the rest of the research team. It was designed predominantly around the conceptual model presented in Figure 6, ensuring that the variables detailed in the theoretical framework (Chapter 3) guided the survey's structure in Figure 7. This method aligns with the exploratory nature of the study, providing preliminary empirical insights into the four potential determinants of manipulation.

The survey questions and experimental conditions are structured into three distinct parts shown in Figure 7. Firstly, Chapter 4.3.1 describes the experimental conditions to test Hypotheses 1 and 3b.
Chapter 4.3.2 examines the impact of individual biases on the perception of manipulation, thus testing Hypothesis 2. Chapter 4.3.3 translates the potential theoretical determinants of perceived manipulation into measurable items, allowing participants to assess the manipulativeness of communications and facilitating the testing of Hypothesis 3a. The final part, outlined in Chapter 4.3.4, includes questions that assess attitudes towards the acceptance of manipulation in public communication, addressing Hypotheses 4a and 4b.

All questions in Chapters 4.3.3 and 4.3.4 were originally formulated by the author of this thesis, with input and feedback from the supervisors. Thus, most of the survey questions are phrased in an original manner rather than relying on existing measurement scales, due to the absence of pre-existing questionnaires for these constructs. All custom constructs were measured on a 5-point Likert scale with options ranging from 'strongly disagree' to 'strongly agree'. Scores varied from 1 to 5, with higher scores indicating a greater presence of the construct in question; some items were reverse-coded to facilitate further analysis.

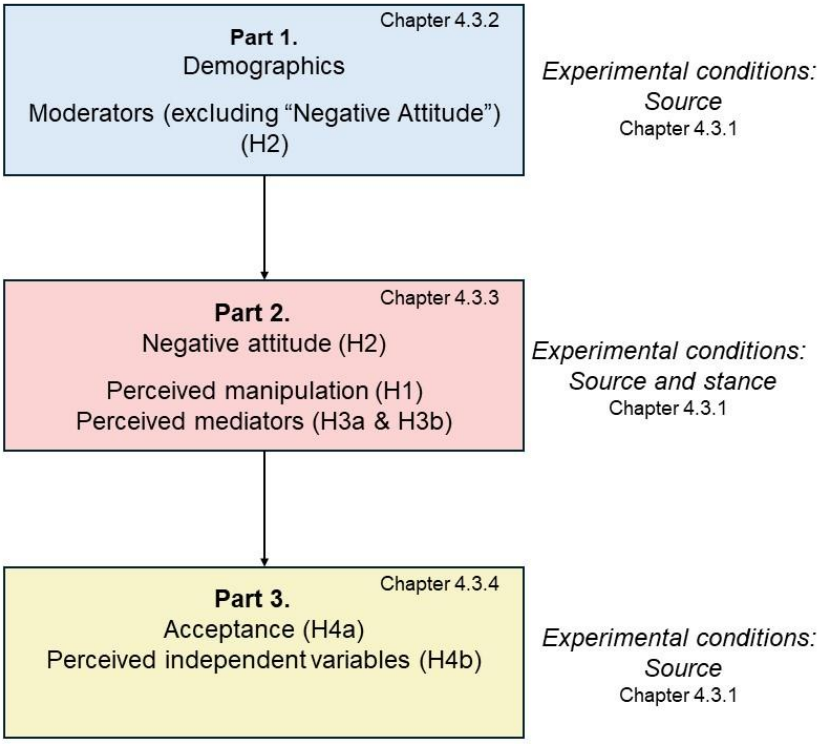

Figure 7. *Survey outline.*

The survey aimed to measure four potential determinants of manipulation, with each construct assessed using three to four questions (16 questions in total). Additionally, five constructs were designed to explore biases in perceived manipulation (18 questions), and three constructs addressed the evaluation of manipulative communication (7 questions). The survey's length was carefully considered to prevent negatively impacting response rates; thus, no more than four questions (preferably three) were devised for each construct.

It is essential to note that while the questions and responses are presented in English here, the actual survey was distributed in Dutch. For the complete set of survey questions, including their Dutch translations, see Appendix B (pre-test) and Appendix D (experiment). The pre-test featured questions similar to those in the experiment, although some were revised or omitted in the final experiment. The following paragraphs will detail the survey used for the final experiment.

4.3.1 Experimental conditions

This thesis utilises a two-factor experimental design to assess the impact of source credibility and communicative intent on perceived manipulation. The experimental conditions are specifically designed to test Hypotheses 1 and 3b by varying the source of the communication and the nature of the content provided.

Participants are randomly assigned to one of the four possible scenarios combining these two factors—source and stance—which allows the study to isolate and evaluate the effects of source credibility and the indifference stance of the communication on the overall perceptions of manipulation.

Experimental Condition 1: Government vs. Energy Company

This study incorporates two distinct sources. Firstly, given the focus on perceived manipulation through government communication within the context of the Netherlands, the Dutch national government will be utilised as the first source. Secondly, in the context of the energy transition, as outlined in Chapter 2, an energy company is chosen as a contrasting source, anticipated to be perceived as more self-serving than public serving. This differentiation allows for an examination of how the source's perceived motives affect the levels of perceived manipulation.

Experimental Condition 2: Careless vs. Caring

Because the indifference account is particularly promising for demarcating manipulation, this will be included for experimental conditions:

- Caring condition: In this condition, the communication, irrespective of the source, includes clear and justifiable reasons for the advocated actions. This condition is intended to serve as a control, aiming to demonstrate a lower perception of manipulation.
- Careless condition: Conversely, in this condition, the communication, irrespective of the source, lacks any justifiable reasons for the advocated actions, reflecting a disregard for the well-being or valid interests of the public. This setup is expected to lead to an increased perception of manipulation.

4.3.2 Constructs for measuring biases in perceived manipulation

The questionnaire includes demographic questions about age, gender, current educational level, profession, religion, and political affiliation. These variables are routinely included in research concerning unconscious influence, exemplified by Osman (2020). Additionally, based on the theoretical framework outlined in Chapter 3.2, five potential biases have been identified as moderator variables of perceived manipulation. These moderators are detailed in Table 2 and include:

- **Individualism** and collectivism can be measured by the four items based on the statements of Singelis et al. (1995). Individualism and collectivism are explained by horizontal and vertical individualism and collectivism items. Horizontality denotes the extent to which individuals perceive themselves as (in)dependent on society while viewing all members as equals. Verticality, on the other hand, accentuates the extent to which individuals perceive themselves as (in)dependent on society but accept inequality within it (Singelis et al., 1995). Sample statements are incorporated from Singelis et al. (1995).
  Responses are measured on a scale from 1 (completely disagree) to 5 (completely agree), high scores on the individualistic statements, along with low scores on horizontal statements, correspond to high levels of individualism. Therefore, the latter two will be reverse-coded.
- **Climate change scepticism** is assessed using the 'Climate Change Scepticism Questionnaire' developed by de Graaf et al. (2023). They designed four items for assessing climate change scepticism about whether the climate is changing, whether climate change has anthropogenic causes, whether climate change will have serious negative consequences and whether human efforts to mitigate climate change can effectively limit the rise in global temperature. Sample statements from de Graaf et al. (2023) are used.
  Responses are measured on a scale from 1 (completely disagree) to 5 (completely agree), with high scores indicating high climate change scepticism.
- **Opposition to climate action** is assessed by three self-made items inspired by research on subjective norms in climate action (Papagiannakis and Lioukas, 2012). Involvement in climate change may decrease the perceived manipulativeness of communication in the context of climate change, as it might be perceived as serving the greater good.
  Responses are measured on a scale of 1 (none at all) to 5 (very much), with a high score indicating a high degree of involvement in climate change. The scores were reverse coded so that higher scores represent opposition to climate action.
- **Source scepticism** combines dispositional scepticism towards the source of the message and scepticism towards the message itself. Citizens' trust in government organisations can be assessed by the scale designed by Grimmelikhuijsen and Knies (2015). Two sample statements from Grimmelikhuijsen and Knies (2015) are included. Additionally, from the perspective of dispositional scepticism towards communications, two sample statements of the scale of Obermiller and Spangenberg (1998) are included.
  Responses are assessed on a scale ranging from 1 (completely disagree) to 5 (completely agree). These items can be tailored to the experimental conditions, namely the Dutch government or a fictitious energy company. All four items are coded so that higher scores indicate lower levels of source scepticism; hence, scores were reverse coded.

- **A negative attitude** towards a campaign, policy or technology could influence the perceived manipulation. This construct is also included in a similar experimental study (De Vries et al., 2015). To account for this, the following question is included in the survey: "What do you think of the campaign?" Respondents are asked to evaluate the campaign based on sample statements by Petty & Cacioppo (1984) after reading the campaign with the second experimental condition.
  Responses are assessed on a scale ranging from 1 (not at all) to 5 (totally). The items are reverse coded so that negative attitudes may mediate higher levels of perceived manipulation.

Table 2. *Survey structure part 1.*

Measurable construct	Survey question	Source of survey question	Response options (and measurement scale)	SPSS codename
Demographics				
Age	'What is your age?'	N.a.	[Numeric] Prefer not to say	*Age*
Gender	'What is your gender?'	Included by similar studies (e.g., Osman & Bechlivanidis, 2022)	Multiple choice (nominal): • Male • Female • Other • Prefer not to say	*Gender*
Education level	'What is your highest education (possibly current education)?'	Included by similar studies (e.g., Wang, 2009)	Multiple choice (nominal): • Primary school • Senior secondary vocational education • Higher vocational education • Scientific Education • Prefer not to say	*Education*
Occupation	'In which sector do you work (or worked, if retired)?'	Included by similar studies (e.g., Wang, 2009)	Multiple choice (nominal): • (Appendix D) • Prefer not to say	*Occupation*
Religiosity	'Which description fits you best?'	Included by similar studies (e.g. Osman, 2020).	Multiple choice (nominal): • Christian • Muslim • Jewish • Hindu	*Religion*

				• Buddhist • Others: • Prefer not to say	
Political affiliation		‘What is your political affiliation?’	Included by similar studies (e.g. Osman, 2020)	Multiple choice (nominal): • Dutch political parties in 2024 (Appendix D) • Prefer not to say	*Politics*
Potential moderator variables					
Individualism	Horizontal individualism	‘I often do my “own thing” and do not care if this suits “good behaviour.’	Based on Singelis et al. (1995)	5-point Likert scale (*interval)* Scale from 1 (completely disagree) to 5 (completely agree)	*Indiv_1*
	Vertical individualism	‘It is important that I do my job better than others.’			*Indiv_2*
	Horizontal collectivism	‘My happiness depends on the happiness of those around me.’			*Col_1* [Reverse coded]
	Vertical collectivism	‘I do not like to disagree with others in my group.’			*Col_2* [Reverse coded]
Climate change scepticism	Climate change scepticism 1	‘I am hesitant to believe climate change scientists tell the whole story.’	Based on De Graaf et al. (2023)	5-point Likert scale (*interval)* Scale from 1 (completely disagree) to 5 (completely agree)	*Clim_scep_1*
	Climate change scepticism 2	‘To me, it is undecided whether climate change happens because of natural processes or human activities.’			*Clim_scep_2*
	Climate change scepticism 3	‘To me, it is unsure that global climate change will impact our environment.’			*Clim_scep_3*

	Climate change scepticism 4	'There is not much we can do that will help solve environmental problems.'			*Clim_scep_4*
Opposition to climate action	Opposition to climate action 1	'To what extent do you believe action should be taken to address climate change in general?'	Author-formulated inspired by subjective norms in Papagiannakis and Lioukas (2012)	5-point Likert scale (*interval)* Scale from 1 (none at all) to 5 (very much)	*Opposition_1* [Reverse coded]
	Opposition to climate action 2	'To what extent do you feel personally responsible for making climate-related adjustments?'			*Opposition_2* [Reverse coded]
	Opposition to climate action 3	'To what extent do you believe companies should take action for climate-related adjustments?'			*Opposition_3* [Reverse coded]
Source scepticism	Source scepticism 1	'The [Source] acts in the interest of citizens instead of its interest.'	Based on Grimmelikhuijsen and Knies (2015)	5-point Likert scale (*interval)* Scale from 1 (completely disagree) to 5 (completely agree).	*Source_scep_1* [Reverse coded]
	Source scepticism 2	'The [Source] is genuinely interested in the well-being of citizens.'			*Source_scep_2* [Reverse coded]
	Source scepticism 3	'[Source]'s communication is a reliable source of information.'	Based on Obermiller and Spangenberg (1998)		*Source_scep_3* [Reverse coded]
	Source scepticism 4	'I feel I have been accurately informed after viewing most [Source]'s communication.'			*Source_scep_4* [Reverse coded]
Negative attitude	Negative attitude 1	"What do you think of the campaign?" 'Useful.'	Based on Petty & Cacioppo (1984)	5-point Likert scale (*interval)* Scale from 1 (not at all) to 5 (totally).	*Attitude_1* [Reverse coded]
	Negative attitude 2	"What do you think of the campaign?" 'Wise.'			*Attitude_2* [Reverse coded]
	Negative attitude 3	"What do you think of the campaign?" 'Desire.'			*Attitude_3* [Reverse coded]

4.3.3 Constructs for measuring perceived manipulation

The following questions focus on the assessment of the potential determinants of the manipulation.

First, it is crucial to assess participants' perceptions of the manipulativeness of the given public communication. This is measured using a 5-point Likert scale to capture perceived manipulation, detailed in Table 3. The reason for assessing perceived manipulation first is to establish a baseline understanding of how manipulative participants view communication. This initial assessment provides a clear and direct measure of perceived manipulation without any influence from subsequent questions.
Thereafter, to mitigate the potential negative connotations associated with the word ‘manipulation', the extent to which the source intends to guide behaviour is also included. Given the absence of established questions for these two variables, they are constructed by the author of this thesis. Responses are rated from 1 (not at all) to 5 (totally), with higher scores indicating greater levels of perceived manipulation and guiding behaviour, respectively.

The potential determinants of perceived manipulation are discussed in Chapter 3.1 and will be measured by author-formulated questions because there is no established questionnaire with any of those variables. Therefore, measuring these is based on the information given in the theoretical framework. To accommodate respondents' potential lack of background knowledge on these determinants, the survey questions were simplified versions of the findings from these theoretical discussions.

The potential determinants include:

- **Perceived bypassing rationality:** Four author-formulated items designed to represent bypassing rationality are derived from philosophical and psychiatric research. The sources for all items are structured in Table 3 and are detailed in the theoretical framework (Chapters 3.1.2.1 and 3.1.2.4).
  Responses are assessed on a scale ranging from 1 (not at all) to 5 (completely). The items indicate that high scores relate to perceived bypassing rationality.
- **Perceived covertness:** Three author-formulated items based on different theoretical perspectives on how covertness might predict perceived manipulation are included. For each item, the source is listed in Table 3 and is detailed in the theoretical framework (Chapter 3.1.2.2).
  Responses are rated from 1 (not at all) to 5 (completely), with the third item being reverse-coded, allowing higher scores to indicate greater perceived covertness.
- **Perceived trickery:** Four author-formulated items focus on the adoption of false beliefs, deception, and the exceeding of norms. These items are crafted to measure perceived trickery. The fourth item is a simplified translation of violating norms. The items and sources where items are based on Noggle (2022) and Trivers (1976), the items are detailed in Table 3 and Chapter 3.1.3.1.
  Responses range from 1 (not at all) to 5 (completely), with higher scores denoting more perceived trickery.
- **Perceived indifference:** To determine if a sense of negligence or indifference is a significant factor in perceived manipulation, it is essential to examine the manipulator's attitude towards providing reasons for behaviour changes. The three items assessing the perceived indifference are author-formulated and based on Klenk (2021) and are detailed in Table 3 and Chapter 3.1.3.2.
  Responses are assessed on a scale ranging from 1 (not at all) to 5 (completely). The items indicate that high scores relate to low perceived levels of indifference, therefore these items should be reverse-coded.

Table 3. *Survey structure part 2.*

Measurable construct		**Survey question**	**Source of survey question**	**Response options (and measurement scale)**	**SPSS codename**
Dependent variables					
Perceived manipulation		'To what extent do you think the intention of the [source] is to manipulate [the target audience] with [the public communication]?'	Author-formulated	5-point Likert scale (*interval)* Scale ranging from 1 (not at all) to 5 (totally)	*Perceived_man*
Perceived guiding behaviour		'To what extent do you think the intention of the [source] is to guide [the target audience]'s behaviour with [the public communication]?'	Author-formulated	5-point Likert scale (*interval)* Scale ranging from 1 (not at all) to 5 (totally)	*Perceived_guid*
Potential determinants					
Perceived bypassing rationality	Perceived bypassing rationality 1	'To what extent do you think [the manipulator] attempts to bypass the logical reasoning of [the target audience] with [the public communication]?'	Author-formulated based on the perspective of Noggle (2022) and Jongepier & Klenk (2022)	5-point Likert scale (*interval)* Scale from 1 (not at all) to 5 (completely)	*Bypass_1*
	Perceived bypassing rationality 2	'To what extent do you think [the manipulator] is trying to avoid factual information with [the public communication]?'			*Bypass_2*
	Perceived Unconscious influence	'To what extent do you think [the manipulator] tries to influence [the target audience] unconsciously with [the public communication]?'			*Uncons_infl*
	Emotions evoking	'To what extent do you think the intention of [the manipulator] is to evoke emotions	Author-formulated based on the psychiatric		*Evoke_emo*

		among [the target audience]? For example, shame, fear or disgust.'	research of Bowers (2003)		
Perceived covertness	Perceived covertness 1	'To what extent do you think [the manipulator] is using a hidden agenda to achieve a goal?'	Author-formulated based on hidden intentions described in Noggle (2022)	5-point Likert scale (*interval)* Scale from 1 (completely disagree) to 5 (completely agree)	*Covert_1*
	Perceived covertness 2	'To what extent do you think [the manipulator] withholds relevant information in [the public communication]?'	Author-formulated based on Susser (2008) and Jongepier & Klenk, 2022, p. 27).		*Covert_2*
	Perceived non-transparency	'To what extent do you think [the manipulator] is transparent about its goals in [the public communication]?'	Author-formulated based on Susser (2008)		*Transparency* [Reverse coded]
Perceived trickery	Perceived trickery 1	'To what extent do you think [the manipulator] wants [the public communication] to entice [the target audience] to adopt false beliefs?'	Author-formulated based on Noggle (2022)	5-point Likert scale (*interval)* Scale from 1 (not at all) to 5 (completely)	*Trickery_1*
	Perceived trickery 2	'To what extent do you think [the manipulator] is influencing [the target audience] with [public communication] with misleading associations?'	Author-formulated based on Noggle (2022)		*Trickery_2*
	Perceived trickery 3	'To what extent do you think [the manipulator] employs deception in [the public communication]?'	Author-formulated based on Trivers (1976) and Noggle (2022)		*Trickery_3*

	Perceived trickery 4	‘To what extent do you think [the manipulator] with [the public communication] violates norms?’	Author-formulated based on Jongepier and Klenk (2022)		*Trickery_4*
Perceived indifference	Perceived indifference 1	‘To what extent do you think [the manipulator] shows interest in explaining reasons to [the target audience] to exhibit [behaviour] with [the public communication]?’	Author-formulated based on Jongepier and Klenk (2022) and Klenk (2021)	5-point Likert scale (*interval)* Scale from 1 (completely disagree) to 5 (completely agree)	*Indif_1* [Reverse coded]
	Perceived indifference 2	‘To what extent do you think [the manipulator] makes it clear to [the target audience] why they should exhibit [behaviour] with [the public communication]?’			*Indif_2* [Reverse coded]
	Perceived indifference 3	‘To what extent do you think [the manipulator] aims to educate [the target audience] with [the public communication]?’			*Indif_3* [Reverse coded]

4.3.4 Constructs evaluating the acceptance of manipulation

The independent variables that might explain the acceptance are derived from research in psychology and philosophy and discussed in Chapter 3.3, including:

- **Perceived morality:** To explore moral perspectives on manipulation, three items could consider the fundamental ethicality of manipulation focusing on the wrongness of manipulation as always wrong, pro tanto wrong and prima facie wrong (Noggle, 2022). The three items are author-formulated and can be found in Table 4.
  Responses are assessed on a scale ranging from 1 (completely disagree) to 5 (completely agree).
- **Perceived autonomy undermining:** Potentially, acceptance can be assessed based on whether it undermines autonomy, this is assessed by an item relating to Noggle (2022) in Table 4.
  Responses are measured on a scale of 1 (not at all) to 5 (completely), high scores relate to high autonomy undermining.
- **Perceived harm:** Whether immediate or long-term harm, warrants discussion about the moral framework being applied. The harm is inspired by the philosophical view of Noggle (2022), and the measurement is shown in Table 4.
  Responses are measured on a scale of 1 (not at all) to 5 (completely), high scores relate to complete harm caused.
- **Perceived indifference:** While indifference has been measured as detailed in Table 3, it could also potentially serve as an independent variable that could affect the acceptance of manipulation. Thus, this construct will not be re-assessed; instead, the existing scale from Table 3 will be utilised for further analysis.

To measure the acceptance of manipulation by the source and context as a dependent variable will be directly questioned as outlined in Table 4. Given the lack of established measures for this specific query, Author-formulated items have been developed. However, it is crucial to account for the varying connotations individuals may associate with manipulation.
Given that this thesis focuses on manipulation in the context of climate change, the acceptance will be assessed for both general manipulative communication and manipulative communication in the context of climate change.

Table 4. *Survey structure part 3.*

Measurable construct		**Survey question**	**Source survey question**	**Response options (and measurement scale)**	**SPSS codename**
Potential independent variables					
Perceived morality	Perceived Manipulation is always wrong	'Manipulation is always wrong.'	Author-formulated based on Noggle (2022)	5-point Likert scale (*interval)* Scale ranging from 1 (completely disagree) to 5 (completely agree).	*Morality_1*
	Perceived manipulation as justified under circumstances	'Manipulation is acceptable under certain circumstances.'			*Morality_2*
	Perceived manipulation as acceptable under circumstances	'Manipulation can be justified under certain circumstances.'			*Morality_3*
Perceived autonomy-undermining		'To what extent do you believe that manipulative communication from [the manipulator] restricts personal freedom?'	Author-formulated based on Noggle (2022)	5-point Likert scale (*interval)* Scale ranging from 1 (not at all) to 5 (completely).	*Autonomy_und*
Perceived harm		'To what extent do you believe that manipulative communication from [the manipulator] causes harm?'	Author-formulated based on Noggle (2022)	5-point Likert scale (*interval)* Scale of 1 (not at all) to 5 (completely).	*Harm*
Dependent variables					
Acceptance	Acceptance manipulative Communication in climate change climate change	'To what extent do you think that [the manipulator] should be allowed to utilise manipulative communication in the context of climate change?'	Author-formulated	5-point Likert scale (*interval)* Scale from 1 (not at all) to 5 (completely)	*Accept_clim*
	Acceptance manipulative communication in general	'To what extent do you think that [the manipulator] should be allowed to utilise manipulative communication in general?'			*Accept_gen*

5. Pre-test

5.1 Method pre-test

A pre-test should be conducted before the final distribution of the survey. In this pre-test, the survey questions will be tested on a small target population to evaluate the reliability and validity of the survey instruments (Hu, 2014). This step is particularly important because, as shown in Tables 3 and 4, all survey items were formulated by the author based on perspectives from philosophy, psychology, and psychiatry, rather than using pre-validated survey instruments. Therefore, ensuring the effectiveness of these author-formulated items is crucial.

5.1.1 Participants and design

12 participants are recruited to complete the survey for the pre-test.
Among the participants, 25% were male and 75% were female. Regarding age distribution, 75% of the participants were aged between 19 and 26, while 25% were aged between 43 and 52. In terms of educational background, 50% are currently pursuing or have obtained an academic bachelor's or master's degree, 16.7% are undertaking or have completed higher professional education (HBO), and 33.3% are undertaking or have completed secondary vocational education (MBO). 41.6% of participants have a left-wing political preference, and 58.3% of participants have a right-wing political preference. 66.6% of the participants have no belief or are not religious, 33.3% of the participants are religious.
The participants were allocated to one of two experimental conditions (indifference stance of the government or caring stance of the government).

5.1.2 Stimulus materials

The experimental material is developed through a review of psychological, psychiatric and philosophical literature. Drawing from recommendations regarding psychological insights in public communication, a public message is crafted. Additionally, two types of an experimental condition (caring and careless) for the introduction are formulated.

For participants in the careless (indifferent) experimental condition, the introduction read:

> "*In the following text, you will read a message from the Ministry of Economic Affairs and Climate, which is part of the Dutch government (the highest authority).*
> *Imagine you have recently moved to a new neighbourhood and you receive a message from the government. The government wants you to change your sustainable behaviour."*

For participants in the caring experimental condition, the introduction read:

> *"In the following text, you will read a message from the Ministry of Economic Affairs and Climate, which is part of the Dutch government (the highest authority).*
> *Imagine you have recently moved to a new neighbourhood and you receive a message from the Dutch government. The government wants to inform you why it is important to adopt sustainable behaviour."*

Subsequently, all participants were presented with the following text to read:

"The message from the central government
Dear Sir/Madam,

First of all, congratulations on your new home! We would like to draw your attention to a great opportunity available in your new neighbourhood: peak savings and energy load shifting.

Peak saving and energy load shifting is a sustainable initiative from the central government, where we work together to better distribute energy demand throughout the day. This means trying to use less energy during peak hours, such as in the evening, and more energy during off-peak hours, such as during the day.
By participating in the programme, you can reduce your energy costs, use the grid more efficiently and reduce your environmental impact.
Within your residential area, more than 40 per cent of households are already using the benefits of the sustainability programme.

As a participant of the "Peak Saving and Energy Load Shifting" programme, you are at the forefront of sustainability and energy saving. You will contribute to a more sustainable future by saving energy and optimising our electricity grid.

We kindly invite you to participate in this project and work with us to create a better world for generations to come.

Yours sincerely,

The Ministry of Economic Affairs and Climate
Sustainable Homes Department"

5.1.3 Procedure

Initially, participants were required to respond to inquiries aimed at gaining insight into demographics and background information related to biases in perceived manipulation by the government and within the context of climate change (in line with Table 2). Subsequently, participants were tasked with reading one of the two introductions with the experimental condition and the public message, after which they evaluated the manipulative nature of the message based on four potential determinants of manipulation (in line with Table 3). Thereafter, participants completed the evaluation of the acceptance of manipulative communication by the government (in line with Table 4). Finally, participants were debriefed and thanked for their participation. The questionnaire took between 10 and 15 minutes, the questionnaire is somewhat different compared to the items in Tables 2, 3 and 4, the questionnaire can be found in Appendix B.

5.1.4 Quantitative analyses

I analysed the survey data with a series of analyses conducted using IBM SPSS version 26 and executed the standard analyses for pre-testing (Hu, 2014) together with the Univariate Analysis of Variance (ANOVA):

- **Exploratory factor analysis (EFA)** was conducted to verify whether the survey data for each construct corresponded with the intended constructs as outlined in Tables 2, 3 and 4. This involved examining factor loadings to determine if specific items grouped consistently under each intended construct. Following the EFA, I conducted a reliability analysis to evaluate the internal consistency of these constructs. This was primarily assessed using Cronbach's Alpha, where values greater than 0.6 generally indicate acceptable reliability, to ensure that each set of items within a construct reliably measured the same underlying concept.
- **Descriptive statistics** were analysed to provide a statistical summary of the items under different conditions—specifically comparing the 'Caring' versus 'Careless' conditions. This included means, standard deviations, and sample sizes for each construct across these conditions.
- **Univariate Analysis of Variance (ANOVA)** was used to identify the effects of the conditions on the constructs of the potential determinants, including significance testing to pinpoint specific differences. Levene's Test for Equality of Variances was applied to check for homogeneity of variances among groups, a necessary assumption for the validity of ANOVA results.

5.2 Results of the pre-test

Exploratory factor analysis (EFA)

Factor analysis did not show any internal consistencies between the constructs of *Individualism and Collectivism, Source scepticism*, *Opposition to climate action*, *Climate change scepticism*, *Perceived bypassing rationality*, *Perceived indifference* and *Perceived covertness*.

Only the author-formulated items for *Perceived trickery* focusing on 'deception' and 'exceeding norms' achieved internal consistency (α = .692).

ANOVA and descriptive statistics

To test whether the experimental condition caused change, the items of *Perceived indifference* are measured:

- In the *Caring condition*, three of the seven participants indicated that the government had intentions to manipulate and was indifferent (according to the two representing items for *Perceived Indifference*). In contrast, in the *Careless condition,* zero of the five participants indicated intentions to manipulate and four of those five participants indicated the government gives no reasons for its intended purpose.
- ANOVA resulted in a non-significant effect of the first item for *Perceived indifference*, "the government wants to achieve a certain goal" in the *Careless condition* (M = 4.200, SD = .8367, N=5) compared to the participants in the *Caring condition* (M = 4.286, SD = .75593, N = 7).
- The second *Perceived indifference* item, which relates to whether the "government provided no reasons for achieving a certain goal", showed participants perceiving more reasons in the *Careless condition* (M = 2.40, SD = 1.14018, N = 5) compared to the *Caring condition* (M = 3.5714, SD = .76880, N = 7). These results were significantly different with an F-value of 4.490 and a p-value of .060, η^2 = 0.310 as indicated with the ANOVA, this result is shown in Figure 8.

This indicates that the careless condition did not lead to heightened perceptions of indifference, suggesting that the experimental manipulation was unsuccessful.

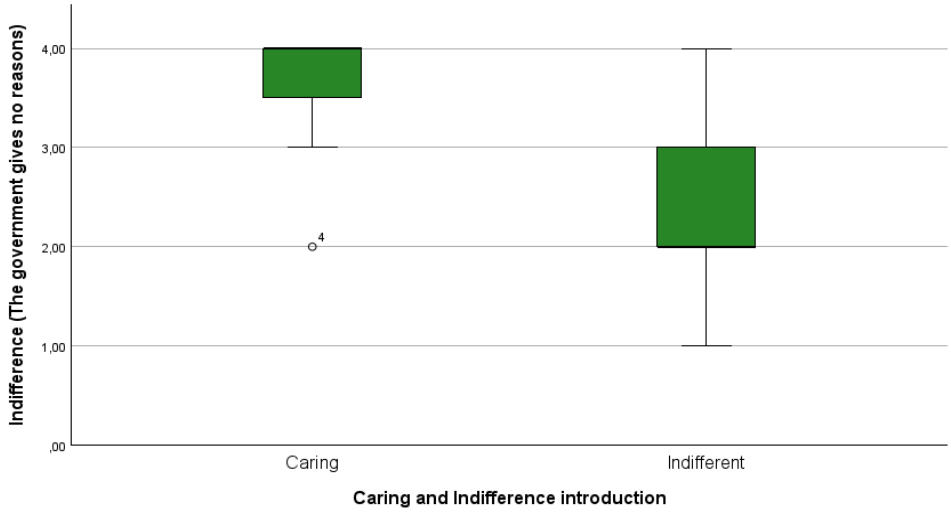

Figure 8. Perceptions of whether the government did not provide reasons for achieving a certain goal between the Caring condition and Careless (indifferent) condition.

In addition, ANOVA showed that *Perceived bypassing rationality* showed significant results:

- Participants in the *Careless condition* perceived the message as more "Vague" (M = 3.20, SD = 1.095, N=5) compared to the participants in the *Caring condition* (M = 2.57, SD = 1.272 N = 7) with significance with (F=3.667, p=0.085, η^2 = .268). This indicates that as no reasons are given, people perceive the communication as more vague.
- The participants in the *Caring condition* perceived the message as more focused on "Evoking emotions" (M = 4.14, SD = 1.069, N = 7) compared to the *Careless condition (*M = 3.00, SD = .707, N = 5). This fourth construct of *Bypassing rationality focusing* on "Emotions evoking" with the message showed particularly strong results (F = 4.301, p = .065, η^2 = .301), suggesting that the condition for caring significantly increases the perceived emotions evocation.

All results of the quantitative analyses can be found in Appendix C.

5.3 Discussion of the pre-test's results

The pre-test revealed only one of the twelve participants indicated that the given public communication case utilises manipulation, and only three participants, including the aforementioned one, perceived intentions to manipulate the reader. These participants were all part of the *Caring condition*. This outcome was contrary to the intended experimental condition, which aimed for the stimulus material to be perceived as manipulative.
Firstly, this means that the experimental condition was unsuccessful because no significant differences in perceived indifference were found. Secondly, as the second item for *Perceived indifference,* measured as "negligence in providing reasons to influence behaviour", was more perceived in the *Caring condition* compared to the *Careless condition*, this was the opposite result of what was intended with the experimental conditions. Thus, the experimental condition failed to distinguish between the two groups, possibly because participants overlooked certain aspects in the introduction.
In the design of the survey in Qualtrics, the experimental condition was located in a short introduction, whereafter people had to click to the subsequent page to read the message. It could be possible that participants overlooked the experimental condition and clicked through quickly. Therefore, it is more valuable to integrate this experimental condition into the communication itself, preferably at the beginning or end of the communication. This approach is applied to the stimulus material in the final experiment.

The results also indicated that if negligence in providing reasons to influence behaviour was perceived, this did not result in perceived intentions to manipulate. This indicates that the level of perceived indifference does not lead to perceived manipulation, rejecting hypothesis 3b.

Despite the absence of perceived manipulation by most of the participants, half of the participants expressed interest in learning more about the programme outlined in the message, possibly due to being manipulated. The perceived non-manipulative intent suggests that it is difficult for participants to assess the demarcating factors of manipulation in the message. This lack of perceived manipulation may be attributed to the subtle nature of manipulative tactics, often operating on subconscious levels, making the manipulation difficult to recognise. This suggests that it is better to create a third-person perspective to assess the manipulativeness of communication, which will be further applied in the stimulus material of the final experiment.
Alternatively, participants might be reluctant to acknowledge the manipulative tactics as manipulation due to their negative connotation associated with everyday language. This suggests that it could be valuable to add a measurement that relates to theoretical manipulation but in its nature will not be perceived as negative, this is done for the final experiment with the *Perceived guiding behaviour* in Table 3.

From the initial responses of the survey involving the first five participants, it became evident that individuals struggled to discern the differences between the questions and understand their intended meanings. This can lead participants to answer questions based on their previous responses, resulting in a dependency between the questions. It is acknowledged in the theoretical framework (Chapter 3.1.4) that there can be multiple determinants of perceived manipulation. However, there may be situations where one determinant is absent while another is present, suggesting that there may not be interdependency between determinants.
Questions such as “To what extent do you believe the government in this message aims to deviate from your beliefs, desires, or emotions?” and “To what extent does the government exceed norms in this message?” were indicated to be too challenging for participants to answer. Therefore, participants’ responses might not have accurately reflected their perceptions. Additionally, these participants took more than 15 minutes to complete the questionnaire, which may result in a decreased completion rate.
Consequently, the survey should focus solely on the four potential determinants of perceived manipulation and the questions should be understandable for laypeople, these results were considered when formulating the final items in Tables 3 and 4.

6. Experiment

6.1 Methods

Participants and design

100 participants were recruited for this experiment. Among them, 39 were male, 59 were female and 2 preferred not to say. 42% of the participants were between age 18 to age 24, 20% of the participants were between age 25 to age 34, followed by 8% between age 35 to age 44, 11% between age 45 to age 54, 9% between age 55 to age 66 and 7% between age 67 to age 82.

In terms of educational background, 51% of the participants currently pursue or have obtained a bachelor's or master's degree, 24% of the participants are undertaking or have completed higher professional education (HBO), 20% are undertaking or have completed secondary vocational education (MBO) and 5% only completed secondary school. 71% of the participants have no belief or are not religious, and 28% of the participants are religious. 49% of participants have a left-wing political preference, and 41% of participants have a right-wing political preference.

The participants were randomly allocated to either one of four experimental conditions, which varied based on the source of the message (government or energy company) and the stance of the source (careless or caring) (Chapter 4.3.1). The energy company was fictitious to test the hypotheses.

Procedure

Due to difficulties with understanding the questions indicated by participants and the experimental conditions being unsuccessful in demarcating perceived indifference in the pre-test, the experimental conditions are changed compared to the pre-test towards a third-person view and incorporation of the experimental condition at the end of the communication.

Initially, participants were required to respond to inquiries aimed at gaining insight into demographics and background information related to biases in perceived source manipulation within the context of climate change. These questions are outlined in Table 2. Subsequently, the participants in the experimental conditions “Rijksoverheid” (The Dutch Government) and “Careless stance” read the following message:

> *“The Rijksoverheid has launched a campaign to encourage households with solar panels to use their household appliances as much as possible when their solar panels are producing electricity. The poster text reads, “Will you do your laundry like your neighbours from now on when the sun is shining?” In doing so, the campaign makers make use of the psychological phenomenon that people care what others - whom they resemble - do and tend to copy their behaviour. This phenomenon is known as the social norm. The campaign does not explain why Rijksoverheid thinks it is important to influence the behaviour of solar panel owners.”*

Participants in experimental conditions “Energieco” (fictitious energy company) and “Careless stance” read:

> *“The Energy Company Energieco has launched a campaign to encourage households with solar panels to use their household appliances as much as possible when their solar panels are producing electricity. The poster text reads, “Will you do your laundry like your neighbours from now on when the sun is shining?” In doing so, the campaign makers make use of the psychological phenomenon*

that people care what others - whom they resemble - do and tend to copy their behaviour. This phenomenon is known as the social norm. The campaign does not explain why Energieco thinks it is important to influence the behaviour of solar panel owners."

Participants in experimental conditions "Rijksoverheid" (The Dutch Government) and "Caring stance" read:

"The Rijksoverheid has launched a campaign to encourage households with solar panels to use their household appliances as much as possible when their solar panels are producing electricity. The poster text reads, "Will you do your laundry like your neighbours from now on when the sun is shining?" In doing so, the campaign makers make use of the psychological phenomenon that people care what others - whom they resemble - do and tend to copy their behaviour. This phenomenon is known as the social norm. The campaign explains that Rijksoverheid believes it is important to influence the behaviour of solar panel owners to reduce peak load on the power grid, thereby reducing the risk of power outages."

Participants in experimental conditions "Energieco" (fictitious energy company) and "Caring stance" read:

"The Energy Company Energieco has launched a campaign to encourage households with solar panels to use their household appliances as much as possible when their solar panels are producing electricity. The poster text reads, "Will you do your laundry like your neighbours from now on when the sun is shining?" In doing so, the campaign makers make use of the psychological phenomenon that people care what others - whom they resemble - do and tend to copy their behaviour. This phenomenon is known as the social norm. The campaign explains that Energieco believes it is important to influence the behaviour of solar panel owners to reduce peak load on the power grid, thereby reducing the risk of power outages."

After reading these messages, participants had to answer the control question, selecting the source of the message from the options: "Rijksoverheid", "Energieco", or indicating uncertainty with "I don't know". This assessment aimed to determine whether participants had indeed read the message.

Subsequently, participants completed the first part of the questionnaire which included the items assessing the manipulativeness of the campaign described in the message for the specific source (the questions are outlined in Table 3). Thereafter, participants completed the second part of the questionnaire including items for the evaluation of the acceptance of manipulation by the source (equivalent to the experimental condition), as detailed in Table 4. Finally, participants were debriefed and thanked for their participation. The questionnaire can be found in Appendix D.

Quantitative analysis

The overall research design is illustrated in Figure 9, the quantitative survey data are analysed through a series of statistical analyses using IBM SPSS version 26.

Initially, an EFA is conducted to verify whether the survey items that were supposed to represent a variable correspond to the intended variable as outlined in Tables 2 and 3. This involves examining factor loadings to determine if specific items consistently group under each intended construct. Following the EFA, a reliability analysis is conducted to evaluate the internal consistency of these constructs. This is primarily assessed using Cronbach's Alpha, where values greater than 0.65 generally indicate acceptable reliability, ensuring that each set of items within a construct reliably measures the same underlying concept (Chapter 6.2.1).

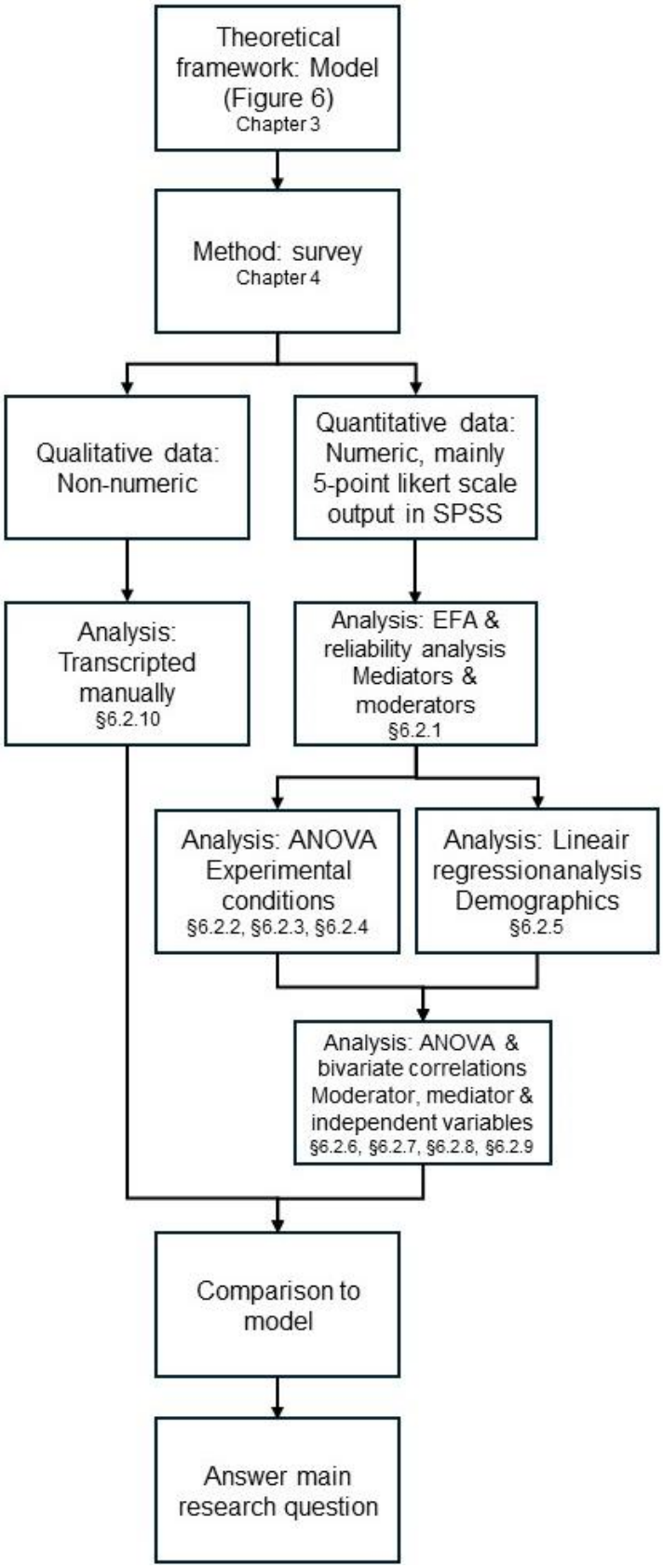

Figure 9. *Research design quantitative and qualitative analyses.*

Secondly, the impact of source, stance, and their interaction on the constructs is analysed based on descriptive statistics and ANOVA to test hypotheses 1 and 3b. The latter is performed to understand the effects of the experimental conditions on each dependent variable (Chapters 6.2.2, 6.2.3, and 6.2.4). For the interaction between the four experimental conditions, the Tukey HSD post hoc tests were conducted to determine if there were specific pairwise differences between the experimental conditions (Chapter 6.2.4).
Thirdly, a regression analysis is executed to examine the effects of demographics on possible dependent variables (Chapter 6.2.5).
Fourthly, to assess the second hypothesis, ANOVA is conducted to explore the influence of the hypothesised moderators for perceived manipulation (Chapter 6.2.6)
Fifthly, to assess hypotheses 3a and 3b, ANOVA is conducted to explore the relation between the potential determinants of perceived manipulation and perceived manipulation itself (Chapter 6.2.7).

To test hypotheses 4a and 4b, it was important to indicate the effects of source on the assessment of the evaluation variables for the acceptance of manipulative communication by the specific actor, analysed with ANOVA. Subsequent ANOVA could assess the evaluation of the hypothesised independent variables for the acceptance of manipulative communication in the context of climate change and in general with the fixed factor being the experimental condition source (Chapter 6.2.8).
Finally, a bivariate Pearson correlation analysis is conducted to inspect the correlations between all variables in the model and to identify overlooked relationships (Chapter 6.2.9).

Qualitative analysis
The final question of the survey yielded qualitative data, where participants were allowed to provide their definitions and thoughts on manipulation. A thematic analysis was executed (Naeem et al., 2023). Even though doing the qualitative analysis manually is not suggested as it might decrease validity in general, the qualitative data was analysed manually because it did not include many responses and only short answers of one sentence were given. In addition, the themes were mostly based on the potential determinants and other easy-to-indicate perspectives. Initially, each response was coded with key terms, these codes were then grouped into themes. The responses were revisited, which is suggested by the thematic analysis, to ensure alignment with these themes, after which the themes were adapted, and themes were merged. The themes were then refined further, highlighting the key observations and consistency of the responses with the themes was ensured. The final step of the thematic analysis, which is the creation of a conceptual model was not executed, because the themes will be compared to the findings of the quantitative analysis.

6.2 Results

For the results, it is presumed that there was no interference with the data, that participants completed the survey independently, and that no individual participated more than once to ensure that data points remained independent of each other. Each measured and computed variable is indicated in *italic font* for clarity.
Initially, EFA was conducted in Chapter 6.2.1. Following this, the impacts of source and stance, along with their interaction effects on the variables, were analysed in Chapters 6.2.2, 6.2.3, and 6.2.4, respectively to test hypotheses 1 and 3a. The results of demographic effects are described in Chapter 6.2.5. The analysis of hypothesis 2 is presented in Chapter 6.2.6, hypotheses 3a and 3b in Chapter 6.2.7, and hypotheses 4a and 4b in Chapter 6.2.8. Additionally, significant results from the correlations of all variables are discussed in Chapter 6.2.9, and the outcomes of the qualitative analysis are detailed in Chapter 6.2.10.

6.2.1 Factor analysis

In Tables 2 and 3, items have been developed to serve as measurements for potential moderator and mediator variables. To enhance the validity and reliability of the variables, at least three items were compiled for each variable. An EFA using a Varimax rotation with a minimum loading criterion of 0.4 was conducted to delineate the constructs into independent dimensions. The empirical can be found in Appendix E.

For the potential moderator variables in Table 2:

- The four items for the potential moderator *Source scepticism* emerged as a reliable construct due to the strong internal consistency, characterised by the statements about source scepticism (α = .816).
- The four items reflecting the potential moderator *Climate change scepticism* are deemed dependable due to their strong internal consistency (α = .731).
- Potential moderator items for *Opposition to climate action* could be dimensionally reduced (α = .825).
- In contrast, the *Individualism and Collectivism* items indicated insufficient internal consistency (α < .50), even when splitting the potential moderator into separate constructs or combining any two constructs, therefore this will not be further included in the analysis.
- The three items presenting the potential moderator's *Negative attitude* (Table 3) had a strong internal consistency (α =.840). This variable is reverse coded, resulting in a negative connotation in the label.

The potential mediator variables address the first sub-research question, "What are potential determinants of manipulation?". From the theoretical framework (Chapter 3.1.4), four potential determinants are translated into four self-created mediator variables (3 or 4 items per mediator, see Table 3). To now know whether the items per mediator variable can be dimensionally reduced, EFA and reliability analysis are performed:

- The potential mediator variable *Perceived bypassing rationality* yielded for two of its author-formulated items 'bypassing logical thinking' and 'avoiding factual information' a satisfactory α = .803, leading to dimension reduction to the dimension *Perceived bypassing rationality*. The other two author-formulated items for *Perceived bypassing rationality,* 'Evoking emotions' and 'unconscious influence', were indicated by factor analysis for dimension reduction (and not with the other two items), however, internal consistency dropped to α = .530. Consequently, the two items will be further approached as two potential mediator variables: *Perceived evoking emotions* and *Perceived unconscious influence.*
- The potential mediator variable *Perceived trickery*, compromising the four author-formulated items, showed an excellent internal consistency (α = .869), leading to dimension reduction.
- *Perceived indifference* was characterised by encompassing all three author-formulated items with α =.817, which led to dimension reduction.
- The factor analysis did not support a dimensionality reduction covering all three author-formulated items of *Perceived covertness*. However, it revealed a dimension reduction for two items: 'Hidden agenda for a certain goal' and 'Hiding relevant information' (α = .694) for *Perceived covertness*.
  The item 'Transparency' (reverse coded) was not included; a relationship with the *Perceived indifference* dimension was suggested (α = .799). However, 'Transparency' will not be included in *Perceived indifference*, despite correlational evidence, because merging them would lead to lower internal consistency and could obscure the distinct indicators of the two dimensions. While there is overlap between the two constructs, maintaining separate dimensions ensures the integrity of each dimension. Consequently, the self-made item will be 'Transparency' (reverse coded) and will be further approached as a mediator variable *Perceived non-transparency.*

6.2.2 Impact of source

The impact of the experimental condition *Source* will be tested on dependent variables to test hypothesis 1:

> **H1.** Communication from the government is perceived as more manipulative and less accepted compared to that from energy companies.

The impact of experimental condition *Source* (*Rijksoverheid* versus *Energieco*) is analysed on the variables *Source scepticism, Perceived manipulation, perceived guiding behaviour, Negative attitude, Perceived bypass rationality, Perceived emotions evoking, Perceived unconscious influence, Perceived covertness, Perceived non-transparency, Perceived trickery and Perceived indifference*.

For ANOVA homogeneity of variances is a prerequisite, the Levene's Test for Equality of Error Variances confirmed that the assumption of homogeneity of variances was not violated, with all variables producing non-significant results (e.g., for *Negative attitude*: Mean-based p = .796, Median-based p = .863), indicating comparable variances across the two groups defined by the *Source.*

ANOVA was conducted to investigate the influence of the *Source* on each dependent variable independently, the significant results include:

- *Source scepticism* is influenced by the experimental condition *Source*. Descriptive statistics for *Source scepticism* indicated a significant difference with M = 2.6806, SD = 0.69942 for Rijksoverheid and M = 3.4511, SD = 0.76489 for Energieco (F (1, 98) = 27.659, p < .001). A much larger proportion of variance was accounted for *Source scepticism* (R Squared = .220, Adjusted R Squared = .212), indicating a strong effect of *Source* on levels of scepticism. The boxplot for *Source scepticism* for both sources is shown in Figure 10, indicating that scepticism towards the organisation is higher with the energy companies as the source.

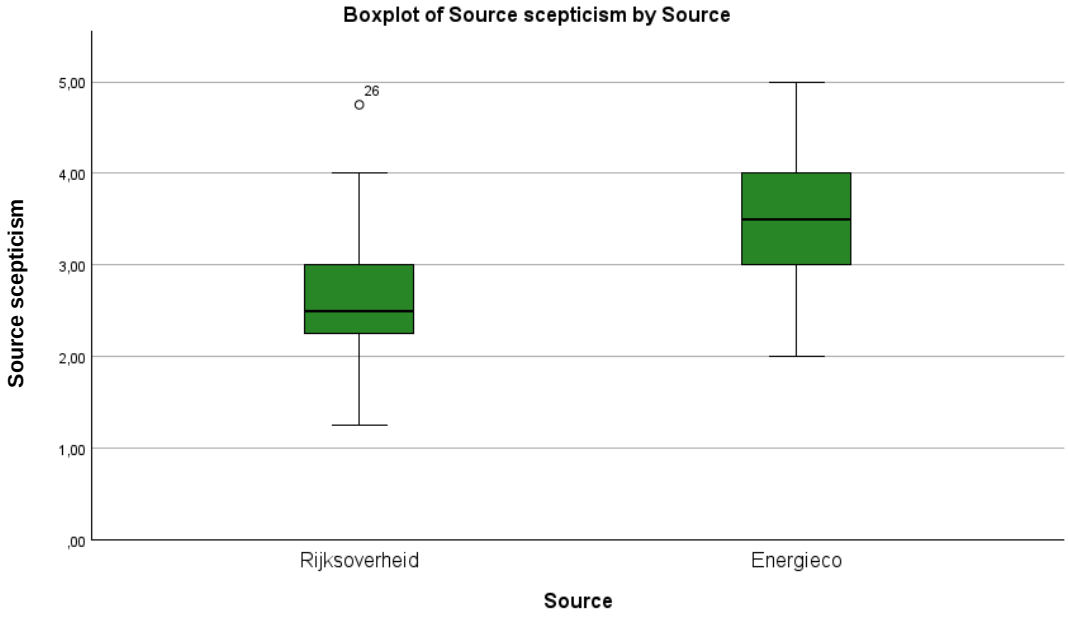

Figure 10. *Source scepticism between Rijksoverheid and Energieco.*

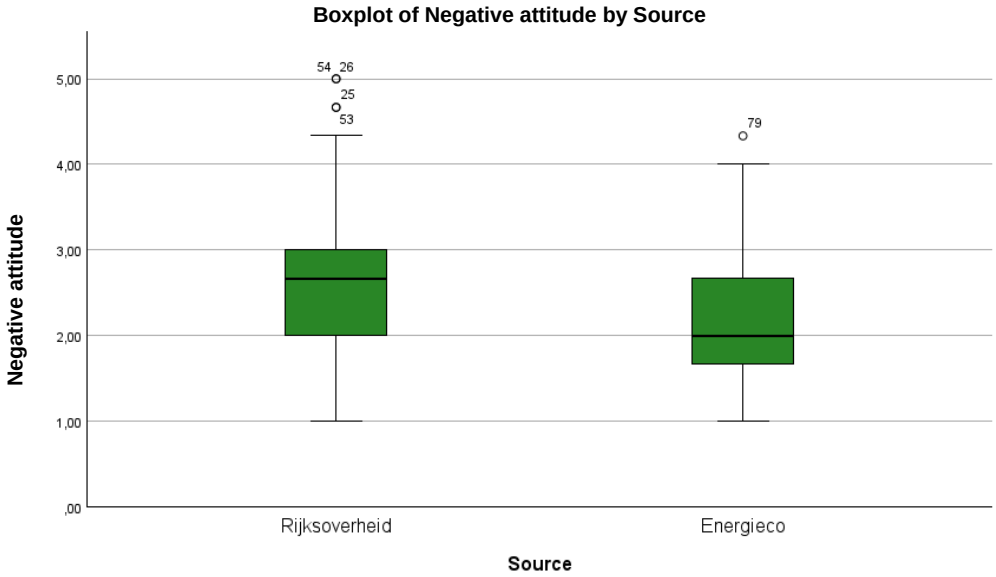

Figure 11. *Negative attitude between Rijksoverheid and Energieco.*

- Descriptive statistics for *Negative attitude* stated that the mean scores were M = 2.6481, SD = 0.90518 for Rijksoverheid (N = 54) and M = 2.2464 and SD = 0.86191 for Energieco (N = 46) were significantly different (F (1, 98) = 5.113, p = .026). The model explained 5% of the variance (R Squared = .050, Adjusted R Squared = .040), suggesting a small but significant effect of *Source* on levels of negative attitude towards the campaign. Figure 11 shows the boxplot for *Negative attitude*, indicating that the campaign is perceived as less wise, helpful and desirable if it is a government campaign.

All analyses can be found in Appendix F.

6.2.3 Impact of stance

The impact of the experimental condition *Stance* will be tested on dependent variables to test hypothesis 3b:

> **H3b.** Manipulation is perceived if and only if the manipulator does not care whether their means of influence reveals eventually existing reasons to the manipulatee.

The impact of the experimental condition *Stance* (*Careless* versus *Caring*) is analysed on the variables *Perceived manipulation, Perceived guiding behaviour, Negative attitude, Perceived bypassing rationality, Perceived emotions evoking, Perceived unconscious influence, Perceived covertness, Perceived non-transparency, Perceived trickery* and *Perceived indifference.*

Levene's Test for Equality of Error Variances was conducted to validate the assumption of homogeneity of variances, which is a prerequisite for ANOVA. This test indicated that there were no significant differences in variances across the groups, affirming that the variability in variable scores was consistent across the levels of the *Stance* factor.
Additionally, the assumption of normality of perceived indifference was assessed through Normal Q-Q Plots of the *Perceived indifference* scores. The plots demonstrated that the observed values conformed closely to the expected normal distribution, with only slight deviations noted at the extremes, which were not deemed to substantively violate the assumption of normality.

For a complete set of detailed statistical analyses, refer to Appendix G.

ANOVA was conducted to investigate the influence of the *Stance* on each dependent variable, the significant results include:

- For *Perceived covertness*, a significant effect was observed (F (1, 98) = 4.114, p = .045), for the *Careless stance* the mean scores were M = 2.8627, SD = 0.95435 (N = 51), and for the *Caring stance* M = 2.4592, SD = 1.03500 (N = 49). A boxplot representing the *Perceived covertness* per source can be found in Figure 12. The R Squared statistic, accounting for 4.0% of the variance in *Covertness*, and the Adjusted R Squared, accounting for 3.0%, suggests that the *Stance* explains a modest proportion of the variability in *Perceived covertness.*
- Similarly, *Perceived indifference* showed a significant effect on *Stance* (F (1, 98) = 4.219, p = .043), indicating an influence on levels of perceived indifference. Descriptive statistics showed a notable difference between the *Careless stance* (M = 3.4902, SD = 1.01839, N = 51) and the *Caring stance* (M = 3.0748, SD = 1.00292, N = 49), see Figure 13. The R Squared statistic, accounting for 4.1% of the variance in *Perceived indifference*, and the Adjusted R Squared, accounting for 3.1%, suggests that the *Stance* experimental condition explains a modest proportion of the variability in *Perceived indifference*. This implies that while textual variation influences perceived indifference, it constitutes a small fraction of the factors influencing the levels of perceived indifference.

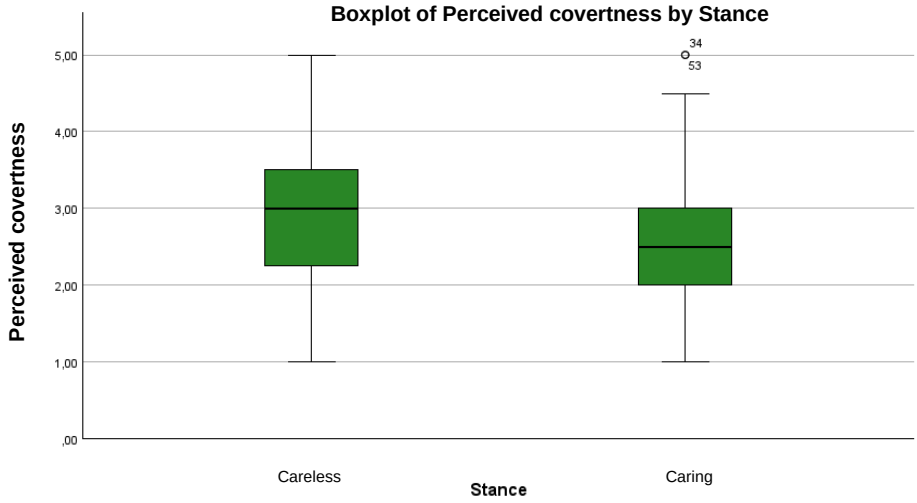

Figure 12. *Perceived covertness between careless and caring stance.*

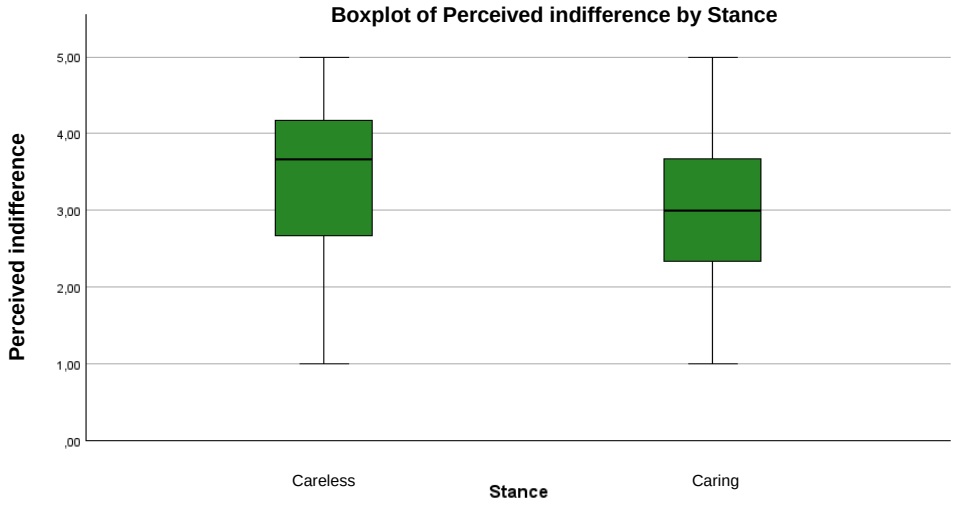

Figure 13*. Perceived indifference by careless and caring stance.*

6.2.4 Impact of source and its stance

In addition to the analyses of the effects of *Source* and *Stance* independent of each other on various variables, the combination could also possibly impact the dependent variables. The between-subjects effects of the experimental conditions (*Source* and *Stance*) were analysed on the variables *Perceived manipulation, Perceived guiding behaviour, Negative attitude, Perceived bypassing rationality, Perceived emotions evoking, Perceived unconscious influence, Perceived covertness, Perceived non-transparency, Perceived trickery* and *Perceived indifference.*

To assess the assumption of homogeneity of variances, Levene's Test for Equality of Error Variances was conducted for each dependent variable. The results were non-significant across all dependent variables indicating that the assumption of equal variances was satisfied. This suggests that the variance in scores for each dependent variable is comparable across the different groups defined by the *Source* and *Stance*.

The interaction term (*Source* * *Stance*) across all dependent variables was non-significant, with all p-values exceeding the threshold of 0.05. This suggests that the effects of *Source* and *Stance* are independent of one another and that there is no combined influence of these factors on the dependent variables.

Table 5 shows the indicated perceived intentions to manipulate (*Perceived manipulation)* per source and stance. Especially people with the experimental conditions of Energieco and careless stance indicate more manipulation compared to the other three groups.

The Tukey HSD post hoc tests indicated no significant pairwise differences between groups for each dependent variable after controlling for the family-wise error rate. For example, while the variable *Negative attitude* showed a significant overall model and the condition *Rijksoverheid Careless* (M = 2.5897, SD = 1.01240) was higher compared to *Energieco caring* (M = 1.9841, SD = 0,70298), the Tukey HSD indicated that the mean negative attitudes across the different *Source* * *Stance* groups did not differ significantly (p=0.781).
Similarly, no significant differences were found between the four experimental condition groups for the other dependent variables, the results of the analysis can be found in Appendix H.

Due to unequal group sizes, the harmonic mean of the group sizes was used, and the Type I error levels are not guaranteed. This suggests that while every effort has been made to conduct the analysis correctly, the results should be interpreted with caution.

Table 5. *Perceived manipulation between source and stance.*

Experimental conditions Source and stance	**No perceived manipulation at all (1)**	**Little perceived manipulation (2)**	**Neutral (3)**	**Much perceived manipulation (4)**	**Complete perceived manipulation (5)**
Rijksoverheid and careless (M = 2.81, SD = 1.357, N=26)	19.2%	26,9%	23.1%	15.4%	15.4%
Rijksoverheid and caring (M = 3.11, SD = 1.315, N=28)	14.3%	21.4%	17.9%	32.1%	14.3%
Energieco and careless (M = 3.36, SD = 0.810, N=25)	0%	16.0%	36.0%	44.0%	4.0%
Energieco and caring (M = 3.00, SD = 1.140, N=21)	4.8%	38.0%	19.1%	28.6%	9.5%

6.2.5 Demographic effects

To know whether demographics might impact the overall analysis, the effects of demographics are tested for the two most important dependent variables, *Perceived manipulation* and *Acceptance of manipulative communication in the context of climate change*.

A first regression analysis examined the *Perceived manipulation* with the independent variables *Age, Gender, Education level, Religiosity, Political affiliation, Familiarity with the campaign* and *Effect of manipulation afterwards.* The predictors indicate a weak linear relationship between the independent variables and the *Perceived manipulation*, with an R-value of 0.222%. The F statistic is not significant ($F(7, 76) = 0.563$, $p = 0.784$), meaning the model does not provide a good fit to the data. Thus, there is not enough evidence to suggest that the independent variables together significantly predict *Perceived manipulation.*
The coefficients show that the model predicts a baseline perceived manipulation score of 2.927 when all other predictors are at zero, which is statistically significant ($p = 0.020$).
The demographical factor of *Gender* suggests a tendency for more perceived manipulation for women, although this result is not statistically significant ($p = 0.162$).

A second regression analysis examined the *Acceptance of manipulative communication in the context of climate change* with the predictors as *Age, Gender, Education level, Religiosity, Political affiliation, Familiarity with the campaign and the Effect of manipulation afterwards.* Overall, the predictors accounted for 12.6% of the variance in *Acceptance of manipulative communication in the context of climate change*. The Adjusted R^2 value is lower at 0.046, which adjusts for the number of predictors in the model and is relatively weak for the model fit. The F-statistic is 1.568 with a non-significance level (p-value) of 0.158 indicating that the model is not statistically significant. This means there is not enough evidence to say that the set of predictors significantly predicts
The demographical factor of *Age* negatively predicted the *Acceptance of manipulative communication in the context of climate change;* in the direction that older ages lead to less *Acceptance of manipulative communication in the context of climate change* ($t=-.401$, $\beta =-.292$, $p = .025$).
No other predictors were significant.

Results for both regression analyses can be found in Appendix I.

6.2.6 Impact of potential moderators on perceived manipulation

To assess the impact of the potential moderators on perceived manipulation will be analysed to test hypothesis 2:

> **H2.** Organisational scepticism, climate change scepticism, individualism, negative attitude towards the campaign and opposition to climate action are moderating variables that increase perceived manipulation in public communication within the context of climate change.

ANOVA is executed to explore the influences of the hypothesised moderators on the *Perceived guiding behaviour* and *Perceived manipulation* (and its potential determinants, including *Perceived bypassing rationality, Perceived emotion-evoking, Perceived unconscious influence*, *Perceived covertness, Perceived non-transparency, Perceived trickery* and *Perceived indifference*) with the experimental conditions and *Source*Stance*. The moderators include *Climate change scepticism*, *Source scepticism*, *Negative attitude*, *Opposition to climate action*.

Levene's Test for Equality of Error Variances generally supported the homogeneity of variances across most variables, although the reliability of the findings for *Perceived Manipulation may* be slightly compromised as indicated by Levene's Test of Equality of Error Variances, which showed significant differences ($F(96,3) = 3.714$, $p = .014$). This suggests that the error variance of *Perceived Manipulation* is not equal across groups, potentially affecting the stability and reliability of the results concerning this dependent variable.

The four potential moderators for perceived manipulation in the context of climate change were dimensionally reduced based on averages of three of four items. To allow for visualisation of the effects on the potential determinants of perceived manipulation, each moderator was categorised into 5 levels (rounded 1; 2; 3; 4; 5), with the visualisation shown in Figures 14, 15 and 16. Based on the theoretical framework focussing on the four potential determinants, only these four potential determinants are represented in the figures to retain clarity (*Perceived emotion-evoking, Perceived unconscious influence, and Perceived non-transparency* are excluded). Note, that this categorisation was not utilised in ANOVA.

ANOVA revealed several significant findings regarding how these potential moderators significantly impact some of the variables:

- ANOVA showed that *Climate change scepticism* had a significant influence on several dimensions: It significantly affected *Perceived bypassing Rationality* ($F = 4.669$, $p = .033$, $\eta^2 = .048$), *Perceived covertness* ($F = 6.470$, $p = .013$, $\eta^2 = .066$) and *Perceived trickery* ($F = 4.886$, $p = .030$, $\eta^2 = .050$). It can be seen from Figure 14 that as *Climate change scepticism* increases, the *Perceived bypassing rationality*, *Perceived covertness*, and *Perceived trickery* also increase. Specifically, lower levels of climate scepticism (1-1.5) correspond to lower mean scores for these dimensions, while higher levels of climate scepticism (4.5-5) are associated with higher mean scores. This indicates that individuals with higher climate scepticism are more likely to perceive higher levels of bypassing rationality, covertness, and trickery with communication.
- *Opposition to climate action* notably affected *Perceived covertness* ($F = 6.959$, $p = .010$, $\eta^2 = .070$). It can be seen from Figure 15 that as *Opposition to climate action* increases, the *Perceived covertness* decreases increases. This indicates that individuals more opposed to climate action are likely to perceive lower levels of covert influence with the campaign.
- *Negative attitude* impact *Perceived indifference* ($F = 3.993$, $p = .049$, $\eta^2 = .042$) and *Perceived guiding Behaviour* ($F = 10.113$, $p = .002$, $\eta^2 = .099$) significantly. From Figure 16 it can be suggested that perceptions of a negative attitude towards the campaign, increase the perceived indifference.

The potential moderators had no significant effect on the perceived manipulation, therefore an adjusted model in Figure 17 shows the significant results, whereby the increasing effects are given with green '+' signs and the negative relation between *Negative attitude* and *Perceived indifference* is indicated with a red '- '.

The empirical findings can be found in Appendix J.

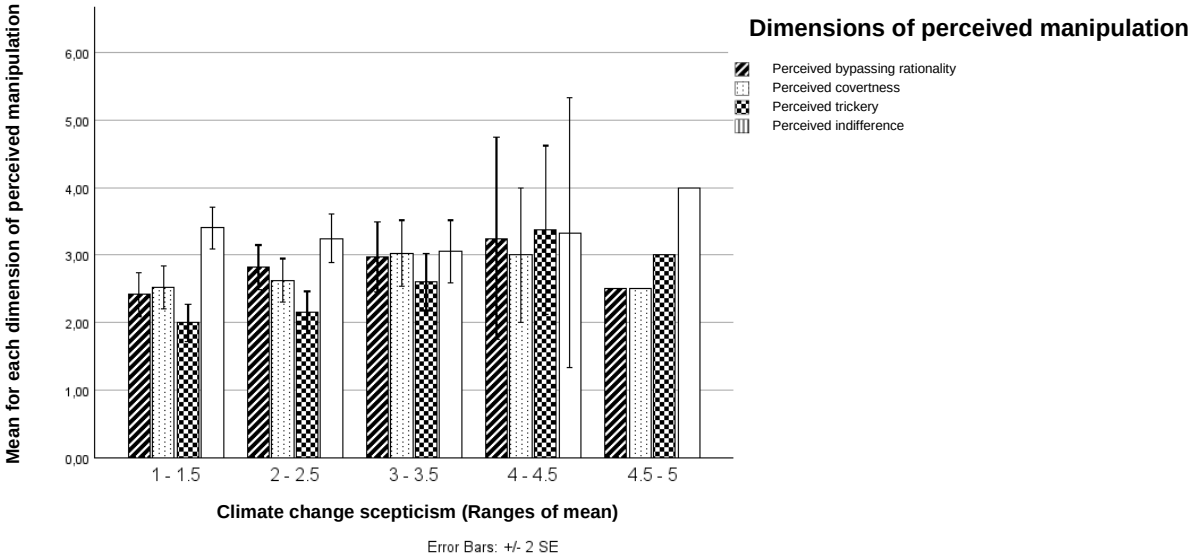

Figure 14. *The potential determinants of perceived manipulation* between mean levels *of Climate change scepticism.*

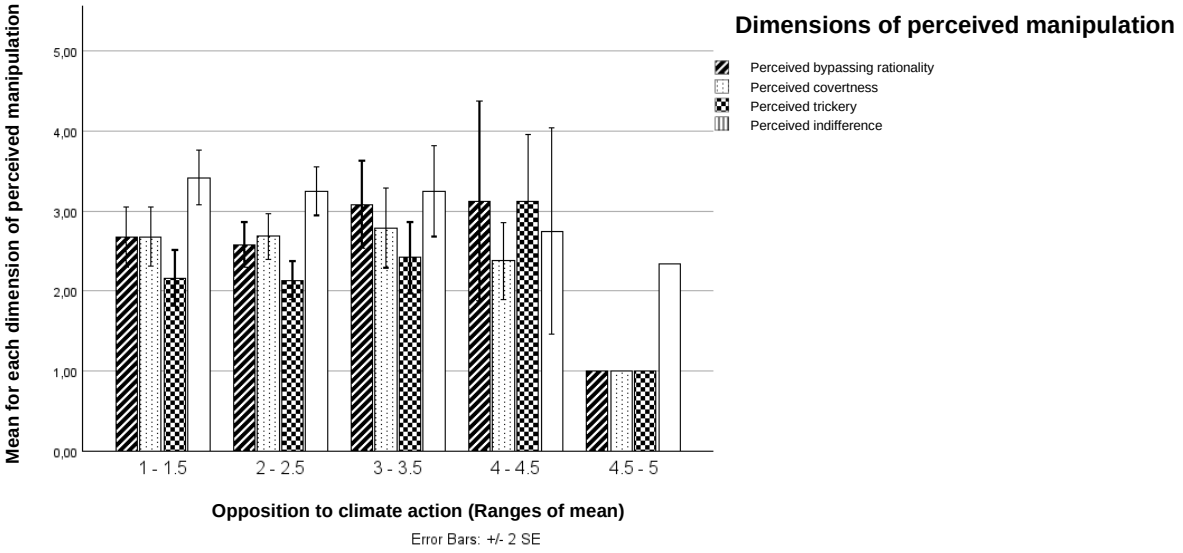

Figure 15. *The potential determinants of perceived manipulation between mean levels of Opposition to climate action.*

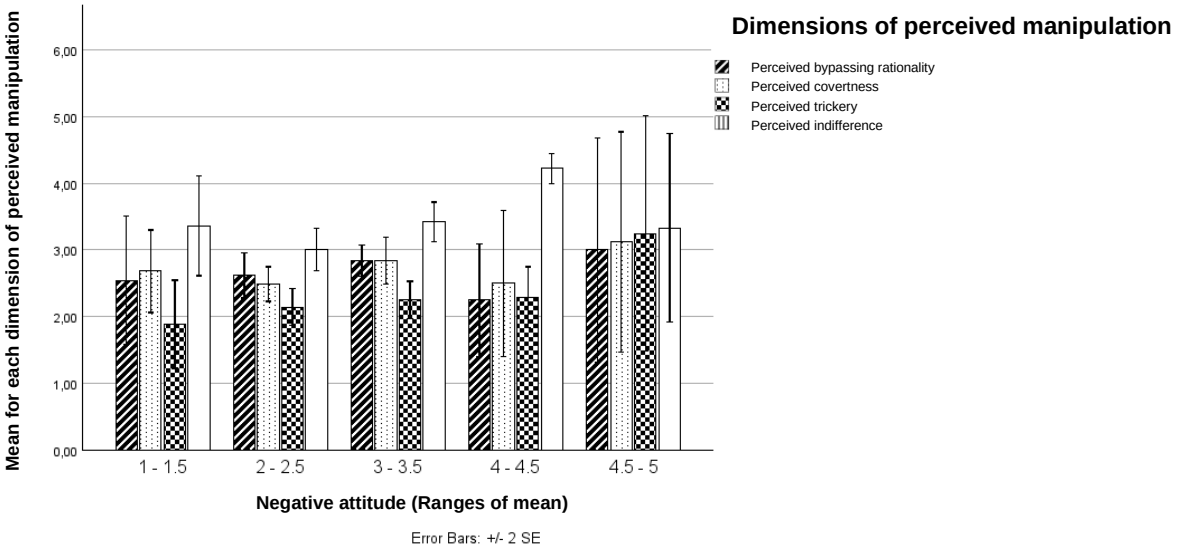

Figure 16. *The potential determinants of perceived manipulation between mean levels of Negative attitude towards the campaign.*

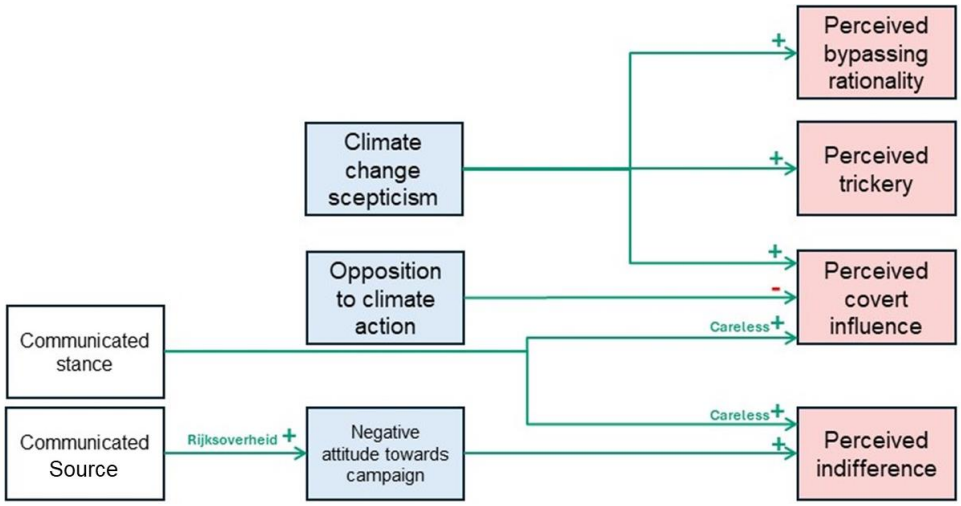

Figure 17. *Resulted model of relations between the potential biases and potential determinants of manipulation.*

6.2.7 Impact of potential mediators on perceived manipulation

To assess the impact of potential mediators on perceived manipulation will be analysed to test hypotheses:

H3a. Perceived bypassing of rationality, perceived covert influence, perceived trickery and perceived indifference are determinants of perceived manipulation.

H3b. Manipulation is perceived if and only if the manipulator does not care whether their means of influence reveals eventually existing reasons to the manipulatee.

However, dimension reduction led to the creation of seven potential determinants, adding the three constructs of *Perceived unconscious influence*, *Perceived emotion-evoking* and *Perceived non-transparency.*

ANOVA is executed to explore the influences of the hypothesised mediators on the *Perceived guiding behaviour* and *Perceived manipulation.* The hypothesised mediators include *Perceived bypassing rationality, Perceived emotion-evoking, Perceived unconscious influence*, *Perceived covertness, Perceived non-transparency, Perceived trickery* and *Perceived indifference.*

The relation between the potential determinants and perceived manipulation is visualised with a bar plot in Figure 18. The ANOVA indicates that 25.6% of the variance in *Perceived manipulation* scores is explained by the model, with an adjusted R-squared of .172, suggesting a reasonably good fit of the model.

ANOVA for the dependent variable *Perceived manipulation* and potential mediator variables with the interaction condition *Source * Stance* is analysed:

- The ANOVA of *Perceived bypassing Rationality * Source and stance* showed a significant effect for *Perceived manipulation*, ($F(1, 64) = 4.280$, $p = .043$, $\eta^2 = .063$). From Figure 18 it can be seen that perceived bypassing rationality increases with perceived manipulation.
- When combining an ANOVA with the potential determinant *Perceived indifference* with *Stance* for the dependent variable *Perceived manipulation*, the *Indifference* reaches almost significance ($F(9, 64) = 2.460$, $p = .071$, $\eta^2 = .649$), indicating a potentially strong but complex relationship between *Stance* and *Perceived indifference* in influencing *Perceived manipulation.* The complex relationship between the two variables is shown in Figure 18.

The results are demonstrated in Figure 19, all empirical findings from these analyses can be found in Appendix K.

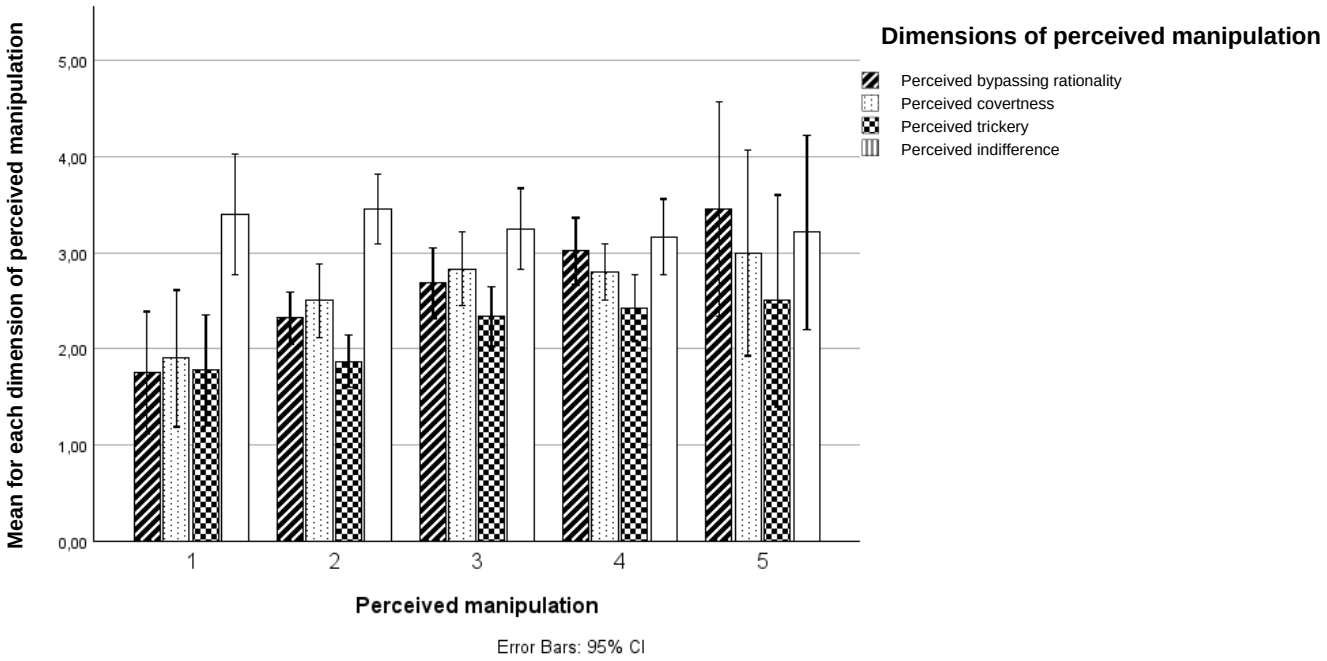

Figure 18. *The distribution of the potential determinants between interval levels of perceived manipulation.*

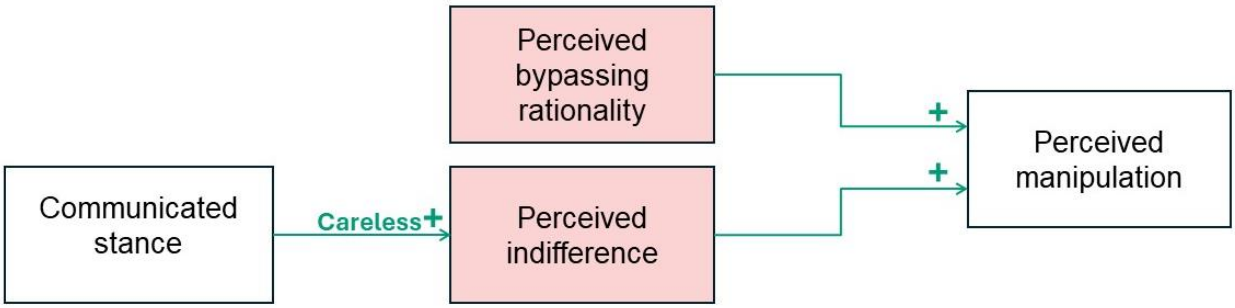

Figure 19. *Resulted model for perceived bypassing rationality and indifference with perceived manipulation.*

6.2.8 Impact of perceived indifference and evaluation variables on acceptance

To evaluate the acceptance of manipulative communication, hypotheses 4a and 4b will be assessed:

H4a. Perceived indifference results in lower acceptance of manipulative public communication in the context of climate change.

H4b. The acceptance of manipulative public communication in the context of climate change can be evaluated based on perceived morality, perceived autonomy loss and perceived harm.

First, the experimental condition *Source* is analysed, because participants in the experimental condition of Rijksoverheid evaluated the acceptance of manipulative public communication by Rijksoverheid, while participants in the experimental condition of Energieco evaluated the acceptance of manipulative public communication by Energieco.

Thereafter, ANOVA is executed to explore the influences of the hypothesised independent variables on the evaluation of *Acceptance of manipulative communication in the context of climate change* and *Acceptance of manipulative communication in general*. The hypothesised independent variables include for hypothesis 4a *Perceived indifference* and for hypothesis 4b the perceived morality of manipulation items and the possible perceived effects by manipulation (*perceived autonomy undermining* and *Perceived harm*).

Descriptive statistics can be found in Table 6, which shows the acceptance of manipulative communication in general and in the context of climate change per source. To see whether there are significant differences between the sources and the 'morality of manipulation'-items, 'possible effects of manipulation'-items and the 'acceptance'-items, ANOVA is executed.

Levene's Test of Equality of Error Variances was not significant for the *Acceptance of manipulative communication in the context of climate change* ($p = .397$ based on mean), suggesting that the variance of responses is equal across groups.

The effect of *Source* (Rijksoverheid versus Energieco) indicated no significant differences between groups for the variables in Table 6. ANOVA showed a trend towards significance for the *Acceptance of manipulative communication in the context of climate change* ($F = 3.144$, $p = .079$, $\eta^2 = .032$), it did not reach the conventional threshold of $p < .05$. This suggests a mild, non-significant difference in how the two Sources affect acceptance of manipulative communication. Descriptive statistics indicate that ($F=2.44$, $SD = 1.127$, $N=52$ for Rijksoverheid and $F=2.87$, $SD = 1.258$, $N=46$ for Energieco) the acceptance is higher for Energieco compared to Rijksoverheid, this is illustrated in Figure 20.

All analyses described in this subchapter can be found in Appendix L.

Table 6. *The evaluation measures between Rijksoverheid and Energieco.*

Variable	Source and descriptives	Likert-scale score 1	Likert-scale score 2	Likert-scale score 3	Likert-scale score 4	Likert-scale score 5
Perceived Manipulation is always wrong	Rijksoverheid (M = 3.02, SD = 1.038, N = 52)	10.5%	26.3%	31.6%	26.3%	5.3%
	Energieco (M = 3.04, SD = 1.095, N = 46)	2.2%	37.0%	28.3%	19.6%	13.0%
Perceived manipulation as acceptable under circumstances	Rijksoverheid (M = 3.48, SD = 0.980, N = 52)	1.8%	26.3%	21.1%	40.4%	10.5%
	Energieco (M = 3.35, SD = 1.120, N = 46)	8.7%	17.4%	10.9%	56.5%	6.5%
Perceived manipulation as justified under circumstances	Rijksoverheid (M = 2.81, SD = 1.049, N = 52)	5.3%	29.8%	36.8%	21.1%	7.0%
	Energieco (M = 2.74, SD = 1.042, N = 46)	8.7%	39.1%	26.1%	21.7%	4.3%
Perceived autonomy-undermining	Rijksoverheid (M = 2.80, SD = 1.088, N = 46)	12.3%	38.6%	21.1%	22.8%	5.3%
	Energieco (M = 2.79, SD = 1.091, N = 52)	8.7%	34.8%	32.6%	15.2%	8.7%
Perceived harm	Rijksoverheid (M = 2.71, SD = 1.091, N = 52)	19.3%	43.9%	19.3%	15.8%	1.8%
	Energieco (M = 2.76, SD = 1.268, N = 46)	19.6%	23.9%	28.3%	17.4%	10.9%
Acceptance manipulative Communication in climate change	Rijksoverheid (M = 2.44, SD = 1.127, N = 52)	22.8%	29.8%	21.1%	22.8%	3.5%
	Energieco (M = 2.87, SD = 1.258, N = 46)	21.7%	15.2%	21.7%	37.0%	4.3%
Acceptance manipulative communication in general	Rijksoverheid (M = 2.33, SD = 1.004, N = 52)	22.8%	47.4%	19.3%	10.5%	0%
	Energieco (M = 2.43, SD = 0.981, N = 46)	19.6%	30.4%	39.1%	8.7%	2.2%

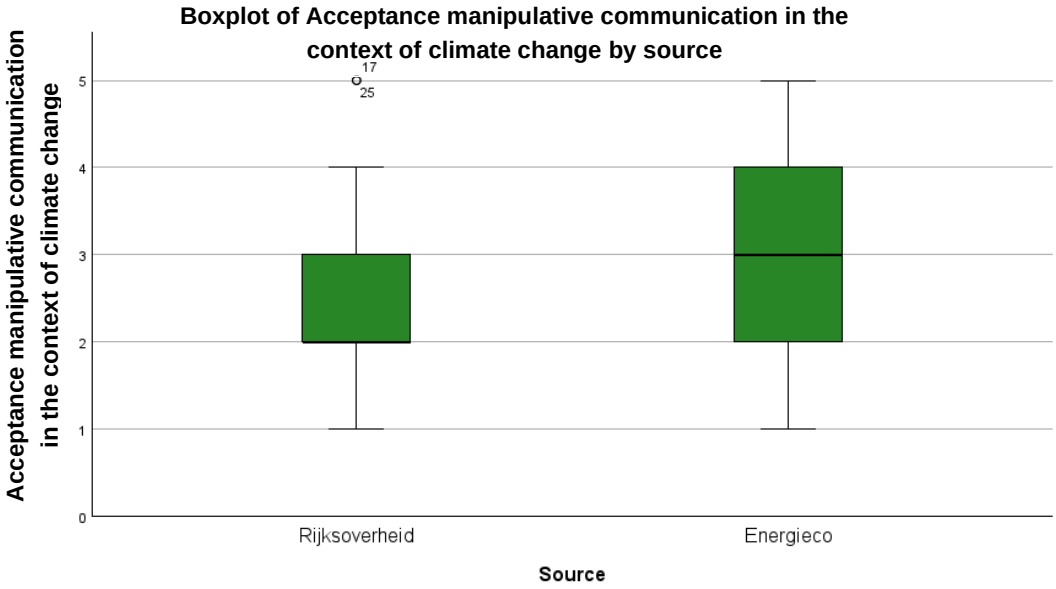

Figure 20. *The acceptance of manipulative communication in the context of climate change between Rijksoverheid and Energieco.*

The overall model including the morality of manipulation and the possible effects of manipulation (*Perceived autonomy undermining* and *Perceived harm*) along with the *Source condition*, was highly significant for explain the *Acceptance of manipulative communication in the context of climate change* ($F(1, 97) = 10.7346$, $p < .001$, $\eta^2 = .412$), explained approximately 41.2% of the variance in (Adjusted R squared = .373) The model also significantly explained approximately 35.3% of the variance in *Acceptance of general manipulative communication* ($F(1, 97) = 8.370$, $p < .001$, $\eta^2 = .353$, Adjusted R squared = .311). This significant result indicates a strong relationship between the potential evaluation variables, source, and acceptance.

For the second ANOVA, Levene's Test of Equality of Error Variances was non-significant ($F(1, 97) = 0.006$, $p = .936$) for *Acceptance of manipulative communication in the context of climate change*, indicating that the assumption of equal variances across groups was not violated. This suggests homogeneity in how different sources influenced perceptions of climate manipulation acceptance.

ANOVA for the dependent variable of *Acceptance of manipulative communication in the context of climate change* and *Acceptance of general manipulative communication* and potential independent variables with the interaction condition *Source* is analysed:

- The independent effects of the evaluation constructs reveal that *Perceived manipulation as always wrong* was a particularly strong predictor for both dependent variables, with a substantial effect for *Acceptance of manipulative communication in the context of climate change* ($F(1, 97) = 12.702$, $p < .001$, $\eta^2 = 0.121$) and for *Acceptance of general manipulative communication* ($F(1, 97) = 14.942$, $p < .001$, $\eta^2 = 0.140$). Figure 21 shows that manipulation evaluated as always wrong lowers the acceptance of manipulative communication in the context of climate change.
- Also, *Perceived manipulation as acceptable under circumstances* significantly contributed to the Acceptance of manipulative communication in the context of climate change ($F (1, 97) = 9.527$, $p =.003$, $\eta^2 = 0.094$).
  Figure 21 shows that manipulation evaluated as acceptable under circumstances lowers the acceptance of manipulative communication in the context of climate change.

The effects of the two morality items on the *Acceptance of manipulative communication in the context of climate change* are shown in Figure 22.

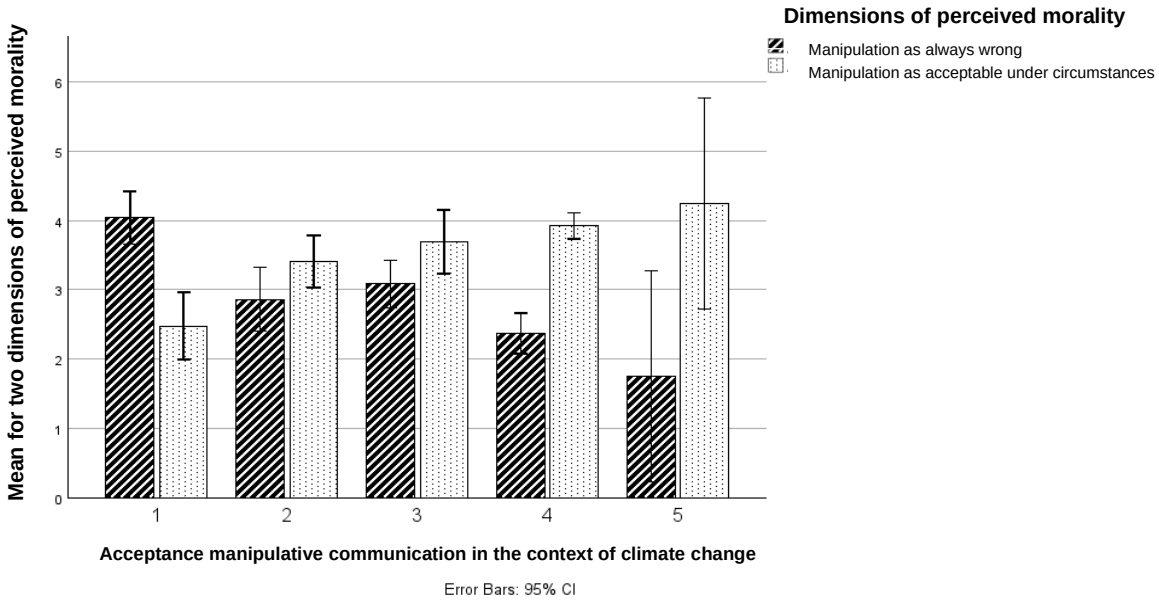

***Figure 21**. The morality items 'Manipulation as always wrong' and 'manipulation as acceptable under circumstances' between interval levels of acceptance of manipulative communication in the context of climate change.*

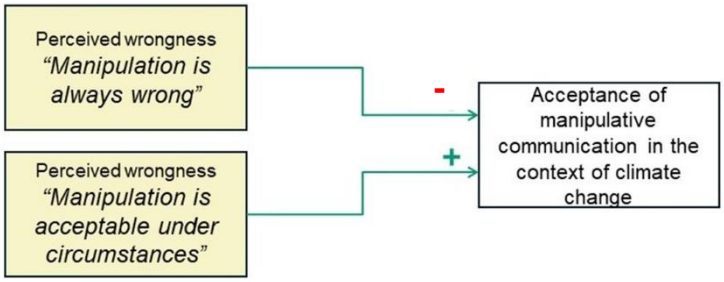

***Figure 22.** Resulted model for the evaluation of the acceptance of manipulative communication in the context of climate change by the perceived morality.*

6.2.9 Correlations between all variables

In examining the relationships between all variables within the dataset, the Pearson correlation was employed to retrieve significant correlations. The bivariate correlations between all variables are shown in Table 7.
The Pearson correlation analysis revealed significant correlations of *Perceived bypassing rationality* with *Perceived covertness* (r = .557, p < .001), *Perceived Trickery* (r = .572, p < .001) and *Perceived manipulation* (r = .415, p < .001).
Also, the *Perceived Trickery and Perceived covertness* correlates with each other (r = .536, p<.001).
Perceived manipulation as always wrong is negatively correlated to *Acceptance of manipulative communication in the context of climate change* (p =.-551, p <.001) and *Acceptance of manipulative communication in general* (p = .-574, p <.001).
Acceptance of manipulative communication in the context of climate change and *Acceptance of manipulative communication in general* are also significantly correlated (p=0.8798, p<.001), showing that the subject might not matter for whether it is accepted or not.

Combining the results of Figures 17, 19 and 22 with the most important findings of the correlations in Table 7 concludes the overall model evidenced by empirical findings in Figure 23. Here *Perceived trickery* and *Perceived covertness* are also indicated to significantly correlate with *Perceived manipulation*. However, the correlation does not indicate the relation between the *Perceived manipulation* and *Perceived indifference*, this could be due to the effects of the experimental conditions.

Table 7. *Bivariate correlations between all variables.*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.
1. Source scepticism	1,000																		
2. Negative attitude	0,109	1,000																	
3. Climate scepticism	0,156	0,188	1,000																
4. Opposition Climate action	0,047	0,132	**,491****	1,000															
5. Perc. manipulation	0,076	-0,140	-0,024	-0,155	1,000														
6. Perc. guiding behaviour	0,080	**-,291****	-0,158	-0,148	0,151	1,000													
7. Perc. Bypass rationality	,230*	0,087	**,219***	-0,013	**,415****	-0,095	1,000												
8. Perc. Emotions evoking	0,057	-0,125	-0,008	-0,145	0,144	0,169	0,158	1,000											
9. Perc. unconscious influence	0,038	-0,072	0,045	-0,119	**,235***	0,170	,246*	,390**	1,000										
10. Perc. covertness	**,225***	0,113	0,177	-0,062	**,224***	-0,022	**,557****	0,125	0,181	1,000									
11. Perc. transparency	**,242***	0,154	0,091	-0,031	0,028	-0,059	**,382****	-0,018	0,083	**,368****	1,000								
12. Perc. trickery	**,322****	**,216***	**,276****	0,144	**,207***	-0,081	,**572****	0,069	0,173	**,536****	**,300****	1,000							
13. Perc. indifference	0,178	**,209***	-0,104	-0,081	-0,086	0,125	0,007	0,136	0,065	**,209***	**,453****	0,041	1,000						
14. Perc. man. Always wrong	**,224***	**,247***	**,378****	0,089	-0,058	-0,165	0,179	-0,097	-0,084	0,166	0,120	,**230***	-0,160	1,000					
15. Perc. man. acceptable	**-,240***	-0,170	**-,284****	-0,135	0,063	0,129	-0,105	0,144	0,111	-0,101	-0,131	**-,343****	0,034	**-,582****	1,000				
16. Perc. man. as justified	-0,186	**-,229***	**-,215***	-0,081	0,167	**,227***	-0,078	0,057	0,184	**-,277****	-0,145	**-,364****	-0,001	**-,524****	**,524****	1,000			
17. Perc. Autonomy-undermining	0,115	-0,100	0,059	-0,082	0,103	0,041	0,131	0,113	0,100	0,168	0,003	,**284****	0,065	,**273****	-0,048	-0,116	1,000		
18. Perc. Harm	**,300****	0,089	0,147	-0,123	-0,001	0,049	0,178	0,102	0,180	0,159	0,183	**,306****	0,117	**,280****	**-,200***	-0,169	**,578****	1,000	
19. Acceptance man. communication climate change	**-,262****	**-,210***	**-,278****	**-,239***	0,039	0,088	-0,123	0,085	0,144	-0,036	-0,089	**-,231***	0,037	**-,551****	**,492****	**,321****	-,159	-0,111	1,000
20. Acceptance man. communication general	**-,276****	-0,098	**-,230***	-0,075	0,086	-0,009	-0,089	0,050	0,105	-0,058	-0,061	-0,115	0,026	**-,574****	**,422****	**,409****	-,150	-0,148	**,798****

***Correlation is significant at the 0.05 level.**
****Correlation is significant at the 0.01 level.**

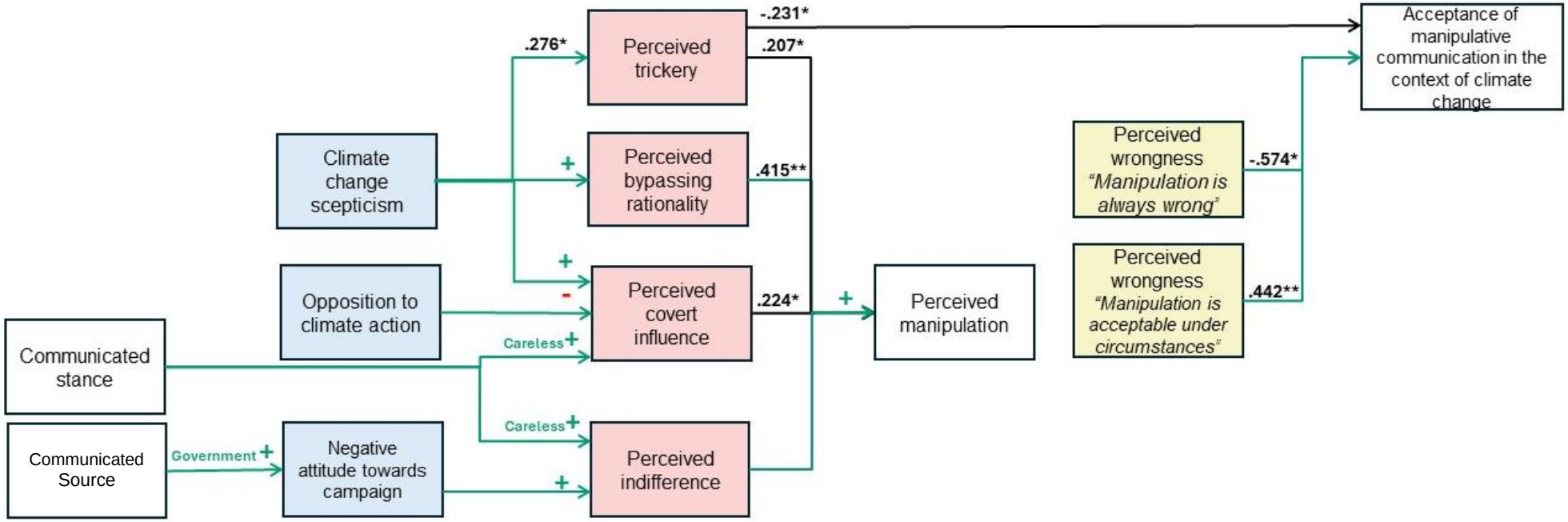

Figure 23. *Resulted model evidenced by ANOVA in green arrows and correlations in black arrows with corresponding correlation values.*

6.2.10 Qualitative analysis

Three iterative rounds of thematic analysis distilled seven principal themes concerning the notion of manipulation as reflected in the responses. This thematic analysis uncovered nuanced insights into the ways individuals perceive and articulate manipulative behaviours. The results are stated in table 8.

Table 8. *Qualitative results with a thematic analysis.*

Described determinant of manipulation	N	Illustrative quotes from qualitative data
Bypassing rationality	19	”Consciously directing people using communication methods that subliminally influence their behaviour.” ”Subconscious influencing of behaviour through the application of psychology or behavioural science.”
Covertness	9	”Using selective information to push people in a certain direction.” ”Communicating with others while withholding information to achieve a specific (hidden) goal.”
Trickery	18	”Influencing others' behaviour in a cunningly.” ”Making someone act or think according to norms imposed by others.”
Emotions Evoking	3	“Playing on vulnerable psychological points, thereby inducing feelings such as shame or the desire to belong.”
Coercion	7	”Forcefully imposing your will on others.” ”Being compelled to act in a manner you would rather not, or would prefer to consider more thoroughly.”
Behavioural direction	12	”Consciously steering someone to perform behaviour that is desirable to the manipulator.” ”Influencing people according to your own will.”
Connotation	6	”Manipulation carries a negative annotation.” ”Often perceived as something negative.”

From Table 8, the following seven described determinants of manipulation are identified:

- The initial theme identified is “Bypassing Rationality” where most participants commonly described manipulation as circumventing the rational decision-making processes, often employing unconscious cues or psychological techniques to influence behaviour or decisions subliminally.
- The second theme, “Covertness” involves the deliberate concealment of information and facts, often to shape perceptions or actions without fully disclosing the truth.
- Under the third theme, “Trickery” (described by 18 participants) manipulation is understood as employing deceitful strategies or misleading tactics to influence or control others. This is characterised by actions intended to deceive or confuse among others the target's norms, typically for personal gain or to accomplish specific outcomes.
- The fourth theme, “Emotions Evoking”, indicated by three participants, focuses on tapping into emotional vulnerabilities to influence decisions or behaviours.
- ”Coercion”, the fifth theme, describes overt efforts to impose behaviours or decisions through means such as obligation, coercion or compulsion.

- The sixth theme, “Behavioural Direction” (described by 12 participants), relates to guiding or influencing people towards a specific goal or interest, utilising strategies that align with the manipulator's objectives.
- Lastly, the theme “Connotation” addresses the underlying tones and implied meanings associated with manipulation, often highlighting the negative connotations that the concept carries.

It also became evident from the review of the responses that certain answers could be categorised under multiple themes. Notably, some responses appeared across the themes of “Covertness” and “Trickery” as well as between “Covertness” and “Emotions Evoking” indicating an overlap that underscores the multidimensional nature of perceived manipulation. The qualitative responses can be found in Appendix M.

6.3 Discussion of the experiment

In this experiment, a convenience sample was utilised, which does not entirely represent the population. The study featured a balanced gender distribution, revealing that women perceived the message as more manipulative compared to men. Participants’ ages ranged from 18 to 82 years, with older individuals demonstrating lower acceptance of manipulative communication regarding climate change.

The study incorporated a control question to verify whether participants had read the communication, specifically by indicating the source. Despite explicit references to the source at the beginning and end of the message, as well as repeated mentions throughout the survey, 52 out of 152 participants answered this question incorrectly. This was the case for both the Rijksoverheid and Energieco sources. Consequently, these 52 participants were excluded from the analysis. This may have been because people still doubted which source created the campaign.

The experimental conditions varied between the source of the communication (government versus a fictitious energy company) and between the stance of the communicator (careless versus caring) to explore differences between perceived manipulation and its potential determinants. The two communications (both careless and caring) associated with the government significantly elicited less scepticism, suggesting a higher degree of credibility associated with governmental communications compared to corporate messages. Nonetheless, the described campaign applying the social norm, when presented by the government, was perceived as less desirable, wise, and useful compared to the identical campaign from the energy company. The influence of the source on perceived manipulation and its potential determinants was minimal, indicating that the source itself does not significantly impact perceptions of manipulation.

The two experimental stances significantly impacted the potential determinants of manipulation, as messages indicating that the messages prioritise explaining why load-shifting is necessary were perceived as less indifferent compared to messages where the source does not provide such explanations in the campaign. This demarcation also aimed to further investigate hypothesis 3b, indicating the success of the experimental condition. Furthermore, the messages indicating the source does not provide explanations correspondingly resulted in significantly higher perceived covert intentions.

No significant interaction effects between source and stance were identified, and Tukey HSD post hoc comparisons did not reveal differences between group means. This indicates that while the experimental sources and stances may influence perceptions independently, they do not interact significantly to affect perceived manipulation and its potential determinants.

The reliability of the author-formulated items for each potential determinant in Table 3 was confirmed with factor analysis. Especially, the perceived trickery constructs and perceived indifference constructs are robust, indicated by strong $\alpha > 0.8$ and incorporating 4 and 3 items respectively, signifying internal consistency. However, the items of perceived bypassing rationality and perceived covertness were less cohesive, leading to a separation of author-formulated items ‘the emotional evocation’ and ‘unconscious influence’ from the perceived bypassing rationality construct, and ‘transparency’ from the perceived covertness construct. Both potential determinants were therefore measured by two author-formulated items.

The model aimed to demonstrate that four potential determinants of manipulation could predict perceived manipulation; however, only perceived bypassing rationality proved to be a significant predictor of perceived manipulation.
When assessing the potential determinants of manipulation, it is important to consider the participants' climate scepticism, attitudes towards the campaign, and involvement in climate action. Greater climate scepticism correlates with higher perceptions of bypassing rationality, covertness, and trickery. Positive attitudes on the campaign's wisdom, usefulness, or desirability led to greater perceived indifference and covert influence. Finally, a higher willingness to engage in climate action increases perceptions of covertness.

The acceptance of manipulative climate action communications did not significantly differ by source, though analysis by box plots suggested that based on the means, first and third quartiles, the Energieco source led to greater acceptance compared to Rijksoverheid.
The constructs evaluating the morality of manipulative communications, particularly through statements such as ‘Manipulation is always wrong’ and ‘Manipulation is acceptable under certain circumstances’, were effective in assessing acceptance levels of manipulative communication in the context of climate action.

7. Conclusions

This chapter revisits the aim and research questions stated at the start of the thesis. The main research question and sub-questions are answered based on the theoretical framework (Chapter 3), and quantitative and qualitative analyses described in Chapter 6.

7.1 Review

This master's thesis aims to contribute to the understanding of perceived manipulation within the context of climate change. As research on the empirical measurements of perceived manipulation is scarce, the thesis focuses on the identification of potential determinants to measure perceived manipulation.
The thesis took an exploratory approach, commencing with a literature review combining philosophical, psychological and psychiatric research. The literature review aimed to suggest potential determinants of manipulation and individual psychological factors that could serve as moderators of perceived manipulation and its determinants. Additionally, it aimed to suggest how the perceived manipulation, along with other evaluation terms, could evaluate the acceptance of manipulative communication.
The literature review led to the development of a conceptual model, which in turn guided the creation of a survey incorporating novel constructs for empirically assessing perceived manipulation.

Subsequently, the validity of the novel constructs and the conceptual model was assessed with a survey among a convenient sample of Dutch citizens. This involved analysing perceptions regarding the application of the social norm as a psychological principle within a fictitious campaign.

The subsequent sections detail the conclusions derived from the literature review (Chapter 7.2) and the quantitative and qualitative analyses (Chapter 7.3). By combining insights from both approaches, in Chapter 7.4 the main research question of this thesis will be answered.

7.2 Conclusions from the literature review

Literature research was conducted to delineate potential determinants of manipulation, drawing from studies in philosophy, psychology and psychiatry. These findings answer the first sub-question posed in this thesis: "*What are the potential determinants of manipulation?*"
The four identified potential determinants include bypassing rationality, covertness, trickery and indifference. Specifically, the potential determinant of indifference holds value as it could potentially distinguish manipulation from other forms of social influence, aiding in the identification of what characterises manipulation. Conversely, counter-examples are given in philosophical research for the other potential determinants, suggesting they could be unable to identify manipulation consistently.

Next, the perceived manipulation could be impacted by the context given with the second sub-question: "*How does the context of climate change influence perceptions of manipulation?"* Within this context, climate change scepticism could potentially increase perceived manipulation and its potential determinants. In contrast, involvement in climate action might decrease perceived manipulation, as manipulative strategies for

climate action could be viewed as contributing to a greater good. Additionally, biases such as organisational scepticism, a negative attitude towards the campaign and a preference for individualism over collectivism, tend to increase perceptions of manipulation, independent of the specific context of climate change.

The fourth sub-question posed in this thesis: *"How can the acceptance of manipulative public communication be evaluated?"* is explored through a philosophical perspective, which posits various methods for evaluating the acceptance of manipulative public communication, with the reasons revealing norms, morality, harm, and autonomy undermining as key indicators.

7.3 Qualitative and quantitative conclusions

One qualitative question in the survey deepened the results from the first sub-question: "*What are the potential determinants of manipulation?"* The qualitative themes described included bypassing rationality, covertness and trickery. No descriptions related to the indifference dimension were identified. This could be possible because people might think of what manipulation constitutes, instead of what it lacks, which distinguishes the indifference account from the other determinants.
In addition, independent themes such as behavioural direction (relating to the intentionality requirement), coercion and negative connotation were identified. Coercion as an aggressive tactic highlights that people do not distinguish between coercion and manipulation as clearly as philosophical literature, which treats them as standalone concepts. Furthermore, since perceptions often describe manipulation as involving coercion and carrying a negative connotation, this indicates that observed manipulation differs from theoretical manipulation.

The quantitative data obtained in the survey was statistically analysed to answer the third sub-question: *"What is the difference in perceived manipulation between information sources, particularly between the Dutch government and energy companies?"* The findings indicated that the source, whether the government or an energy company, does not impact the perceived manipulation and its potential determinants. This is contrary to existing literature; De Vries et al. (2015) found that the source of communication impacts perceived legitimacy, resulting in more perceived manipulation if higher legitimacy of the source is expected. This suggests other factors might played a more significant role in shaping perceptions of manipulation.
However, the quantitative findings indicate campaign with the social norm from the government was perceived as less desirable, wise, and helpful compared to an energy company using an identical campaign. This aligns with the findings of De Vries et al. (2015) regarding legitimacy judgments for sources with different expectations of legitimacy. In addition, there was generally more scepticism indicated towards an energy company than indicated towards the government.

The statistical findings could also answer the second sub-question further: "*How does the context of climate change influence perceptions of manipulation?"* Scepticism towards climate change confirmed a strong increase of three potential determinants of perceived manipulation, including that public communication using social norms to encourage load-shifting; bypasses rationality, is a hidden influence and involves trickery. This could be explained by the findings of Bertolotti et al. (2021), which indicate that climate sceptics pay more attention to the negative side of communication in the context of climate change. Therefore, climate change scepticism might focus on the manipulative aspects of public communication in the context of climate change instead of the sustainable advantages.

The involvement in climate change significantly increases the perceived covert influence, which is the opposite effect of a study on users of health apps, where more involved users indicated they were less worried about manipulative intentions (Sax et al., 2018). However, as Petty & Cacioppo (1990) demonstrate, individuals highly involved with an issue are more motivated to systematically process persuasive messages than those not involved. This higher level of involvement may lead them to be more critical in evaluating the manipulativeness of hidden influences.
Additionally, the negative attitude towards the campaign (based on the extent to which it is perceived as desired, wise and helpful) was found to be related to higher levels of perceived indifference. If the campaign is seen as not revealing reasons for the intended behaviour, this could lead to lower perceived transparency and, consequently, less support manifesting as a negative attitude. This aligns with John and Mikolajczak (2022), who found that the support for nudges depends on perceived transparency.

Finally, the empirical data allowed the fourth sub-question of this thesis to be ascertained: *"How can the acceptance of manipulative public communication be evaluated?"*
The perceived harm and autonomy loss were not related to the acceptance of manipulative communication in the context of climate change. This is in line with Osman (2020), who found that manipulative communication does not necessarily impact public perceptions of perceived free will, which could be related to having autonomy.
The constructs assessing the morality of manipulation were strong predictors for evaluating the acceptance, including "Manipulation is always wrong" and "Manipulation is acceptable under circumstances", which is in line with the philosophical perspective of Noggle (2022).
The perceived acceptance of manipulative communication in general and in the context of climate change was independent of perceived manipulation and perceived indifference. As Klenk (2021) explains, not providing reasons can undermine autonomy. However, since the results indicated that the perceived autonomy undermining was not related to the perceived acceptance of manipulative communications, this could also apply to the perceived manipulation and perceived indifference not indicating effects on the acceptance.

7.4 Main conclusion

Taken together, the literature and quantitative conclusions discussed in the sections above can be used to answer the main research question of this thesis:

"What are the determinants of perceived manipulation of government environmental communication according to Dutch public perceptions?"

The findings of the quantitative and qualitative survey show that perceived bypassing rationality is a strong determinant of perceived manipulation in public communication describing a campaign with applying a social norm to encourage load-shifting. In addition, perceived indifference emerges as a significant determinant of perceived manipulation when considering the effects of the communicator's stance (if the communicator cares about providing reasons for the intended behaviour or not) and who the communicator is (government or an energy company). These factors significantly influence the level of perceived indifference.
However, the other suggested determinants, perceived covertness and perceived trickery, did not emerge as significant determinants of perceived manipulation.

The analysis of the four potential determinants of perceived manipulation was based on at least three statements per determinant. All statements were novel and based on philosophical, psychological and psychiatric literature. Two of the potential determinants, perceived trickery and perceived indifference, indicated a strong internal consistency and could add value for the empirical measurement of perceived manipulation, which could be applied in other contexts.

Four questions can represent the dimension of perceived trickery with a reliable internal consistency:

- "To what extent do you think [the manipulator] wants [the public communication] to entice [the target audience] to adopt false beliefs?"
- "To what extent do you think [the manipulator] is influencing [the target audience] with the [public communication] with misleading associations?"
- "To what extent do you think [the manipulator] employs deception in [the public communication]?"
- "To what extent do you think [the manipulator] with [the public communication] violates norms?"

Similarly, three statements can represent the dimension of indifference demonstrated with reliable internal consistency, namely:

- "[the manipulator] shows interest in explaining reasons to [the target audience] to exhibit [behaviour] with [the public communication]"
- "[the manipulator] makes it clear to [the target audience] why they should exhibit [behaviour] with [the public communication]"
- "[the manipulator] aims to educate [the target audience] with [the public communication]"

Both the potential determinants of perceived bypassing rationality and perceived covertness displayed internal consistency for only two constructs, respectively.

In conclusion, the trickery statements and indifference statements are identified as valid representations of perceived trickery and perceived indifference, respectively, and can be applied to assess these dimensions of perceived manipulation to measure the perceptions of manipulation towards communication. Future research could focus on developing an internally consistent construct for measuring perceived bypassing of rationality (which should include 'bypass of logical reasoning' and 'avoiding factual information'), as this could potentially determine whether manipulation is perceived.

8. General Discussion

8.1 Strengths

The implementation of manipulative tactics, based on psychological insights, to stimulate sustainable behaviour for climate change mitigation represents a viable strategy. Given the nascent nature of such tactics and the yet unknown broader effects, there is an opportunity for both advocates and critics to inform the public about the issues surrounding manipulative strategies or to convince them of their benefits or drawbacks. The study adopts an exploratory approach to take steps towards understanding perceived manipulation in public communication by identifying potential perceived characteristics of manipulation.

The primary strength of this thesis is the novelty of identifying measurements of manipulation by integrating philosophical and psychiatric literature resulting in two of the four proposed predictors for perceived manipulation demonstrating high internal consistency based on at least three items. This means that these constructs, which relate to the trickery and indifference dimensions, could be used as valid measurements to measure these dimensions. These items can be further applied to empirically identify manipulation. Additionally, it was found that one could potentially affect the perceived manipulation, which is the bypassing of rationality. This means that if the campaign is judged to avoid facts and logical reasoning, this increases the perceptions of manipulation.

In addition, an example of a psychological insight to influence behaviour could be tested by conducting a pre-test and a final experiment. Considering the results of the pre-test, the final experiment was adjusted to achieve greater effectiveness. The first hypothesis could be tested through the experiment: ‘Communication from the government is perceived as more manipulative and less accepted compared to that from energy companies’. The hypothesis was rejected because it turned out that the communicator, whether the government or an energy company, did not affect the perceptions of manipulation significantly, which is contrary to another research (De Vries et al., 2015).

The incorporation of a qualitative component in the experiment also provided deeper insight into the understanding of manipulation. It indicated that people focus more on its effects on individuals rather than on the communicator's behaviour when they explain what manipulation means. This could be concluded as no responses directly addressed the indifference account which could distinguish itself from the other three potential determinants by the focus on what the communicator lacks. The qualitative findings also validated the significance of bypassing rationality as a component of perceived manipulation, with elements from trickery and covertness also being described. In addition, it also showed the negative connotation people have with manipulation in general, making it a non-neutral term, which could raise questions about whether perceived manipulation is a thick concept compared to theoretical manipulation (Jongepier and Klenk, 2022). This means that if manipulation is perceived as a thick concept and wrong, then this could mean that perceived manipulation is always wrong.

Perceptions of manipulation might be influenced by individual psychological factors and contextual factors. To account for potential mediators in the research, the following hypothesis was proposed based on

psychological insights: ‘Organisational scepticism, climate change scepticism, individualism, negative attitude towards the campaign and opposition to climate action are moderating variables that increase perceived manipulation in public communication within the context of climate change’. This hypothesis was rejected because it did not directly impact perceived manipulation but did affect the perceptions of the proposed potential determinants.
This may be explained by the fact that participants first had to indicate whether they perceived the communication as manipulative and then evaluate the potential methods used in the campaign. Initially, people might rely on their system 2 thinking, which is more deliberate and requires energy. During the questionnaire, when assessing the potential determinants, they might switch to system 1 thinking, which is fast and with minimal conscious effort. At this stage, they may no longer judge based on the content of the message but on their values, such as their stance on climate change.

Based on insights from philosophy, psychology and psychiatry research on the demarcating factors of manipulation, it was hypothesised that the demarcating factors are bypassing rationality, covertness, trickery, and indifference (hypothesis 3a). The results supported this prediction for bypassing rationality, which can be interpreted as participants indicating that the described campaign avoids facts and bypasses logic, resulting in bypassing rational capacities for decision-making and thus manipulating behaviour. In addition, when the campaign did not explain the rationale behind the intended goal, the communicator's negligence was perceived, leading to more perceived manipulation accordingly. However, trickery was not related to perceived manipulation, likely because the described campaign was straightforward, and participants did not perceive that false beliefs were being created. Similarly, covertness was not related to perceived manipulation, possibly because the link between the campaign and its intended goal was easy to discern, and the hidden aspect was quickly unravelled by people leading to lower levels of perceived covert influence.

Following hypothesis 4b, acceptance of manipulative communication in the context of climate change was significantly associated with perceived morality. The perceived morality could resonate with an individual’s values and principles, leading them to accept or reject manipulative communication based on whether it aligns with their sense of what is right and wrong. In addition, the hypothesis proposed that acceptance could also be assessed with perceived harm and loss of autonomy. However, as perceived harm and loss of autonomy might be viewed as more personal and situational, and not considered within ethical considerations, the results indicated that only perceived morality was significantly associated with acceptance. This suggests that when evaluating the acceptance of manipulative communication, both in the context of climate change and more broadly, perceived loss of autonomy or harm does not necessarily play a significant role.

8.2 Limitations

This study encountered several limitations that need consideration for a comprehensive understanding of the findings. The first experiment indicated that most participants in the pre-test did not perceive the message as manipulative, which could stem from the fact that they do not perceive it as manipulative, or they could not recognise manipulative intentions due to its characteristics of subtlety and unconscious influence. To address this, the second experiment explicitly outlined the effects of applying social norms, yet manipulative perceptions remained low. In the second experiment, the experimental manipulation did indeed influence the experimental conditions, marking an improvement from the first experiment where it failed to produce the experimental manipulated effects.

The survey was filled in by 152 participants, but only 100 responses were suitable for analysis, resulting in a relatively small sample size. This limitation reduced the statistical power of the quantitative analysis, thereby decreasing the likelihood of detecting true effects.
Furthermore, the use of a convenience sample to test the predictions poses challenges regarding the generalisability of the results to the broader public. Notably, the sample included a higher proportion of highly educated individuals compared to the general population. This demographic characteristic could influence the findings, as more educated participants might apply greater cognitive capacity in assessing manipulativeness, potentially leading to higher perceived manipulation. However, despite these limitations, it is important to consider that for an exploratory study, the use of a convenience sample still provides a relatively conservative test of hypotheses.
Additionally, the internal consistency between scales was not always robust, impacting the reliability and validity of the measures. For the constructs representing perceived bypassing rationality and perceived covertness, only two questions per scale were used, which can limit the thorough representation of each construct. More questions per construct generally enhance construct representation and increase scale reliability (Eisinga et al., 2013).

In the exploration of the determinant 'perceived bypassing rationality' is represented with two by the author-formulated items "To what extent do you think [the manipulator] is attempting to bypass the logical reasoning of [the target audience] with [the public communication]?" and "To what extent do you think [the manipulator] is trying to avoid factual information with [the public communication]?". However, the questions "To what extent do you think the intention of [the manipulator] is to evoke emotions among [the target audience]? For example, fear, disgust, guilt, anger, or excitement," and "To what extent do you think [the manipulator] tries to influence [the target audience] unconsciously with [the public communication]?" did not exhibit internal consistency.
The exclusion of emotional evocation from the constructs could be attributed to the strong responses such terminology often elicits. The evocation of emotions can be associated with immediate, overt emotional responses such as sadness, anger, or happiness. However, manipulation as bypassing rationality can also subtly work through emotions such as shame or confusion, which respondents might not have considered.
Unconscious influence, according to literature, could align with the constructs of bypassing rationality. However, assessing whether the source involves bypassing logical thinking and avoiding factual information can be more tangible and focus on the manipulator's actions, while assessing unconscious influencing can be more challenging.
Unconscious influence could also fall under the covertness construct because covert influence typically involves hidden tactics or intentions that individuals are not aware of, linking it to unconscious influence. However, this was not supported by the results of the experiment.

The covertness construct is assessed by the author-formulated questions ‘To what extent do you think [the manipulator] is using a hidden agenda to achieve a goal?’ and ‘To what extent do you think [the manipulator] withholds relevant information in [the public communication]?’ showed a strong correlation, indicating consistent recognition of covert manipulation. However, a subsequent reversed-coded question, ‘To what extent do you think [the manipulator] is transparent about its goals in [the public communication]?’, potentially caused confusion among participants, as it contradicted earlier items. This may have led to inconsistent responses, suggesting future questionnaires should use uniformly phrased questions to ensure reliable data on perceptions of manipulation.

While the literature-based items for organisational scepticism, negative attitude towards the campaign and opposition in involvement to climate action showed reliable internal consistency, this was not observed for the values of participants towards individualism versus collectivism. These discrepancies in measuring constructs such as individualism and collectivism through only four questions could be attributed to the literature's recommendations for a more extensive set of questions. The decision against adding more questions was made to mitigate the risk of a low response rate.

Considering that the author of this thesis phrased the survey questions for the potential determinates of perceived manipulation and the evaluation variables for acceptance of manipulative communication herself, meaning the questions have not been standardised, phrasing issues were perhaps unavoidable. Nonetheless, this limitation ought to be kept in mind when interpreting the results. For example, the trickery construct included the “To what extent do you think [the manipulator] with [the public communication] violates norms?”, this could be seen as an oversimplification of the true meaning of violating norms according to the trickery view.

In this thesis, it is essential to consider that two concepts are being explored. The first is the theoretical concept of "manipulation," as detailed in the theoretical framework in Chapter 3. The second concept, "perceived manipulation," pertains to individuals' perceptions of the manipulation, regardless of whether this is manipulative according to philosophical theories. This distinction has significant implications for translating practical findings into valid theories. This challenge of translating practice to theory also emerged in the quest to identify determinants of manipulation, where literature on psychological disorders was consulted due to their association with manipulative personality traits. While numerous psychological disorders were recognised for their manipulative tendencies, only a few articles elaborated on the specific characteristics that made them manipulative. Often, clients were labelled as manipulative without further clarification on distinctive traits indicative of manipulative behaviour. The lack of a definitive set of criteria for manipulative traits questions the objectivity of identifying such traits in individuals and greater beliefs about manipulativeness.

8.3 Implications & recommendations

This thesis contributes to research that encourages behavioural insights in sustainability transition processes by adding the ethical considerations that should be considered when applying behavioural insight to impact the effectiveness of public communication. The validated and significant determinants of perceived manipulation in the use of the psychological phenomena of social norms in public campaigns demonstrate a step towards the identification of perceived manipulative characteristics of communication for sustainability transitions.

It was discovered that people can perceive this social norm as a covert and negligent influence when the communicator does not provide reasons for the intended goal of the campaign. This is highly relevant because the perception of manipulation becomes particularly problematic when impartiality is expected. Especially in the context of sustainability transitions, back-lash effects need to be prevented. To mitigate the risk of perceptions of manipulation and foster public support for the application of behavioural insights in public campaigns, it is essential to clearly articulate the rationale behind the intended behaviours to the target group.

It is important to acknowledge that governments often engage in various forms of influential communication to achieve societal goals. While some may view these efforts as manipulation, others may see them as a necessary means to promote collective well-being and address societal challenges. Therefore, it can be argued that manipulation has always been and should be a tool utilised by governments. Consequently, the application of particular psychological insights should not be considered an exceptional characteristic. However, as persuasive strategies continue to evolve, there is an urgent need to address the ethical considerations surrounding the implementation of behavioural insights in influential communication, particularly when these strategies are personalized. Influential communication must be ethical by design, with designers considering ethical issues at every stage of design and development. Additionally, professional and government regulations are essential to ensure that these powerful technologies are not misused by unethical actors and entities (Alslaity et al., 2024).

The findings of the current study have important implications for policymakers as well as for corporations. The experiment indicated that social norms for promoting load-shifting are not perceived as desirable for public communication. Consequently, it can be inferred that similar approaches may also be undesirable for other initiatives related to sustainability transitions and various communication tactics using psychological insights. Messages attempting to bypass rational capacities to influence behaviour by avoiding facts and logic and influence without giving existing reasons for the behaviour can increase perceptions of manipulation.
It may therefore be recommended that designers of communication, where there is no intention to manipulate individuals, specifically ensure that the described components do not occur.

Of course, it can be argued that the determinants of perceived manipulation described in this thesis are not the only relevant factors and may not fully explain all instances of perceived manipulative communication. However, this contribution also raises awareness among public communicators that, while various social and psychological processes can be applied, it is crucial to consider the validated determinants of perceived manipulation in this thesis to explore possible manipulative perceptions.

The identified and validated determinants are valuable because they can be applied to assess the manipulativeness of communication empirically based on perceptions, which could set standards for the regulatory framework and stimulate ethical communication practices. They assist policymakers in policy design for influential communication that can both promote behaviour change and maintain public support. This is especially crucial in the sustainability transitions, where public cooperation and trust are paramount to changing sustainable behaviours.

8.4 Suggestions for further research

The final section of this thesis issues some suggestions for further research.
The primary scientific contribution of this thesis is the establishment of perceived determinants of manipulation, which provides a nuanced understanding of how public communications can be perceived based on their manipulative characteristics. These determinants intersect with multiple disciplines including psychology, philosophy, and psychiatry studies fostering a comprehensive understanding of perceptions of manipulation. Future research can utilise these validated determinants to explore perceived manipulation in various contexts, enhancing the robustness of the characteristics of manipulation across different fields.

In addition, unclear or conflicting findings of the current study warrant clarification. For instance, more in-depth empirical philosophy research is needed to understand the nature of the relationship between the determinants of perceived manipulation. Such research could look at the reason why not all determinants are associated with perceived manipulation and whether they should be independent of each other.

The findings of the current study observed overlap within the determinants relating to perceived bypassing rationality, perceived covertness, and perceived trickery. However, only bypassing rationality was related to perceived manipulation. Therefore, future studies might benefit from refining these constructs with more specific questions that significantly differentiate these determinants. However, it is also important to acknowledge that the nature of manipulative communication may inherently blend the characteristics of the determinants. For instance, a message that is considered covert may also simultaneously engage in bypassing rationality.

Similarly, more in-depth research is needed to understand the nature of the relationship between the individual biases affecting the determinants of manipulation. Again, the findings of the current study hint at an interaction effect, but this claim needs further research. This is relevant because it could tell policymakers whether they should apply a particular psychological insight in their public communication aimed at a specific target group with specific individual biases that may cause high levels of perceived manipulation causing a possible backlash effect.

The experiment specifically described the strategy of the social norm, raising questions about whether the results of perceived manipulation apply to other psychological insights employed in communication techniques. The effect of perceived manipulation is likely stronger concerning complex and novel issues (e.g., carbon capture and storage, nanotechnology, and genetically modified foods) than for more familiar issues where individuals have already formed stable opinions. After all, communications about well-known issues are less likely to alter deep-rooted beliefs, regardless of the perceived quality of such communications. Moreover, individuals with strong opinions about an issue may focus on specific aspects of communications due to selective exposure. Therefore, it is recommended to compare the perceived determinants of manipulation for similar psychological nudges with complex and novel issues.

A significant component of this research was to investigate whether the communicator revealing no reasons for an intended behaviour to the manipulatee impacted perceived manipulation (Hypothesis 3b) as it was suggested that revealing reasons could distinguish manipulation from other forms of social influence. However, the findings indicated that providing reasons did not significantly affect perceptions of manipulation. It may be that the perceived manipulation is impacted by factors not identified in this thesis. Or it could be argued that people tend to have particular misperceptions of the effects of no reasons given on the perceptions of manipulation (Klenk, 2021). These possibilities invite further research and research on how perceived manipulation can be clearly distinguished from other sources of influence.

A reflection of the use of artificial intelligence in the thesis is provided in Appendix N.

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10. Appendix

A. Informed consent

Figure A.1: Informed consent form provided to survey participants.

Informed Consent – Online survey

U wordt uitgenodigd om deel te nemen aan het onderzoek genaamd "Op weg naar een beter begrip van percepties over milieucommunicatie: Een voorstudie"

Dit onderzoek wordt uitgevoerd door Fabiën Dekker van de Technische Universiteit Delft. De verzamelde gegevens zullen worden gebruikt voor de resultaten van het onderzoek als onderdeel van de master thesis om af te studeren, onder begeleiding van Gerdien de Vries en Michael Klenk.

Het onderzoek zal ongeveer 10 minuten in beslag nemen. U wordt gevraagd om een fictieve campagne te lezen en deze te beoordelen op verschillende aspecten.

Wij behandelen uw gegevens vertrouwelijk en slaan geen namen, e-mailadressen en IP-adressen op. De overige gegevens slaan wij op op een beveiligde server.

Uw deelname aan dit onderzoek is volledig vrijwillig, u kunt op elk moment stoppen.

In de afsluiting kunt u informatie vinden over het onderzoek en de gebruikte werkwijze.

Door op 'Volgende pagina' te klikken gaat u akkoord met het bovenstaande.

Veel dank,

Fabiën Dekker

B. Pre-test questions

The survey includes 2 introduction texts for the experimental conditions careless and caring, one relates to the careless account while the other relates to caring account. The questionnaire is described in Dutch because the survey was executed in Dutch.
It is strongly recommended to get inspired by the second survey in Appendix D for further research on perceived manipulation and its determinants.

Start van blok: Introduction

Introductie

U wordt uitgenodigd om deel te nemen aan het onderzoek genaamd "Op weg naar een beter begrip van percepties over milieucommunicatie: Een voorstudie".
Dit onderzoek wordt uitgevoerd door Fabiën Dekker van de Technische Universiteit Delft. De verzamelde gegevens zullen worden gebruikt voor de resultaten van het onderzoek als onderdeel van de master thesis om af te studeren, onder begeleiding van Gerdien de Vries en Michael Klenk.

Het onderzoek zal ongeveer 10-15 minuten in beslag nemen. U wordt gevraagd om een fictieve boodschap te lezen en deze te beoordelen op verschillende aspecten.

Wij behandelen uw gegevens vertrouwelijk en slaan geen namen, e-mailadressen en IP-adressen op. De overige gegevens slaan wij op op een beveiligde server.

U wordt aangeraden de afsluiting te lezen, hierin kunt u informatie vinden over het onderzoek en de gebruikte werkwijze.

Uw deelname aan dit onderzoek is volledig vrijwillig, u kunt op elk moment stoppen.

Mocht u vragen of opmerkingen hebben omtrent het onderzoek, dan kunt u Fabiën Dekker bereiken via F.F.C.Dekker@student.tudelft.nl.

Door op 'Volgende pagina' te klikken gaat u akkoord met het bovenstaande.

Veel dank,

Fabiën Dekker

Einde blok: Introduction

Start van blok: Demographics

Age Wat is uw leeftijd?

o Leeftijd in jaren: _____

o Ik zeg dat liever niet

Gender Wat is uw geslacht?

o Man

o Vrouw

o Niet-binair

o Ik zeg dat liever niet

Education Wat is uw hoogst genoten (mogelijk huidige) opleiding?

o Middelbare school

o MBO

o HBO

o WO

o Ik zeg dat liever niet

Profession In welke sector werkt u (of werkte u, indien u met pensioen bent)?

- ▢ Automotive
- ▢ Bouw en techniek
- ▢ Financiën en bankwezen
- ▢ Gezondheid
- ▢ Handel en verkoop
- ▢ Kunst en cultuur
- ▢ Landbouw
- ▢ Milieu en duurzaamheid
- ▢ Onderwijs
- ▢ Overheid en openbaar bestuur
- ▢ Student
- ▢ Technologie en IT
- ▢ Transport en logistiek
- ▢ Wetenschap en onderzoek
- ▢ Anders, namelijk: _____
- ▢ Ik zeg dat liever niet

Religion Welke omschrijving past het best bij u?

o Atheïst (niet-gelovig)

o Agnost (geen overtuiging)

o Christen

o Moslim

o Joods

o Hindoe

o Boeddhist

o Anders, namelijk: _____

o Ik zeg dat liever niet

Political affiliation Wat is uw politieke voorkeur?

o PVV

o Groenlinks-PvdA

o VVD

o NSC

o D66

o BBB

o CDA

o SP

o DENK

o Partij voor de Dieren

o Forum voor Democratie

o SGP

o ChristenUnie

o Volt

o JA21

o Anders, namelijk: _____

o Ik zeg dat liever niet

Einde blok: Demographics

Start van blok: Rijksoverheid en klimaat

Rijksoverheid

De volgende vragen gaan over de Rijksoverheid. De Rijksoverheid is het centrale bestuur van Nederland en is verantwoordelijk voor het schrijven, uitvoeren en controleren van beleid op landelijk niveau.

Source scepticism In hoeverre vindt u dat de Rijksoverheid…

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Betrouwbaar is?	o	o	o	o	o
Het algemeen belang nastreeft?	o	o	o	o	o

Individualism/collectivism Geef aan in hoeverre u het oneens of eens bent met elk van de onderstaande stellingen.

	Helemaal mee oneens, 1 (1)	Mee oneens, 2 (2)	Niet mee eens en niet mee oneens, 3 (3)	Mee eens, 4 (4)	Helemaal mee eens, 5 (5)
Ik doe mijn “eigen ding” en geef geen aandacht of het past bij “goed gedrag”.	o	o	o	o	o
Het is belangrijk voor mij dat ik mijn bezigheden beter doe dan anderen.	o	o	o	o	o
Mijn geluk is afhankelijk van het geluk van de mensen om mij heen.	o	o	o	o	o
Ik vind het vervelend om het oneens te zijn met anderen in mijn groep.	o	o	o	o	o

Climate change scepticism In hoeverre verwacht u dat informatie over klimaatverandering vanuit de Rijksoverheid objectief is?

Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
o	o	o	o	o

General action In hoeverre vindt u dat er in het algemeen actie moet worden ondernomen tegen klimaatverandering?

Helemaal geen, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Zeer veel, 5 (5)
o	o	o	o	o

Individual action In hoeverre voelt u zich verantwoordelijk voor het ondernemen van klimaatgerelateerde aanpassingen? Bijvoorbeeld het isoleren van uw huis, de kachel op maximaal 19 graden, maximaal 5 minuten douchen en minder vlees eten.

Helemaal geen, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Volledig, 5 (5)
o	o	o	o	o

Corporates action In hoeverre vindt u dat bedrijven actie moeten ondernemen voor klimaatgerelateerde aanpassingen?

Helemaal geen, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Zeer veel, 5 (5)
o	o	o	o	o

Climate change scepticism Geef voor elk van de onderstaande milieuonderwerpen aan in hoeverre u dit als een probleem ziet voor onze samenleving.

	Helemaal geen probleem, 1 (1)	Klein probleem, 2 (2)	Gemiddeld probleem, 3 (3)	Groot probleem, 4 (4)	Zeer groot probleem, 5 (5)
Luchtvervuiling en smog (1)	o	o	o	o	o
Vervuiling van rivieren, meren en oceanen (2)	o	o	o	o	o
Het verdwijnen van regenwouden en jungles (3)	o	o	o	o	o
Klimaatverandering, de opwarming van de aarde, oftewel het ‘broeikaseffect’ (4)	o	o	o	o	o

Pagina-einde

Einde blok: Rijksoverheid en klimaat

Start van blok A: Intentie tekst caring

Experimental condition 1 In de volgende tekst gaat u een bericht lezen vanuit het Ministerie van Economische Zaken en Klimaat, dat onderdeel is van de Nederlandse Rijksoverheid (het hoogste gezag).

Stelt u zich voor dat u onlangs bent verhuisd naar een nieuwe wijk en u een bericht ontvangt van de Rijksoverheid. De Rijksoverheid wilt u graag informeren waarom het belangrijk is om duurzaam gedrag aan te passen.

Einde blok: Intentie tekst caring

Start van blok B: Intentie tekst purpose

Experimental condition 2 In de volgende tekst gaat u een bericht lezen vanuit het Ministerie van Economische Zaken en Klimaat, dat onderdeel is van de Nederlandse Rijksoverheid (het hoogste gezag).

Stelt u zich voor dat u onlangs bent verhuisd naar een nieuwe wijk en u een bericht ontvangt van de Rijksoverheid. De Rijksoverheid wilt vooral dat u uw duurzaam gedrag aanpast.

Einde blok: Intentie tekst caring

Start van blok: Boodschap Rijksoverheid

Message **De boodschap vanuit de Rijksoverheid**

Geachte heer/mevrouw,

Allereerst van harte gefeliciteerd met uw nieuwe huis! We willen graag uw aandacht vestigen op een mooie kans die beschikbaar is in uw wijk: Piekbesparing en verschuiving van de energiebelasting.

Piekbesparing en verschuiving van de energiebelasting is een duurzaam initiatief vanuit de Rijksoverheid, waarbij we samenwerken om de vraag naar energie beter te verdelen over de dag. Dit betekent dat we proberen om minder energie te gebruiken tijdens piekuren, zoals 's avonds, en meer energie te verbruiken tijdens daluren, zoals overdag.

Door deelname aan het programma kunt u uw energiekosten verlagen, het elektriciteitsnet efficiënter gebruiken en uw ecologische impact verminderen.

Binnen uw woonwijk maakt al meer dan 40% van de huishoudens gebruik van de voordelen van het duurzaamheidsprogramma.

Als deelnemer van het “Piekbesparing en Verschuiving van de energiebelasting” programma bent u voorloper op het gebied van duurzaamheid en energiebesparing. U draagt bij aan een duurzamere toekomst door energie te besparen en ons elektriciteitsnet te optimaliseren.

We nodigen u vriendelijk uit om deel te nemen aan dit project en samen met ons te werken aan een betere wereld voor de komende generaties.

Hoogachtend,

Het Ministerie van Economische Zaken en Klimaat

Afdeling Duurzame Woningen

Intention manipulation In hoeverre denkt u dat de intentie van de Rijksoverheid in de boodschap is om u te ...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Informeren?	o	o	o	o	o
Overtuigen?	o	o	o	o	o
Manipuleren?	o	o	o	o	o
Inspireren?	o	o	o	o	o

Perceived bypassing rationality In hoeverre vindt u de boodschap duidelijk? Geef van de volgende drie dingen aan:

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (5)	Helemaal, 5 (6)
Vaag	o	o	o	o	o
Feitelijk	o	o	o	o	o
Logisch	o	o	o	o	o

Perceived bypassing rationality In hoeverre is de boodschap gericht op het wekken van emoties? Bijvoorbeeld vreugde, verdriet, angst, woede, verbazing of afschuw.

Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (5)	Helemaal, 5 (6)
o	o	o	o	o

Perceived indifference In hoeverre vindt u dat de Rijksoverheid in deze boodschap...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Heel erg, 5 (5)
Een specifiek doel wilt bereiken?	o	o	o	o	o
Redenen geeft voor het behalen van een specifiek doel?	o	o	o	o	o

Perceived covertness In hoeverre vindt u dat de intentie van de Rijksoverheid in de boodschap voor u verborgen is?

Helemaal niet, 1 (1)	Een beetje, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
o	o	o	o	o

Perceived covertness and cognitive optimism In hoeverre denkt u dat de boodschap…

	Helemaal niet, 1 (1)	Een beetje, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
U aan het denken zet? (1)	o	o	o	o	o
U aanzet kritisch te zijn op het piekbesparingsprogramma? (2)	o	o	o	o	o
U bewust beïnvloedt? (3)	o	o	o	o	o
U onbewust beïnvloedt? (4)	o	o	o	o	o

Perceived manipulation and trickery In hoeverre vindt u dat de boodschap gebruik maakt van...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (5)	Heel erg, 5 (6)
Bedrog? (1)	o	o	o	o	o
Manipulatie? (2)	o	o	o	o	o

Perceived trickery In hoeverre overschrijdt de Rijksoverheid in deze boodschap normen?

Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Heel veel, 5 (5)

	o	o	o	o	o

Pagina-einde

Einde blok: Boodschap Rijksoverheid

Start van blok: Acceptance

De volgende twee vragen gaan over uw mogelijkheden na onbewust te zijn gemanipuleerd.

Unconscious control In hoeverre heeft u controle over uw keuzes over duurzame beslissingen, wanneer u onbewust kan zijn gemanipuleerd?

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
(4)	o	o	o	o	o

Unconscious care In hoeverre maakt het voor u uit dat uw keuzes over duurzame beslissingen maakt zonder er bewust over na te denken?

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Heel veel, 5 (5)
(4)	o	o	o	o	o

De volgende drie vragen gaan over uw mening tegenover het gebruik van manipulatie.

Perceived morality Wat is uw mening over manipulatieve communicatie door de Rijksoverheid?

o Altijd verkeerd (1)
o In eerste instantie verkeerd, maar mogelijk gerechtvaardigd onder bepaalde omstandigheden (2)
o Acceptabel onder bepaalde omstandigheden (4)
o Niet verkeerd (5)

Perceived Autonomy loss and harm In hoeverre vindt u dat manipulatieve communicatie vanuit de Rijksoverheid…

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)

Persoonlijke vrijheid beperkt? (1)	o	o	o	o	o
Schade veroorzaakt? (2)	o	o	o	o	o

Perceived acceptance In hoeverre vindt u dat de Rijksoverheid gebruik mag maken van manipulatieve communicatie…

	1, Helemaal niet (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Zeer veel, 5 (5)
In de context van klimaat? (1)	o	o	o	o	o
In het algemeen? (2)	o	o	o	o	o

Einde blok: Acceptance

Start van blok: Afsluitende vragen

De laatste drie vragen

Familairity Had u voor het invullen van de vragenlijst al eerder gehoord van Piekbesparing en Verschuiving van de belasting energie?

o Ja (1)

o Nee (2)

Manipulated Zou u meer willen weten over Piekbesparing en Verschuiving van de belastingsenergie?

o Ja (1)

o Nee (2)

Qualitative question Dit onderzoek gaat over wat manipulatie door de Rijksoverheid inhoudt, kunt u onder eigen woorden uitleggen wat u onder manipulatie verstaat?

Deze vraag is niet verplicht.

_____

Einde blok: Afsluitende vragen

Start van blok: De-briefing

Bedankt voor uw deelname aan het onderzoek "Op weg naar een beter begrip van percepties over milieucommunicatie: Een voorstudie".

Met behulp van dit onderzoek willen we een beter begrip krijgen van wat manipulatie inhoudt en empirische data verzamelen om een concept van manipulatie te kunnen creëren, waarmee we het kunnen onderscheiden van andere vormen van invloed.

Er waren twee versies van de introductietekst, één met focus op de intentie om u te manipuleren en één die als meer objectief zal kunnen worden ervaren. Dit waren de introductieteksten:

1) In de volgende tekst gaat u een bericht lezen vanuit het Ministerie van Economische Zaken en Klimaat, dat onderdeel is van de Nederlandse Rijksoverheid (het hoogste gezag). Stelt u zich voor dat u onlangs bent verhuisd naar een nieuwe wijk en u een bericht ontvangt van de Rijksoverheid. Ze wilt u graag aanmoedigen om deel te nemen aan een duurzaamheidsprogramma, zodat u bewuster omgaat met uw energieverbruik en klimaatvriendelijke keuzes maakt.

2) In de volgende tekst gaat u een bericht lezen vanuit het Ministerie van Economische Zaken en Klimaat, dat onderdeel is van de Nederlandse Rijksoverheid (het hoogste gezag). Stelt u zich voor dat u onlangs bent verhuisd naar een nieuwe wijk en u een bericht ontvangt van de Rijksoverheid. Zij wilt u graag informeren over het duurzaamheidsprogramma dat in uw wijk wordt gestart om klimaatvriendelijk gedrag te bevorderen. Het doel is om mogelijkheden voor klimaatvriendelijk gedrag te geven en bij te dragen aan het behalen van de klimaatdoelen van 2030 en 2050.

Het bericht en de vragen waren voor alle deelnemers hetzelfde.

Einde blok: De-briefing

C. Pre-test quantitative analysis

Table C.1: Principal Component Analysis of variables, rotation method: Varimax with Kaiser Normalization.

	Component							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Indivualism 1	0,836							
Individualism 2				0,605				
Collectivism 1								
Collectivism 2		-0,935						
Source scepticism 1				0,920				
Source scepticism 2				0,713				
Source scepticism 3								-0,548
Opposition involvement in climate action 1			0,501					
Opposition involvement in climate action 2			0,804					
Opposition involvement in climate action 3				0,772				
Climate change scepticism 1						0,925		
Climate change scepticism 2	0,756							
Climate change scepticism 3			0,889					
Climate change scepticism 4			0,899					
Perceived bypassing rationality 1	0,832							
Perceived bypassing rationality 2							0,875	
Perceived bypassing rationality 3					0,923			
Perceived bypassing rationality 4	-,546						0,598	
Perceived indifference 1	-,824							
Perceived indifference 2								0,928
Perceived cognitive optimism 1					0,791			
Perceived cognitive optimism 2							-0,605	
Perceived covertness 1		0,802						
Perceived covertness 2					0,506	0,639		
Perceived trickery deception		0,778						
Perceived trickery norms		0,758						

Table C.2: Descriptive statistics for experimental conditions careless and caring.

		Mean	Std. Deviation	N
Perceived intention to manipulate	Caring	3,00	1,155	7
	Careless	2,20	0,837	5
	Total	2,67	1,073	12
Perceived intention to inform	Caring	3,43	1,134	7
	Careless	3,80	0,837	5
	Total	3,58	0,996	12
Perceived intention to persuade	Caring	4,00	0,816	7
	Careless	4,00	0,000	5
	Total	4,00	0,603	12
Perceived intention to manipulate	Caring	4,00	0,577	7
	Careless	4,20	0,447	5
	Total	4,08	0,515	12
Perceived bypassing rationality vague	Caring	2,57	1,272	7
	Careless	3,20	1,095	5
	Total	2,83	1,193	12
Perceived bypassing rationality factual	Caring	3,5714	1,13389	7
	Careless	2,4000	0,89443	5
	Total	3,0833	1,16450	12
Perceived bypassing rationality logic	Caring	1,7143	1,60357	7
	Careless	1,8000	1,09545	5
	Total	1,7500	1,35680	12
Perceived bypassing rationality emotions evoking	Caring	4,14	1,069	7
	Careless	3,00	0,707	5
	Total	3,67	1,073	12
Perceived covertness hidden agenda	Caring	2,43	0,787	7
	Careless	2,20	1,304	5
	Total	2,33	0,985	12
Perceived covertness unconscious influence	Caring	2,57	1,272	7
	Careless	2,40	0,894	5
	Total	2,50	1,087	12
Perceived trickery deception	Caring	2,00	1,000	7
	Careless	2,20	0,837	5
	Total	2,08	0,900	12
Perceived trickery norms	Caring	2,00	1,000	7
	Careless	2,00	1,000	5
	Total	2,00	0,953	12
Perceived Conscious influence	Caring	3,29	1,254	7
	Careless	3,60	0,548	5

	Total	3,42	0,996	12
Perceived unconscious influence	Caring	2,29	1,254	7
	Careless	2,40	0,894	5
	Total	2,33	1,073	12
Perceived indifference goals	Caring	4,286	0,7559	7
	Careless	4,200	0,8367	5
	Total	4,250	0,7538	12
Perceived indifference of reasons	Caring	3,5714	0,78680	7
	Careless	2,4000	1,14018	5
	Total	3,0833	1,08362	12
Perceived cognitive optimism 1	Caring	3,0000	1,29099	7
	Careless	2,2000	1,09545	5
	Total	2,6667	1,23091	12
Perceived cognitive optimism 1	Caring	3,1429	1,46385	7
	Careless	2,8000	1,48324	5
	Total	3,0000	1,41421	12

Table C.3: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + Introduction

		Levene Statistic	df1	df2	Sig.
Perceived intention to manipulate	Based on Mean	0,381	1	10	0,551
	Based on Median	0,475	1	10	0,506
	Based on Median and with adjusted df	0,475	1	9,567	0,507
	Based on trimmed mean	0,405	1	10	0,539
Perceived intention to inform	Based on Mean	1,133	1	10	0,312
	Based on Median	0,318	1	10	0,585
	Based on Median and with adjusted df	0,318	1	8,548	0,587
	Based on trimmed mean	1,128	1	10	0,313
Perceived intention to persuade	Based on Mean	5,556	1	10	0,040
	Based on Median	5,556	1	10	0,040
	Based on Median and with adjusted df	5,556	1	6,000	0,057
	Based on trimmed mean	5,556	1	10	0,040
Perceived intention to inspire	Based on Mean	0,020	1	10	0,890
	Based on Median	0,096	1	10	0,763
	Based on Median and with adjusted df	0,096	1	9,930	0,763
	Based on trimmed mean	0,003	1	10	0,955
Perceived bypassing rationality vague	Based on Mean	0,243	1	10	0,633
	Based on Median	0,192	1	10	0,671
	Based on Median and with adjusted df	0,192	1	9,729	0,671
	Based on trimmed mean	0,261	1	10	0,620

Perceived bypassing rationality factual	Based on Mean	0,001	1	10	0,971
	Based on Median	0,079	1	10	0,785
	Based on Median and with adjusted df	0,079	1	9,546	0,785
	Based on trimmed mean	0,020	1	10	0,891
Perceived bypassing rationality logic	Based on Mean	2,494	1	10	0,145
	Based on Median	0,563	1	10	0,470
	Based on Median and with adjusted df	0,563	1	9,998	0,470
	Based on trimmed mean	2,340	1	10	0,157
Perceived bypassing rationality emotions evoking	Based on Mean	7,312	1	10	0,022
	Based on Median	0,757	1	10	0,405
	Based on Median and with adjusted df	0,757	1	7,920	0,410
	Based on trimmed mean	7,082	1	10	0,024
Perceived covertness hidden agenda	Based on Mean	2,150	1	10	0,173
	Based on Median	1,667	1	10	0,226
	Based on Median and with adjusted df	1,667	1	9,897	0,226
	Based on trimmed mean	2,084	1	10	0,179
Perceived covertness unconscious influence	Based on Mean	0,336	1	10	0,575
	Based on Median	0,192	1	10	0,671
	Based on Median and with adjusted df	0,192	1	9,729	0,671
	Based on trimmed mean	0,328	1	10	0,579
Perceived trickery norms	Based on Mean	0,855	1	10	0,377
	Based on Median	0,938	1	10	0,356
	Based on Median and with adjusted df	0,938	1	8,772	0,359
	Based on trimmed mean	0,834	1	10	0,383
Perceived trickery norms	Based on Mean	0,338	1	10	0,574
	Based on Median	0,338	1	10	0,574
	Based on Median and with adjusted df	0,338	1	8,286	0,577
	Based on trimmed mean	0,282	1	10	0,607
Perceived Conscious influence	Based on Mean	3,893	1	10	0,077
	Based on Median	0,271	1	10	0,614
	Based on Median and with adjusted df	0,271	1	7,444	0,618
	Based on trimmed mean	2,681	1	10	0,133
Perceived unconscious influence	Based on Mean	0,015	1	10	0,904
	Based on Median	0,002	1	10	0,964
	Based on Median and with adjusted df	0,002	1	9,546	0,964
	Based on trimmed mean	0,000	1	10	0,987
Perceived indifference goals	Based on Mean	0,014	1	10	0,907
	Based on Median	0,008	1	10	0,930
	Based on Median and with adjusted df	0,008	1	9,994	0,930

	Based on trimmed mean	0,015	1	10	0,905
Perceived indifference of reasons	Based on Mean	0,865	1	10	0,374
	Based on Median	0,618	1	10	0,450
	Based on Median and with adjusted df	0,618	1	9,963	0,450
	Based on trimmed mean	0,928	1	10	0,358
Perceived cognitive optimism 1	Based on Mean	1,701	1	10	0,221
	Based on Median	0,354	1	10	0,565
	Based on Median and with adjusted df	0,354	1	9,062	0,567
	Based on trimmed mean	1,642	1	10	0,229
Perceived cognitive optimism 2	Based on Mean	0,002	1	10	0,969
	Based on Median	0,000	1	10	1,000
	Based on Median and with adjusted df	0,000	1	10,000	1,000
	Based on trimmed mean	0,002	1	10	0,965

Table C.4: Test of between-subjects effects

Source		**Type III Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**	**Partial Eta Squared**
Corrected Model	Perceived intention to manipulate	1,867[a]	1	1,867	1,728	0,218	0,147
	Perceived intention to inform	,402[b]	1	0,402	0,383	0,550	0,037
	Perceived intention to persuade	,000[c]	1	0,000	0,000	1,000	0,000
	Perceived intention to influence	,117[d]	1	0,117	0,417	0,533	0,040
	Perceived bypassing rationality 1	1,152[e]	1	1,152	0,794	0,394	0,074
	Perceived bypassing rationality 2	4,002[f]	1	4,002	3,667	0,085	0,268
	Perceived bypassing rationality 3	,021[g]	1	0,021	0,011	0,920	0,001
	Perceived bypassing rationality 4	3,810[h]	1	3,810	4,301	0,065	0,301
	Perceived covertness 1	,152[i]	1	0,152	0,145	0,711	0,014
	Perceived covertness 2	,086[j]	1	0,086	0,066	0,802	0,007
	Perceived trickery deception	,117[k]	1	0,117	0,133	0,723	0,013
	Perceived trickery norms	1,776E-15[l]	1	0,289	0,000	1,000	0,000
	Perceived conscious influence	,288[m]	1	0,288	0,271	0,614	0,026
	Perceived unconscious influence	,038[n]	1	0,038	0,030	0,866	0,003
	Perceived indifference 1	,021[o]	1	0,021	0,034	0,857	0,003
	Perceived indifference 2	4,002[p]	1	4,002	4,490	0,060	0,310
	Perceived cognitive optimism 1	1,867[q]	1	1,867	1,261	0,288	0,112
	Perceived cognitive optimism 2	,343[r]	1	0,343	0,158	0,699	0,016
Intercept	Perceived intention to manipulate	78,867	1	78,867	73,025	0,000	0,880
	Perceived intention to inform	152,402	1	152,402	144,948	0,000	0,935
	Perceived intention to persuade	186,667	1	186,667	466,667	0,000	0,979
	Perceived intention to influence	196,117	1	196,117	700,417	0,000	0,986
	Perceived bypassing rationality 1	97,152	1	97,152	66,936	0,000	0,870

	Perceived bypassing rationality 2	104,002	1	104,002	95,290	0,000	0,905
	Perceived bypassing rationality 3	36,021	1	36,021	17,807	0,002	0,640
	Perceived bypassing rationality 4	148,810	1	148,810	168,011	0,000	0,944
	Perceived covertness 1	62,486	1	62,486	59,429	0,000	0,856
	Perceived covertness 2	72,086	1	72,086	55,819	0,000	0,848
	Perceived trickery deception	51,450	1	51,450	58,466	0,000	0,854
	Perceived trickery norms	46,667	1	46,667	46,667	0,000	0,824
	Perceived conscious influence	138,288	1	138,288	130,110	0,000	0,929
	Perceived unconscious influence	64,038	1	64,038	50,709	0,000	0,835
	Perceived indifference 1	210,021	1	210,021	337,190	0,000	0,971
	Perceived indifference 2	104,002	1	104,002	116,669	0,000	0,921
	Perceived cognitive optimism 1	78,867	1	78,867	53,288	0,000	0,842
	Perceived cognitive optimism 2	103,010	1	103,010	47,564	0,000	0,826
Introduction	Perceived intention to manipulate	1,867	1	1,867	1,728	0,218	0,147
	Perceived intention to inform	0,402	1	0,402	0,383	0,550	0,037
	Perceived intention to persuade	0,000	1	0,000	0,000	1,000	0,000
	Perceived intention to influence	0,117	1	0,117	0,417	0,533	0,040
	Perceived bypassing rationality 1	1,152	1	1,152	0,794	0,394	0,074
	Perceived bypassing rationality 2	4,002	1	4,002	3,667	0,085	0,268
	Perceived bypassing rationality 3	0,021	1	0,021	0,011	0,920	0,001
	Perceived bypassing rationality 4	3,810	1	3,810	4,301	0,065	0,301
	Perceived covertness 1	0,152	1	0,152	0,145	0,711	0,014
	Perceived covertness 2	0,086	1	0,086	0,066	0,802	0,007
	Perceived trickery deception	0,117	1	0,117	0,133	0,723	0,013
	Perceived trickery norms	0,000	1	0,000	0,000	1,000	0,000
	Perceived conscious influence	0,288	1	0,288	0,271	0,614	0,026
	Perceived unconscious influence	0,038	1	0,038	0,030	0,866	0,003
	Perceived indifference 1	0,021	1	0,021	0,034	0,857	0,003
	Perceived indifference 2	4,002	1	4,002	4,490	0,060	0,310
	Perceived cognitive optimism 1	1,867	1	1,867	1,261	0,288	0,112
	Perceived cognitive optimism 2	0,343	1	0,343	0,158	0,699	0,016
Error	Perceived intention to manipulate	10,800	10	1,080			
	Perceived intention to inform	10,514	10	1,051			
	Perceived intention to persuade	4,000	10	0,400			
	Perceived intention to influence	2,800	10	0,280			
	Perceived bypassing rationality 1	14,514	10	1,451			
	Perceived bypassing rationality 2	10,914	10	1,091			
	Perceived bypassing rationality 3	20,229	10	2,023			
	Perceived bypassing rationality 4	8,857	10	0,886			

	Perceived covertness 1	10,514	10	1,051			
	Perceived covertness 2	12,914	10	1,291			
	Perceived trickery deception	8,800	10	0,880			
	Perceived trickery norms	10,000	10	1,000			
	Perceived conscious influence	10,629	10	1,063			
	Perceived unconscious influence	12,629	10	1,263			
	Perceived indifference 1	6,229	10	0,623			
	Perceived indifference 2	8,914	10	0,891			
	Perceived cognitive optimism 1	14,800	10	1,480			
	Perceived cognitive optimism 2	21,657	10	2,166			
Total	Perceived intention to manipulate	98,000	12				
	Perceived intention to inform	165,000	12				
	Perceived intention to persuade	196,000	12				
	Perceived intention to influence	203,000	12				
	Perceived bypassing rationality 1	112,000	12				
	Perceived bypassing rationality 2	129,000	12				
	Perceived bypassing rationality 3	57,000	12				
	Perceived bypassing rationality 4	174,000	12				
	Perceived covertness 1	76,000	12				
	Perceived covertness 2	88,000	12				
	Perceived trickery deception	61,000	12				
	Perceived trickery norms	58,000	12				
	Perceived conscious influence	151,000	12				
	Perceived unconscious influence	78,000	12				
	Perceived indifference 1	223,000	12				
	Perceived indifference 2	127,000	12				
	Perceived cognitive optimism 1	102,000	12				
	Perceived cognitive optimism 2	130,000	12				
Corrected Total	Perceived intention to manipulate	12,667	11				
	Perceived intention to inform	10,917	11				
	Perceived intention to persuade	4,000	11				
	Perceived intention to influence	2,917	11				
	Perceived bypassing rationality 1	15,667	11				
	Perceived bypassing rationality 2	14,917	11				
	Perceived bypassing rationality 3	20,250	11				
	Perceived bypassing rationality 4	12,667	11				
	Perceived covertness 1	10,667	11				
	Perceived covertness 2	13,000	11				
	Perceived trickery deception	8,917	11				

	Perceived trickery norms	10,000	11				
	Perceived conscious influence	10,917	11				
	Perceived unconscious influence	12,667	11				
	Perceived indifference 1	6,250	11				
	Perceived indifference 2	12,917	11				
	Perceived cognitive optimism 1	16,667	11				
	Perceived cognitive optimism 2	22,000	11				

a. R Squared = ,147 (Adjusted R Squared = ,062)
b. R Squared = ,037 (Adjusted R Squared = -,059)
c. R Squared = ,000 (Adjusted R Squared = -,100)
d. R Squared = ,040 (Adjusted R Squared = -,056)
e. R Squared = ,074 (Adjusted R Squared = -,019)
f. R Squared = ,268 (Adjusted R Squared = ,195)
g. R Squared = ,001 (Adjusted R Squared = -,099)
h. R Squared = ,301 (Adjusted R Squared = ,231)
i. R Squared = ,014 (Adjusted R Squared = -,084)
j. R Squared = ,007 (Adjusted R Squared = -,093)
k. R Squared = ,013 (Adjusted R Squared = -,086)
l. R Squared = ,000 (Adjusted R Squared = -,100)
m. R Squared = ,026 (Adjusted R Squared = -,071)
n. R Squared = ,003 (Adjusted R Squared = -,097)
o. R Squared = ,003 (Adjusted R Squared = -,096)
p. R Squared = ,310 (Adjusted R Squared = ,241)
q. R Squared = ,112 (Adjusted R Squared = ,023)
r. R Squared = ,016 (Adjusted R Squared = -,083)

D. Survey final experiment

This survey is one of the four versions (experimental conditions: Rijksoverheid and careless stance).

Start van blok: Introductie

Introductie

U wordt uitgenodigd om deel te nemen aan het onderzoek genaamd “Op weg naar een beter begrip van percepties over milieucommunicatie: Een voorstudie”

Dit onderzoek wordt uitgevoerd door Fabiën Dekker van de Technische Universiteit Delft. De verzamelde gegevens zullen worden gebruikt voor de resultaten van het onderzoek als onderdeel van de master thesis om af te studeren, onder begeleiding van Gerdien de Vries en Michael Klenk.

Het onderzoek zal ongeveer 10 minuten in beslag nemen. U wordt gevraagd om een fictieve campagne te lezen en deze te beoordelen op verschillende aspecten.

Wij behandelen uw gegevens vertrouwelijk en slaan geen namen, e-mailadressen en IP-adressen op. De overige gegevens slaan wij op op een beveiligde server.
Uw deelname aan dit onderzoek is volledig vrijwillig, u kunt op elk moment stoppen.

In de afsluiting kunt u informatie vinden over het onderzoek en de gebruikte werkwijze.

Mocht u vragen of opmerkingen hebben omtrent het onderzoek, dan kunt u Fabiën Dekker bereiken via F.F.C.Dekker@student.tudelft.nl.

Door op 'Volgende pagina' te klikken gaat u akkoord met het bovenstaande.

Veel dank,

Fabiën Dekker

Einde blok: Introductie

Start van blok: Demography

Age Wat is uw leeftijd?
o Leeftijd in jaren: _____
o Ik zeg dat liever niet

Gender Wat is uw geslacht?
o Man (1)
o Vrouw (2)
o Niet-binair (3)
o Ik zeg dat liever niet (4)

Education Wat is uw hoogst genoten (mogelijk huidige) opleiding?
o Middelbare school (1)
o MBO (2)
o HBO (3)
o WO (4)
o Ik zeg dat liever niet (5)

Profession In welke sector werkt u (of werkte u, indien u met pensioen bent)?
▢ Automotive (16)
▢ Bouw en techniek (6)
▢ Financiën en bankwezen (1)
▢ Gezondheid (10)
▢ Handel en verkoop (5)
▢ Kunst en cultuur (4)
▢ Landbouw (12)
▢ Milieu en duurzaamheid (8)
▢ Onderwijs (9)
▢ Overheid en openbaar bestuur (3)
▢ Student (13)
▢ Technologie en IT (2)
▢ Transport en logistiek (7)
▢ Wetenschap en onderzoek (11)
▢ Anders, namelijk: (14) _____
▢ Ik zeg dat liever niet (15)

Religion Welke omschrijving past het best bij u?
o Niet gelovig (1)
o Geen overtuiging (2)
o Christen (3)
o Moslim (4)
o Joods (5)
o Hindoe (6)

o Boeddhist (7)
o Anders, namelijk: (8) _____
o Ik zeg dat liever niet (9)

Politics Wat is uw politieke voorkeur?
o PVV (1)
o Groenlinks-PvdA (2)
o VVD (3)
o NSC (4)
o D66 (5)
o BBB (6)
o CDA (7)
o SP (8)
o DENK (9)
o Partij voor de Dieren (10)
o Forum voor Democratie (11)
o SGP (12)
o ChristenUnie (13)
o Volt (14)
o JA21 (15)
o Anders, namelijk: (16) _____
o Ik zeg dat liever niet (17)

Einde blok: Demography

Start van blok: Individualisme en klimaat

De volgende vragen gaan over uw waarden.

individualism/collectivism Geef aan in hoeverre u het oneens of eens bent met elk van de onderstaande stellingen.

	Helemaal mee oneens, 1 (1)	Mee oneens, 2 (2)	Niet mee eens en niet mee oneens, 3 (3)	Mee eens, 4 (4)	Helemaal mee eens, 5 (5)
Ik doe mijn “eigen ding” en geef geen aandacht of het past bij “goed gedrag”.	o	o	o	o	o
Het is belangrijk voor mij dat ik mijn bezigheden beter doe dan anderen.	o	o	o	o	o
Mijn geluk is afhankelijk van het geluk van de mensen om mij heen.	o	o	o	o	o

Ik vind het vervelend om het oneens te zijn met anderen in mijn groep. (5)	o	o	o	o	o

Climate change scepticism Geef aan in hoeverre u het oneens of eens bent met elk van de onderstaande stellingen.

	Helemaal mee oneens, 1 (1)	Mee oneens, 2 (2)	Niet mee eens en niet mee oneens, 3 (3)	Mee eens, 4 (4)	Helemaal mee eens, 5 (5)
Ik aarzel om te geloven dat wetenschappers het hele verhaal vertellen over klimaatverandering.	o	o	o	o	o
Voor mij is het onduidelijk of klimaatverandering het gevolg is van natuurlijke processen of van menselijke activiteiten.	o	o	o	o	o
Voor mij is het onzeker dat klimaatverandering ons milieu daadwerkelijk zal beïnvloeden.	o	o	o	o	o
Er is niet veel dat we kunnen doen om milieuproblemen op te lossen.	o	o	o	o	o

General action In hoeverre vindt u dat de Rijksoverheid (het hoogste gezag) actie moet ondernemen tegen klimaatverandering?

Helemaal geen, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Zeer veel, 5 (5)
o	o	o	o	o

Individual action In hoeverre voelt u zich verantwoordelijk voor het ondernemen van klimaatgerelateerde aanpassingen?

Bijvoorbeeld het isoleren van uw huis, de kachel op maximaal 19 graden, maximaal 5 minuten douchen en minder vlees eten.

Helemaal geen, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Volledig, 5 (5)
o	o	o	o	o

Business action In hoeverre vindt u dat bedrijven actie moeten ondernemen voor klimaatgerelateerde aanpassingen?

Helemaal geen, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Zeer veel, 5 (5)
o	o	o	o	o

Einde blok: Individualisme en klimaat

Start van blok: Campagne Rijksoverheid careless

Rijksoverheid uitleg

De volgende vragen gaan over de Rijksoverheid. De Rijksoverheid is het centrale bestuur van Nederland en is verantwoordelijk voor het schrijven, uitvoeren en controleren van beleid op landelijk niveau.

Rijksoverheid careless source scepticism Geef aan in hoeverre u het oneens of eens bent met elk van de onderstaande stellingen.

	Helemaal mee oneens, 1 (1)	Mee oneens, 2 (2)	Niet mee eens en niet mee oneens, 3 (3)	Mee eens, 4 (4)	Helemaal mee eens, 5 (5)
De Rijksoverheid is meer gericht op het dienen van het algemeen belang dan op eigenbelang. (2)	o	o	o	o	o
De Rijksoverheid is oprecht geïnteresseerd in het welzijn van burgers. (3)	o	o	o	o	o
Overheidscommunicatie is een betrouwbare bron van informatie. (6)	o	o	o	o	o
Ik heb het gevoel dat ik correct ben geïnformeerd na het bekijken van de meeste overheidscommunicatie. (7)	o	o	o	o	o

Pagina-einde

Rijksoverheid uitleg

In de volgende tekst gaat u een bericht lezen over de Nederlandse Rijksoverheid, zij is het centrale bestuur van Nederland en is verantwoordelijk voor het schrijven, uitvoeren en controleren van beleid op landelijk niveau.

Pagina-einde

Rijksoverheid careless, het bericht

De Rijksoverheid is een campagne gestart om huishoudens met zonnepanelen te stimuleren hun huishoudelijke apparaten zoveel mogelijk te gebruiken als hun zonnepanelen elektriciteit produceren. De poster-tekst luidt: “Doet u net als uw buren voortaan de was als de zon schijnt?” De campagnemakers maken hierbij gebruik van het psychologische verschijnsel dat mensen het belangrijk vinden wat anderen – op wie zij lijken – doen en geneigd zijn hun gedrag te kopiëren. Dit verschijnsel staat bekend als de sociale norm. In de campagne wordt niet uitgelegd waarom de Rijksoverheid het belangrijk vindt het gedrag van zonnepaneelhouders te beïnvloeden.

Rijksoverheid careless manipulation check Heeft u zojuist een bericht gelezen van:

o De Rijksoverheid (1)
o Energieco (2)
o Ik weet het niet (4)

Negative attitude Wat vindt u van de campagne?

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Nuttig (1)	o	o	o	o	o
Verstandig (2)	o	o	o	o	o
Wenselijk (4)	o	o	o	o	o

Perceived manipulation / perceived guiding behaviour In hoeverre denkt u dat de intentie van de Rijksoverheid met deze campagne is om..

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Zonnepaneelhouders te manipuleren? (2)	o	o	o	o	o
Het gedrag van zonnepaneelhouders te sturen? (4)	o	o	o	o	o

Perceived bypassing rationality In hoeverre denkt u dat de Rijksoverheid met de campagne probeert...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Het logisch denken van zonnepaneelhouders te omzeilen? (1)	o	o	o	o	o
Feitelijke informatie te vermijden? (2)	o	o	o	o	o
Emoties op te wekken bij de zonnepaneelhouders? (4)	o	o	o	o	o
Zonnepaneelhouders onbewust te beïnvloeden? (6)	o	o	o	o	o

Perceived covertness In hoeverre denkt u dat de Rijksoverheid in de campagne...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Een verborgen agenda gebruikt om een doel te bereiken? (1)	o	o	o	o	o
Relevante informatie achterhoudt? (2)	o	o	o	o	o
Transparant is over haar doelen met de campagne? (4)	o	o	o	o	o

Perceived trickery In hoeverre denkt u dat de Rijksoverheid met de campagne...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Zonnepaneelhouders wilt verleiden tot het aannemen van onjuiste overtuigingen?	o	o	o	o	o
Zonnepaneelhouders beïnvloedt met misleidende associaties?	o	o	o	o	o
Normen overschrijdt?	o	o	o	o	o
Bedrog toepast?	o	o	o	o	o

Perceived indifference In hoeverre denkt u dat de Rijksoverheid in de campagne...

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Interesse toont in het uitleggen van redenen aan zonnepaneelhouders voor gedragsaanpassing?	o	o	o	o	o
Duidelijk communiceert waarom zonnepaneelhouders hun huishoudelijke apparaten moeten gebruiken als de zon schijnt?	o	o	o	o	o
Als doel heeft om zonnepaneelhouders wat te leren?	o	o	o	o	o

Einde blok: Campagne RO indif

Start van blok: Government acceptance

De volgende drie vragen gaan over uw mening tegenover het gebruik van manipulatie.

Perceived morality Geef aan in hoeverre u het oneens of eens bent met elk van de onderstaande stellingen.

	Helemaal mee oneens, 1 (1)	Mee oneens, 2 (2)	Niet mee eens en niet mee oneens, 3 (3)	Mee eens, 4 (4)	Helemaal mee eens, 5 (5)
Manipulatie is altijd verkeerd.	o	o	o	o	o
Manipulatie is acceptabel onder bepaalde omstandigheden.	o	o	o	o	o
Manipulatie kan helemaal gerechtvaardigd zijn.	o	o	o	o	o

Perceived autonomy and harm In hoeverre vindt u dat manipulatieve communicatie vanuit de Rijksoverheid…

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
Persoonlijke vrijheid beperkt ?	o	o	o	o	o
Schade veroorzaakt?	o	o	o	o	o

Acceptance manipulative communication In hoeverre vindt u dat de Rijksoverheid gebruik mag maken van manipulatieve communicatie…

	1, Helemaal niet (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Zeer veel, 5 (5)
In de context van klimaat? (1)	o	o	o	o	o
In het algemeen? (2)	o	o	o	o	o

Einde blok: Government acceptance

Start van blok: Onbewust

De volgende twee vragen gaan over het onbewuste.

Free choice In hoeverre heeft u controle over uw keuzes over duurzame beslissingen, wanneer u onbewust kan zijn gemanipuleerd?

Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Helemaal, 5 (5)
o	o	o	o	o

Unconscious care In hoeverre maakt het voor u uit dat uw keuzes over duurzame beslissingen maakt zonder er bewust over na te denken?

	Helemaal niet, 1 (1)	Weinig, 2 (2)	Neutraal, 3 (3)	Redelijk, 4 (4)	Heel veel, 5 (5)
(4)	o	o	o	o	o

Einde blok: Onbewust

Start van blok: Afsluitende vragen

Q47 Tot slot, de laatste drie vragen.

Familiarity social norm Had u voor het invullen van de vragenlijst al eerder gehoord van het toepassen van de sociale norm?

o Ja (1)

o Nee (2)

Manipulated Zou u meer willen weten over de campagne?

o Ja (1)

o Nee (2)

Qualitative question Dit onderzoek gaat over wat manipulatie inhoudt, kunt u onder eigen woorden uitleggen wat u onder manipulatie verstaat?
Deze vraag is niet verplicht.

Einde blok: Afsluitende vragen

Start van blok: De-briefing

Bedankt voor uw deelname aan het onderzoek "Op weg naar een beter begrip van percepties over milieucommunicatie: Een voorstudie".

Met behulp van dit onderzoek willen we een beter begrip krijgen van wat manipulatie inhoudt en empirische data verzamelen om een concept van manipulatie te kunnen onderbouwen, waarmee we het kunnen onderscheiden van andere vormen van invloed.

Er zijn vier verschillende versies van het bericht. Twee van hen betreffen de rol van de Rijksoverheid, terwijl de andere twee de rol van het ficiteve energiebedrijf Energieco belichten. Daarnaast zijn er twee bericht-versies waarin wordt aangegeven dat het niet van belang is waarom het gedrag moet worden beïnvloed (1), en twee bericht-versies waarin de Rijksoverheid/Energieco benadrukt waarom het belangrijk vindt om gedrag te veranderen (2):

1) *De Rijksoverheid / Energiebedrijf Energieco* is een campagne gestart om huishoudens met zonnepanelen te stimuleren hun huishoudelijke apparaten zoveel mogelijk te gebruiken als hun zonnepanelen elektriciteit produceren. De poster-tekst luidt: “Doet u net als uw buren voortaan de was als de zon schijnt?” De campagnemakers maken hierbij gebruik van het psychologische verschijnsel dat mensen het belangrijk vinden wat anderen – op wie zij lijken – doen en geneigd zijn hun gedrag te kopiëren. Dit verschijnsel staat bekend als de sociale norm. In de campagne wordt niet uitgelegd waarom *de Rijksoverheid / Energieco* het belangrijk vindt het gedrag van zonnepaneelhouders te beïnvloeden.

2) *De Rijksoverheid / Energiebedrijf Energieco* is een campagne gestart om huishoudens met zonnepanelen te stimuleren hun huishoudelijke apparaten zoveel mogelijk te gebruiken als hun zonnepanelen elektriciteit produceren. De poster-tekst luidt: “Doet u net als uw buren voortaan de was als de zon schijnt?” De campagnemakers maken hierbij gebruik van het psychologische verschijnsel dat mensen het belangrijk vinden wat anderen – op wie zij lijken – doen en geneigd zijn hun gedrag te kopiëren. Dit verschijnsel staat bekend als de sociale norm. In de campagne wordt uitgelegd dat *de Rijksoverheid / Energieco* het belangrijk vindt het gedrag van zonnepaneelhouders te beïnvloeden om piekbelasting van het elektriciteitsnet te verlagen en daarmee de kans op stroomuitval te verminderen.

Einde blok: De-briefing

E. Factor analysis

Table E.1: Principal Component Analysis of variables, rotation method: Varimax with Kaiser Normalization.

Dimension / construct	1	2		3	4	5	6	7	8
Individualism_1			.480					0.698	
Individualism_2								0.688	
Collectivism_1									0.550
Collectivism_2			.527						0.733
Climate change scepticism 1						**0.740**			
Climate change scepticism 2						**0.776**			
Climate change scepticism 3						**0.842**			
Climate change scepticism 4			.686			**0.441**			0.445
Opposition to climate action 1			**-.824**						
Opposition to climate action 2			**-.774**						
Opposition to climate action 3			**-.775**						
Source scepticism 1				**0.685**					
Source scepticism 2				**0.811**					
Source scepticism 3				**0.854**					
Source scepticism 4				**0.773**					
Negative attitude 1					**0.848**				
Negative attitude 2					**0.884**				
Negative attitude 3					**0.804**				
Perceived bypassing rationality 1	**0.774**								
Perceived bypassing rationality 2	**0.730**								
Perceived emotions-evoking							0.739		
Perceived unoconscious influence							0.729		
Perceived covertness 1	**0.606**								
Perceived covertness 2	**0.645**	0.426							
Perceived covertness 3		0.630							
Perceived trickery 1	**0.736**								
Perceived trickery 2	**0.768**								
Perceived trickery 3	**0.819**								
Perceived trickery 4	**0.740**								
Perceived indifference 1		**0.820**							
Perceived indifference 2		**0.829**							
Perceived indifference 3		**0.758**							

Table E.2: Reliability analysis for all constructs.

Dimension	Constructs	Cronbach alpha
Source scepticism	Source scepticism 1 Source scepticism 2 Source scepticism 3 Source scepticism 4	0.816
Climate scepticism	Climate change scepticism 1 Climate change scepticism 2 Climate change scepticism 3 Climate change scepticism 4	0.731
Individualism	Individualism_1 Individualism_2	Lower than 0.5
Collectivism	Collectivism_1 Collectivism_2	Lower than 0.5
Opposition to climate action	Opposition to climate action 1 Opposition to climate action 2 Opposition to climate action 3	0.825
Negative attitude	Negative attitude 1 Negative attitude 2 Negative attitude 3	0.840
Perceived bypassing rationality	Perceived bypassing rationality 1 Perceived bypassing rationality 2	0.803
Perceived unconscious influence and emotions evoking	Perceived emotions-evoking Perceived unoconscious influence	0.530
Perceived unconscious influence	Perceived unconscious influence	1
Perceived emotions evoking	*Perceived emotions evoking*	1
Perceived covertness	Covertness_1 Covertness_2	0.694
Perceived trickery	Trickery_1 Trickery_2 Trickery_3 Trickery_4	0.869
Perceived indifference	Indifference_1 Indifference_2 Indifference_3	0.817
Perceived indifference and covertness	Covertness_3 Indifference_1 Indifference_2 Indifference_3	0.799

F. Impact of source

Table F.1: Descriptive statistics for the experimental conditions of source (Rijksoverheid or Energieco) on the first and second part of the questionnaire.

Source		**Mean**	**Std. Deviation**	**N**
Negative attitude	Rijksoverheid	**2.6481**	**0.90518**	54
	Energieco	**2.2464**	**0.86191**	46
	Total	2.4633	0.90378	100
Perceived bypassing rationality	Rijksoverheid	2.5741	1.04794	54
	Energieco	2.8152	1.05598	46
	Total	2.6850	1.05327	100
Perceived covertness	Rijksoverheid	2.5833	1.04498	54
	Energieco	2.7609	0.97033	46
	Total	2.6650	1.01019	100
Perceived trickery	Rijksoverheid	2.1898	1.04603	54
	Energieco	2.2283	0.81450	46
	Total	2.2075	0.94218	100
Perceived indifference	Rijksoverheid	3.1975	.99584	54
	Energieco	3.3913	1.02715	46
	Total	3.2867	1.02715	100
Perceived manipulation	Rijksoverheid	2.96	1.331	54
	Energieco	3.20	0.980	46
	Total	3.07	1.183	100
Perceived guiding behaviour	Rijksoverheid	4.24	0.699	54
	Energieco	4.28	0.655	46
	Total	4.26	0.676	100
Perceived emotions evoking	Rijksoverheid	3.46	0.966	54
	Energieco	3.67	0.967	46
	Total	3.56	0.967	100
Perceived unconscious influence	Rijksoverheid	3.72	1.036	54
	Energieco	3.85	0.729	46
	Total	3.78	0.905	100
Perceived non-transparency	Rijksoverheid	2.89	1.076	54
	Energieco	3.09	1.029	46
	Total	2.98	1.054	100
Source scepticism	Rijksoverheid	**2.6806**	**0.69942**	54
	Energieco	**3.4511**	**0.76489**	46
	Total	3.0350	0.82267	100

Table F.2: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + Source.

		Levene Statistic	df1	df2	Sig.
Perceived emotions_evoking	Based on Mean	0,197	1	98	0,658
	Based on Median	0,011	1	98	0,918
	Based on Median and with adjusted df	0,011	1	96,825	0,918
	Based on trimmed mean	0,231	1	98	0,632
Perceived unconsciou s influence	Based on Mean	5,266	1	98	0,024
	Based on Median	2,493	1	98	0,118
	Based on Median and with adjusted df	2,493	1	89,117	0,118
	Based on trimmed mean	4,385	1	98	0,039
Perceived non- transparency	Based on Mean	0,296	1	98	0,587
	Based on Median	0,274	1	98	0,602
	Based on Median and with adjusted df	0,274	1	97,987	0,602
	Based on trimmed mean	0,317	1	98	0,575
Perceived_manipulation	Based on Mean	5,318	1	98	0,023
	Based on Median	5,381	1	98	0,022
	Based on Median and with adjusted df	5,381	1	94,117	0,023
	Based on trimmed mean	5,392	1	98	0,022
Perceived guiding_behaviour	Based on Mean	0,077	1	98	0,783
	Based on Median	0,070	1	98	0,792
	Based on Median and with adjusted df	0,070	1	97,101	0,792
	Based on trimmed mean	0,037	1	98	0,848
Source scepticism	Based on Mean	0,521	1	98	0,472
	Based on Median	0,429	1	98	0,514
	Based on Median and with adjusted df	0,429	1	97,968	0,514
	Based on trimmed mean	0,569	1	98	0,453
Negative attitude	Based on Mean	0,067	1	98	0,796
	Based on Median	0,030	1	98	0,863
	Based on Median and with adjusted df	0,030	1	97,617	0,863
	Based on trimmed mean	0,041	1	98	0,840
Perceived bypass_rationality	Based on Mean	0,292	1	98	0,590
	Based on Median	0,225	1	98	0,636
	Based on Median and with adjusted df	0,225	1	97,504	0,636
	Based on trimmed mean	0,364	1	98	0,548
Perceived covertness	Based on Mean	0,226	1	98	0,635
	Based on Median	0,235	1	98	0,629
	Based on Median and with adjusted df	0,235	1	97,985	0,629
	Based on trimmed mean	0,204	1	98	0,652
Perceived trickery	Based on Mean	2,734	1	98	0,101
	Based on Median	1,959	1	98	0,165
	Based on Median and with adjusted df	1,959	1	89,849	0,165
	Based on trimmed mean	2,338	1	98	0,129
Perceived indifference	Based on Mean	0,222	1	98	0,639
	Based on Median	0,240	1	98	0,626
	Based on Median and with adjusted df	0,240	1	97,999	0,626
	Based on trimmed mean	0,231	1	98	0,632

Table F.3: Test of between-subjects effects.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	*Perceived emotions evoking*	1,105[a]	1	1,105	1,183	0,279	0,012
	Perceived unconscious influence	,392[b]	1	0,392	0,475	0,492	0,005
	Perceived non-transparency	,974[c]	1	0,974	0,876	0,352	0,009
	Perceived manipulation	1,345[d]	1	1,345	0,961	0,329	0,010
	Perceived guiding behaviour	,044[e]	1	0,044	0,094	0,759	0,001
	Source scepticism	14,748[f]	1	14,748	27,659	0,000	0,220
	Negative attitude	4,010[g]	1	4,010	5,113	0,026	0,050
	Perceived bypass rationality	1,444[h]	1	1,444	1,306	0,256	0,013
	Perceived covertness	,783[i]	1	0,783	0,765	0,384	0,008
	Perceived trickery	,037[j]	1	0,037	0,041	0,840	0,000
	Perceived indifference	,933[k]	1	0,933	0,883	0,350	0,009
Intercept	*Perceived emotions evoking*	1265,225	1	1265,225	1354,592	0,000	0,933
	Perceived unconscious influence	1423,472	1	1423,472	1727,170	0,000	0,946
	Perceived non-transparency	887,054	1	887,054	797,641	0,000	0,891
	Perceived manipulation	942,145	1	942,145	673,132	0,000	0,873
	Perceived guiding behaviour	1804,564	1	1804,564	3912,856	0,000	0,976
	Source scepticism	933,910	1	933,910	1751,488	0,000	0,947
	Negative attitude	595,076	1	595,076	758,790	0,000	0,886
	Perceived bypass rationality	721,464	1	721,464	652,348	0,000	0,869
	Perceived covertness	709,443	1	709,443	693,558	0,000	0,876
	Perceived trickery	484,862	1	484,862	540,911	0,000	0,847
	Perceived indifference	1078,373	1	1078,373	1020,908	0,000	0,912
Source	*Perceived emotions evoking*	1,105	1	1,105	1,183	0,279	0,012
	Perceived unconscious influence	0,392	1	0,392	0,475	0,492	0,005
	Perceived non-transparency	0,974	1	0,974	0,876	0,352	0,009
	Perceived manipulation	1,345	1	1,345	0,961	0,329	0,010
	Perceived guiding behaviour	0,044	1	0,044	0,094	0,759	0,001
	Source scepticism	**14,748**	**1**	**14,748**	**27,659**	**<0,001**	**0,220**
	Negative attitude	**4,010**	**1**	**4,010**	**5,113**	**0,026**	**0,050**
	Perceived bypass rationality	1,444	1	1,444	1,306	0,256	0,013
	Perceived covertness	0,783	1	0,783	0,765	0,384	0,008
	Perceived trickery	0,037	1	0,037	0,041	0,840	0,000
	Perceived indifference	0,933	1	0,933	0,883	0,350	0,009
Error	*Perceived emotions evoking*	91,535	98	0,934			
	Perceived unconscious influence	80,768	98	0,824			
	Perceived non-transparency	108,986	98	1,112			
	Perceived manipulation	137,165	98	1,400			
	Perceived guiding behaviour	45,196	98	0,461			
	Source scepticism	52,255	98	0,533			
	Negative attitude	76,856	98	0,784			
	Perceived bypass rationality	108,383	98	1,106			

	Perceived covertness	100,245	98	1,023			
	Perceived trickery	87,845	98	0,896			
	Perceived indifference	103,516	98	1,056			
Total	*Perceived emotions evoking*	1360,000	100				
	Perceived unconscious influence	1510,000	100				
	Perceived non-transparency	998,000	100				
	Perceived manipulation	1081,000	100				
	Perceived guiding behaviour	1860,000	100				
	Source scepticism	988,125	100				
	Negative attitude	687,667	100				
	Perceived bypass rationality	830,750	100				
	Perceived covertness	811,250	100				
	Perceived trickery	575,188	100				
	Perceived indifference	1184,667	100				
Corrected Total	*Perceived emotions evoking*	92,640	99				
	Perceived unconscious influence	81,160	99				
	Perceived non-transparency	109,960	99				
	Perceived manipulation	138,510	99				
	Perceived guiding behaviour	45,240	99				
	Source scepticism	67,003	99				
	Negative attitude	80,866	99				
	Perceived bypass rationality	109,828	99				
	Perceived covertness	101,028	99				
	Perceived trickery	87,882	99				
	Perceived indifference	104,449	99				

a. R Squared = ,012 (Adjusted R Squared = ,002)
b. R Squared = ,005 (Adjusted R Squared = -,005)
c. R Squared = ,009 (Adjusted R Squared = -,001)
d. R Squared = ,010 (Adjusted R Squared = ,000)
e. R Squared = ,001 (Adjusted R Squared = -,009)
f. R Squared = ,220 (Adjusted R Squared = ,212)
g. R Squared = ,050 (Adjusted R Squared = ,040)
h. R Squared = ,013 (Adjusted R Squared = ,003)
i. R Squared = ,008 (Adjusted R Squared = -,002)
j. R Squared = ,000 (Adjusted R Squared = -,010)
k. R Squared = ,009 (Adjusted R Squared = -,001)

G. Impact of indifferent and caring stance

Table G.1: Descriptive statistics for the experimental conditions stance (careless or caring) on the first and second part of the questionnaire.

Source		**Mean**	**Std. Deviation**	**N**
Negative attitude	Indifferent	2.5294	0.96650	51
	Caring	2.3946	0.83797	49
	Total	2.4633	0.90378	100
Perceived bypassing rationality	Indifferent	2.8431	0.95651	51
	Caring	2.5204	1.13174	49
	Total	2.6850	1.05327	100
Perceived covertness	Indifferent	**2.8627**	**0.95435**	51
	Caring	**2.4592**	**1.03500**	49
	Total	2.6650	1.01019	100
Perceived trickery	Indifferent	2.2304	0.88295	51
	Caring	2.1837	1.00878	49
	Total	2.2075	0.94218	100
Perceived indifference	**Indifferent**	**3.4902**	**1.01839**	**51**
	Caring	**3.0748**	**1.00292**	**49**
	Total	3.2100	1.02715	100
Perceived manipulation	Indifferent	3.08	1.146	51
	Caring	3.06	1.232	49
	Total	3.07	1.183	100
Perceived guiding behaviour	Indifferent	4.25	0.560	51
	Caring	4.27	0.785	49
	Total	4.26	0.676	100
Perceived emotions evoking	Indifferent	3.45	0.923	51
	Caring	3.67	1.008	49
	Total	3.56	0.967	100
Perceived unconscious influence	Indifferent	3.84	0.857	51
	Caring	3.71	0.957	49
	Total	3.78	0.905	100
Perceived non-transparency	Indifferent	3.10	0.964	51
	Caring	2.86	1.137	49
	Total	2.98	1.054	100

Table G.2: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + Stance.

		Levene Statistic	df1	df2	Sig.
Perceived emotions_evoking	Based on Mean	0,030	1	98	0,863
	Based on Median	0,102	1	98	0,750
	Based on Median and with adjusted df	0,102	1	97,941	0,750
	Based on trimmed mean	0,155	1	98	0,695
Perceived unconscious influence	Based on Mean	0,932	1	98	0,337
	Based on Median	0,187	1	98	0,666
	Based on Median and with adjusted df	0,187	1	95,716	0,666
	Based on trimmed mean	0,958	1	98	0,330
Perceived non-transparency	Based on Mean	2,295	1	98	0,133
	Based on Median	2,178	1	98	0,143
	Based on Median and with adjusted df	2,178	1	97,686	0,143
	Based on trimmed mean	2,371	1	98	0,127
Perceived_manipulation	Based on Mean	1,009	1	98	0,318
	Based on Median	1,063	1	98	0,305
	Based on Median and with adjusted df	1,063	1	97,330	0,305
	Based on trimmed mean	1,001	1	98	0,319
Perceived guiding_behaviour	Based on Mean	1,408	1	98	0,238
	Based on Median	1,443	1	98	0,233
	Based on Median and with adjusted df	1,443	1	90,912	0,233
	Based on trimmed mean	1,866	1	98	0,175
Negative attitude	Based on Mean	2,142	1	98	0,147
	Based on Median	2,259	1	98	0,136
	Based on Median and with adjusted df	2,259	1	97,958	0,136
	Based on trimmed mean	2,025	1	98	0,158
Perceived bypass_rationality	Based on Mean	0,125	1	98	0,724
	Based on Median	0,303	1	98	0,583
	Based on Median and with adjusted df	0,303	1	97,840	0,583
	Based on trimmed mean	0,148	1	98	0,701
Perceived covertness	Based on Mean	0,350	1	98	0,556
	Based on Median	0,433	1	98	0,512
	Based on Median and with adjusted df	0,433	1	97,172	0,512
	Based on trimmed mean	0,390	1	98	0,534
Perceived trickery	Based on Mean	0,129	1	98	0,720
	Based on Median	0,164	1	98	0,686
	Based on Median and with adjusted df	0,164	1	97,898	0,686
	Based on trimmed mean	0,118	1	98	0,732
Perceived indifference	Based on Mean	0,030	1	98	0,863
	Based on Median	0,102	1	98	0,750
	Based on Median and with adjusted df	0,102	1	97,941	0,750
	Based on trimmed mean	0,155	1	98	0,695

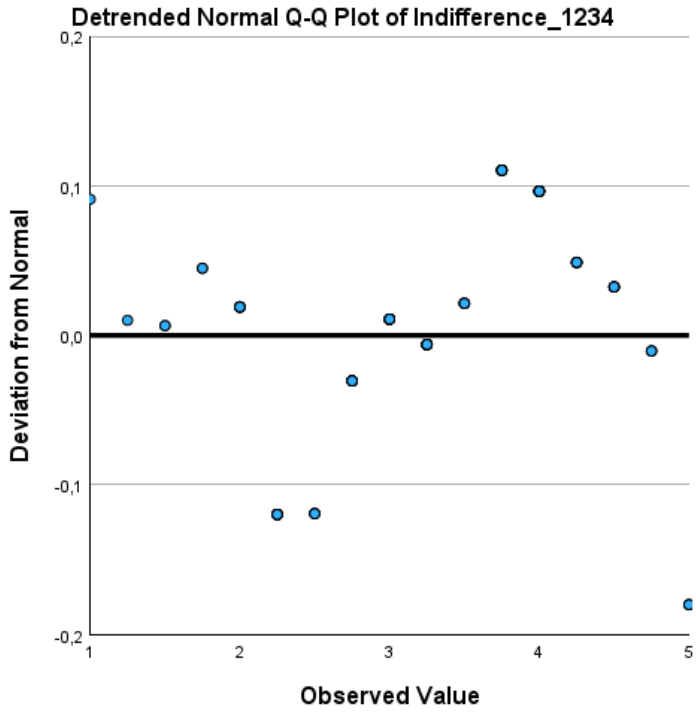


Figure G.1: Q-Q plot of the perceived potential determinant indifference.

Table G.4: Test of between subjects effects.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	*Perceived emotions evoking*	1,237[a]	1	1,237	1,326	0,252	0,013
	Perceived unconscious influence	,415[b]	1	0,415	0,504	0,480	0,005
	Perceived non- transparency	1,450[c]	1	1,450	1,310	0,255	0,013
	Perceived manipulation	,007[d]	1	0,007	0,005	0,942	0,000
	Perceived guiding behaviour	,003[e]	1	0,003	0,006	0,939	0,000
	Negative attitude	,454[f]	1	0,454	0,554	0,459	0,006
	Perceived bypass rationality	2,603[g]	1	2,603	2,379	0,126	0,024
	Perceived covertness	4,070[h]	1	4,070	4,114	0,045	0,040
	Perceived trickery	,055[i]	1	0,055	0,061	0,806	0,001
	Perceived indifference	4,312[j]	1	4,312	4,219	0,043	0,041
Intercept	*Perceived emotions evoking*	1268,437	1	1268,437	1359,987	0,000	0,933
	Perceived unconscious influence	1427,295	1	1427,295	1732,302	0,000	0,946
	Perceived non-transparency	886,250	1	886,250	800,412	0,000	0,891
	Perceived manipulation	942,007	1	942,007	666,534	0,000	0,872
	Perceived guiding behaviour	1814,123	1	1814,123	3930,032	0,000	0,976
	Negative attitude	605,894	1	605,894	738,426	0,000	0,883
	Perceived bypass rationality	718,903	1	718,903	657,055	0,000	0,870
	Perceived covertness	707,790	1	707,790	715,400	0,000	0,880
	Perceived trickery	486,905	1	486,905	543,301	0,000	0,847
	Perceived indifference	1077,058	1	1077,058	1054,069	0,000	0,915
Stance	*Perceived emotions evoking*	1,237	1	1,237	1,326	0,252	0,013
	Perceived unconscious influence	0,415	1	0,415	0,504	0,480	0,005

	Perceived non-transparency	1,450	1	1,450	1,310	0,255	0,013
	Perceived manipulation	0,007	1	0,007	0,005	0,942	0,000
	Perceived guiding behaviour	0,003	1	0,003	0,006	0,939	0,000
	Negative attitude	0,454	1	0,454	0,554	0,459	0,006
	Perceived bypass rationality	2,603	1	2,603	2,379	0,126	0,024
	Perceived covertness	**4,070**	**1**	**4,070**	**4,114**	**0,045**	**0,040**
	Perceived trickery	0,055	1	0,055	0,061	0,806	0,001
	Perceived indifference	**4,312**	**1**	**4,312**	**4,219**	**0,043**	**0,041**
Error	*Perceived emotions evoking*	91,403	98	0,933			
	Perceived unconscious influence	80,745	98	0,824			
	Perceived non-transparency	108,510	98	1,107			
	Perceived manipulation	138,503	98	1,413			
	Perceived guiding behaviour	45,237	98	0,462			
	Negative attitude	80,411	98	0,821			
	Perceived bypass rationality	107,225	98	1,094			
	Perceived covertness	96,958	98	0,989			
	Perceived trickery	87,827	98	0,896			
	Perceived indifference	100,137	98	1,022			
Total	*Perceived emotions evoking*	1360,000	100				
	Perceived unconscious influence	1510,000	100				
	Perceived non-transparency	998,000	100				
	Perceived manipulation	1081,000	100				
	Perceived guiding behaviour	1860,000	100				
	Negative attitude	687,667	100				
	Perceived bypass rationality	830,750	100				
	Perceived covertness	811,250	100				
	Perceived trickery	575,188	100				
	Perceived indifference	1184,667	100				
Corrected Total	*Perceived emotions evoking*	92,640	99				
	Perceived unconscious influence	81,160	99				
	Perceived non-transparency	109,960	99				
	Perceived manipulation	138,510	99				
	Perceived guiding behaviour	45,240	99				
	Negative attitude	80,866	99				
	Perceived bypass rationality	109,828	99				
	Perceived covertness	101,028	99				
	Perceived trickery	87,882	99				
	Perceived indifference	104,449	99				

a. R Squared = ,013 (Adjusted R Squared = ,003)
b. R Squared = ,005 (Adjusted R Squared = -,005)
c. R Squared = ,013 (Adjusted R Squared = ,003)
d. R Squared = ,000 (Adjusted R Squared = -,010)
e. R Squared = ,000 (Adjusted R Squared = -,010)
f.. R Squared = ,006 (Adjusted R Squared = -,005)
g. R Squared = ,024 (Adjusted R Squared = ,014)
h. R Squared = ,040 (Adjusted R Squared = ,030)
i. R Squared = ,001 (Adjusted R Squared = -,010)
j. R Squared = ,041 (Adjusted R Squared = ,031)

H. Impact of source and its stance

Table H.1: Descriptive statistics for Rijksoverheid versus Energieco and Caring versus Careless.

Source_Stance		Mean	Std. Deviation	N
Perceived emotions evoking	Rijksoverheid Careless	3,38	0,898	26
	Rijksoverheid Caring	3,54	1,036	28
	Energieco Careless	3,52	0,963	25
	Energieco Caring	3,86	0,964	21
	Total	3,56	0,967	100
Perceived unconscious influence	Rijksoverheid Careless	3,73	1,002	26
	Rijksoverheid Caring	3,71	1,084	28
	Energieco Careless	3,96	0,676	25
	Energieco Caring	3,71	0,784	21
	Total	3,78	0,905	100
Perceived non-transparency	Rijksoverheid Careless	3,00	0,938	26
	Rijksoverheid Caring	2,79	1,197	28
	Energieco Careless	3,20	1,000	25
	Energieco Caring	2,95	1,071	21
	Total	2,98	1,054	100
Perceived_manipulation	Rijksoverheid Careless	2,81	1,357	26
	Rijksoverheid Caring	3,11	1,315	28
	Energieco Careless	3,36	0,810	25
	Energieco Caring	3,00	1,140	21
	Total	3,07	1,183	100
Perceived guiding_behaviour	Rijksoverheid Careless	4,23	0,587	26
	Rijksoverheid Caring	4,25	0,799	28
	Energieco Careless	4,28	0,542	25
	Energieco Caring	4,29	0,784	21
	Total	4,26	0,676	100
Negative attitude	Rijksoverheid Careless	2,5897	1,01240	26
	Rijksoverheid Caring	2,7024	0,80808	28
	Energieco Careless	2,4667	0,93294	25
	Energieco Caring	1,9841	0,70298	21
	Total	2,4633	0,90378	100
Perceived bypassing rationality	Rijksoverheid Careless	2,6731	0,95856	26
	Rijksoverheid Caring	2,4821	1,13433	28
	Energieco Careless	3,0200	0,94074	25
	Energieco Caring	2,5714	1,15418	21
	Total	2,6850	1,05327	100
Perceived covertness	Rijksoverheid Careless	2,6731	0,93747	26
	Rijksoverheid Caring	2,5000	1,14665	28
	Energieco Careless	3,0600	0,95000	25
	Energieco Caring	2,4048	0,88909	21
	Total	2,6650	1,01019	100

Perceived trickery	Rijksoverheid Careless	2,1538	0,98254	26
	Rijksoverheid Caring	2,2232	1,11874	28
	Energieco Careless	2,3100	0,77822	25
	Energieco Caring	2,1310	0,86465	21
	Total	2,2075	0,94218	100
Perceived indifference	Rijksoverheid Careless	3,3718	0,93012	26
	Rijksoverheid Caring	3,0357	1,04365	28
	Energieco Careless	3,6133	1,10839	25
	Energieco Caring	3,1270	0,96883	21
	Total	3,2867	1,02715	100

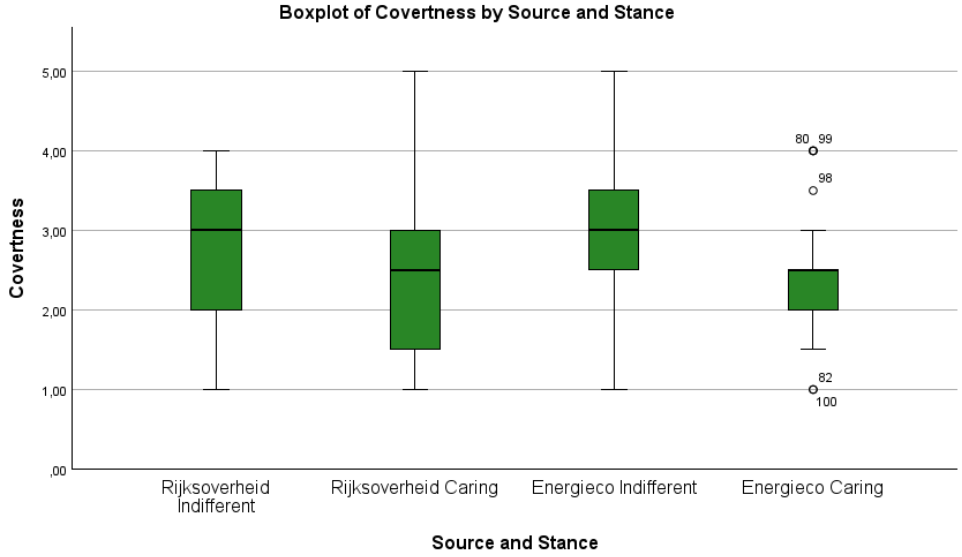


Figure H.1: Boxplot of perceived covertness by Rijksoverheid versus Energieco and careless versus caring.

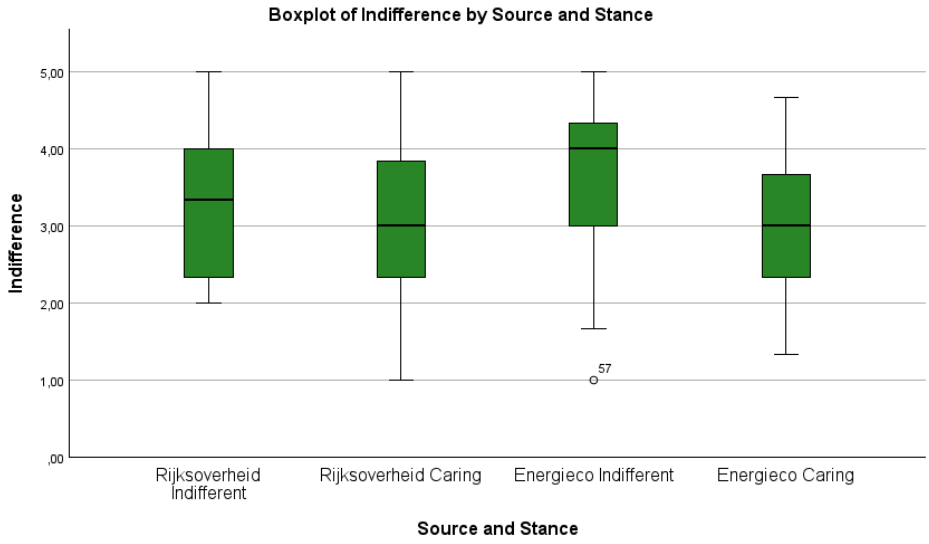


Figure H.2: Boxplot of indifference by Rijksoverheid versus Energieco and careless versus caring stance.

Table H.3: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + Stance*Source.

		Levene Statistic	df1	df2	Sig.
Perceived emotions evoking	Based on Mean	0,174	3	96	0,914
	Based on Median	0,050	3	96	0,985
	Based on Median and with adjusted df	0,050	3	93,165	0,985
	Based on trimmed mean	0,181	3	96	0,909
Perceived unconscious influence	Based on Mean	2,130	3	96	0,102
	Based on Median	0,855	3	96	0,467
	Based on Median and with adjusted df	0,855	3	85,731	0,468
	Based on trimmed mean	1,655	3	96	0,182
Perceived non-transparency	Based on Mean	1,303	3	96	0,278
	Based on Median	1,102	3	96	0,352
	Based on Median and with adjusted df	1,102	3	95,533	0,352
	Based on trimmed mean	1,322	3	96	0,272
Perceived_manipulation	Based on Mean	2,850	3	96	0,041
	Based on Median	2,443	3	96	0,069
	Based on Median and with adjusted df	2,443	3	90,364	0,069
	Based on trimmed mean	2,881	3	96	0,040
Perceived guiding_behaviour	Based on Mean	0,580	3	96	0,630
	Based on Median	0,619	3	96	0,605
	Based on Median and with adjusted df	0,619	3	87,838	0,605
	Based on trimmed mean	0,691	3	96	0,559
Negative attitude	Based on Mean	1,105	3	96	0,351
	Based on Median	1,074	3	96	0,364
	Based on Median and with adjusted df	1,074	3	89,558	0,364
	Based on trimmed mean	1,149	3	96	0,333
Perceived bypass rationality	Based on Mean	0,957	3	96	0,416
	Based on Median	0,676	3	96	0,569
	Based on Median and with adjusted df	0,676	3	87,267	0,569
	Based on trimmed mean	0,912	3	96	0,438
Perceived covertness	Based on Mean	0,654	3	96	0,582
	Based on Median	0,624	3	96	0,601
	Based on Median and with adjusted df	0,624	3	94,329	0,601
	Based on trimmed mean	0,675	3	96	0,569
Perceived trickery	Based on Mean	0,974	3	96	0,408
	Based on Median	0,830	3	96	0,480
	Based on Median and with adjusted df	0,830	3	87,189	0,481
	Based on trimmed mean	0,906	3	96	0,441
Perceived indifference	Based on Mean	0,262	3	96	0,852
	Based on Median	0,167	3	96	0,918
	Based on Median and with adjusted df	0,167	3	86,640	0,918
	Based on trimmed mean	0,233	3	96	0,873

Table H.4: Test of between subjects effects.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	*Perceived emotions evoking*	2,710[a]	3	0,903	0,964	0,413	0,029
	Perceived unconscious influence	1,085[b]	3	0,362	0,433	0,730	0,013
	Perceived non-transparency	2,293[c]	3	0,764	0,682	0,565	0,021
	Perceived manipulation	4,033[d]	3	1,344	0,960	0,415	0,029
	Perceived guiding behaviour	,049[e]	3	0,016	0,035	0,991	0,001
	Negative attitude	6,838[f]	3	2,279	2,956	0,036	0,085
	Perceived bypass rationality	4,232[g]	3	1,411	1,283	0,285	0,039
	Perceived covertness	6,087[h]	3	2,029	2,052	0,112	0,060
	Perceived trickery	,467[i]	3	0,156	0,171	0,916	0,005
	Perceived indifference	5,155[j]	3	1,718	1,661	0,180	0,049
Intercept	*Perceived emotions evoking*	1263,438	1	1263,438	1348,722	0,000	0,934
	Perceived unconscious influence	1412,866	1	1412,866	1693,843	0,000	0,946
	Perceived non-transparency	880,857	1	880,857	785,408	0,000	0,891
	Perceived manipulation	931,251	1	931,251	664,798	0,000	0,874
	Perceived guiding behaviour	1795,994	1	1795,994	3815,252	0,000	0,975
	Negative attitude	586,696	1	586,696	760,838	0,000	0,888
	Perceived bypass rationality	713,808	1	713,808	648,946	0,000	0,871
	Perceived covertness	699,426	1	699,426	707,230	0,000	0,880
	Perceived trickery	480,592	1	480,592	527,795	0,000	0,846
	Perceived indifference	1068,423	1	1068,423	1032,980	0,000	0,915
Source stance	*Perceived emotions evoking*	2,710	3	0,903	0,964	0,413	0,029
	Perceived unconscious influence	1,085	3	0,362	0,433	0,730	0,013
	Perceived non-transparency	2,293	3	0,764	0,682	0,565	0,021
	Perceived manipulation	4,033	3	1,344	0,960	0,415	0,029
	Perceived guiding behaviour	0,049	3	0,016	0,035	0,991	0,001
	Negative attitude	6,838	3	2,279	2,956	0,036	0,085
	Perceived bypass rationality	4,232	3	1,411	1,283	0,285	0,039
	Perceived covertness	6,087	3	2,029	2,052	0,112	0,060
	Perceived trickery	0,467	3	0,156	0,171	0,916	0,005
	Perceived indifference	5,155	3	1,718	1,661	0,180	0,049
Error	*Perceived emotions evoking*	89,930	96	0,937			
	Perceived unconscious influence	80,075	96	0,834			
	Perceived non-transparency	107,667	96	1,122			
	Perceived manipulation	134,477	96	1,401			
	Perceived guiding behaviour	45,191	96	0,471			
	Negative attitude	74,027	96	0,771			
	Perceived bypass rationality	105,595	96	1,100			
	Perceived covertness	94,941	96	0,989			
	Perceived trickery	87,414	96	0,911			
	Perceived indifference	99,294	96	1,034			
Total	*Perceived emotions evoking*	1360,000	100				

	Perceived unconscious influence	1510,000	100				
	Perceived non-transparency	998,000	100				
	Perceived manipulation	1081,000	100				
	Perceived guiding behaviour	1860,000	100				
	Negative attitude	687,667	100				
	Perceived bypass rationality	830,750	100				
	Perceived covertness	811,250	100				
	Perceived trickery	575,188	100				
	Perceived indifference	1184,667	100				
Corrected Total	*Perceived emotions evoking*	92,640	99				
	Perceived unconscious influence	81,160	99				
	Perceived non-transparency	109,960	99				
	Perceived manipulation	138,510	99				
	Perceived guiding behaviour	45,240	99				
	Negative attitude	80,866	99				
	Perceived bypass rationality	109,828	99				
	Perceived covertness	101,028	99				
	Perceived trickery	87,882	99				
	Perceived indifference	104,449	99				

a. R Squared = ,029 (Adjusted R Squared = -,001)
b. R Squared = ,013 (Adjusted R Squared = -,017)
c. R Squared = ,021 (Adjusted R Squared = -,010)
d. R Squared = ,029 (Adjusted R Squared = -,001)
e. R Squared = ,001 (Adjusted R Squared = -,030)
f. R Squared = ,085 (Adjusted R Squared = ,056)
g. R Squared = ,039 (Adjusted R Squared = ,008)
h. R Squared = ,060 (Adjusted R Squared = ,031)
i. R Squared = ,005 (Adjusted R Squared = -,026)
j. R Squared = ,049 (Adjusted R Squared = ,020)

Table H.5: Post Hoc with no significant results.

Dependent Variable			Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower	Upper
Perceived Emotions evoking	Rijksoverheid Indifferent	Rijksoverheid Caring	-0,15	0,264	0,940	-0,84	0,54
		Energieco Indifferent	-0,14	0,271	0,959	-0,84	0,57
		Energieco Caring	-0,47	0,284	0,348	-1,21	0,27
	Rijksoverheid Caring	Rijksoverheid Indifferent	0,15	0,264	0,940	-0,54	0,84
		Energieco Indifferent	0,02	0,266	1,000	-0,68	0,71
		Energieco Caring	-0,32	0,279	0,659	-1,05	0,41
	Energieco Indifferent	Rijksoverheid Indifferent	0,14	0,271	0,959	-0,57	0,84
		Rijksoverheid Caring	-0,02	0,266	1,000	-0,71	0,68
		Energieco Caring	-0,34	0,286	0,643	-1,09	0,41
	Energieco Caring	Rijksoverheid Indifferent	0,47	0,284	0,348	-0,27	1,21
		Rijksoverheid Caring	0,32	0,279	0,659	-0,41	1,05
		Energieco Indifferent	0,34	0,286	0,643	-0,41	1,09
Perceived unconscious influence	Rijksoverheid Indifferent	Rijksoverheid Caring	0,02	0,249	1,000	-0,63	0,67
		Energieco Indifferent	-0,23	0,256	0,807	-0,90	0,44
		Energieco Caring	0,02	0,268	1,000	-0,68	0,72
	Rijksoverheid Caring	Rijksoverheid Indifferent	-0,02	0,249	1,000	-0,67	0,63
		Energieco Indifferent	-0,25	0,251	0,762	-0,90	0,41
		Energieco Caring	0,00	0,264	1,000	-0,69	0,69
	Energieco Indifferent	Rijksoverheid Indifferent	0,23	0,256	0,807	-0,44	0,90
		Rijksoverheid Caring	0,25	0,251	0,762	-0,41	0,90
		Energieco Caring	0,25	0,270	0,800	-0,46	0,95
	Energieco Caring	Rijksoverheid Indifferent	-0,02	0,268	1,000	-0,72	0,68
		Rijksoverheid Caring	0,00	0,264	1,000	-0,69	0,69
		Energieco Indifferent	-0,25	0,270	0,800	-0,95	0,46
Perceived *non*-Transparency	Rijksoverheid Indifferent	Rijksoverheid Caring	0,21	0,288	0,879	-0,54	0,97
		Energieco Indifferent	-0,20	0,297	0,907	-0,98	0,58
		Energieco Caring	0,05	0,311	0,999	-0,76	0,86
	Rijksoverheid Caring	Rijksoverheid Indifferent	-0,21	0,288	0,879	-0,97	0,54
		Energieco Indifferent	-0,41	0,291	0,489	-1,18	0,35
		Energieco Caring	-0,17	0,306	0,948	-0,97	0,63
	Energieco Indifferent	Rijksoverheid Indifferent	0,20	0,297	0,907	-0,58	0,98
		Rijksoverheid Caring	0,41	0,291	0,489	-0,35	1,18
		Energieco Caring	0,25	0,313	0,859	-0,57	1,07
	Energieco Caring	Rijksoverheid Indifferent	-0,05	0,311	0,999	-0,86	0,76
		Rijksoverheid Caring	0,17	0,306	0,948	-0,63	0,97
		Energieco Indifferent	-0,25	0,313	0,859	-1,07	0,57
Perceived manipulation	Rijksoverheid Indifferent	Rijksoverheid Caring	-0,30	0,322	0,789	-1,14	0,54
		Energieco Indifferent	-0,55	0,332	0,347	-1,42	0,31
		Energieco Caring	-0,19	0,347	0,945	-1,10	0,72
	Rijksoverheid Caring	Rijksoverheid Indifferent	0,30	0,322	0,789	-0,54	1,14
		Energieco Indifferent	-0,25	0,326	0,865	-1,10	0,60
		Energieco Caring	0,11	0,342	0,989	-0,79	1,00
	Energieco Indifferent	Rijksoverheid Indifferent	0,55	0,332	0,347	-0,31	1,42
		Rijksoverheid Caring	0,25	0,326	0,865	-0,60	1,10

		Energieco Caring	0,36	0,350	0,734	-0,56	1,28
	Energieco Caring	Rijksoverheid Indifferent	0,19	0,347	0,945	-0,72	1,10
		Rijksoverheid Caring	-0,11	0,342	0,989	-1,00	0,79
		Energieco Indifferent	-0,36	0,350	0,734	-1,28	0,56
Perceived Guiding behaviour	Rijksoverheid Indifferent	Rijksoverheid Caring	-0,02	0,187	1,000	-0,51	0,47
		Energieco Indifferent	-0,05	0,192	0,994	-0,55	0,45
		Energieco Caring	-0,05	0,201	0,993	-0,58	0,47
	Rijksoverheid Caring	Rijksoverheid Indifferent	0,02	0,187	1,000	-0,47	0,51
		Energieco Indifferent	-0,03	0,189	0,999	-0,52	0,46
		Energieco Caring	-0,04	0,198	0,998	-0,55	0,48
	Energieco Indifferent	Rijksoverheid Indifferent	0,05	0,192	0,994	-0,45	0,55
		Rijksoverheid Caring	0,03	0,189	0,999	-0,46	0,52
		Energieco Caring	-0,01	0,203	1,000	-0,54	0,53
	Energieco Caring	Rijksoverheid Indifferent	0,05	0,201	0,993	-0,47	0,58
		Rijksoverheid Caring	0,04	0,198	0,998	-0,48	0,55
		Energieco Indifferent	0,01	0,203	1,000	-0,53	0,54
Negative attitude	Rijksoverheid Indifferent	Rijksoverheid Caring	-0,1126	0,23916	0,965	-0,7380	0,5127
		Energieco Indifferent	0,1231	0,24597	0,959	-0,5200	0,7662
		Energieco Caring	0,6056	0,25764	0,094	-0,0680	1,2792
	Rijksoverheid Caring	Rijksoverheid Indifferent	0,1126	0,23916	0,965	-0,5127	0,7380
		Energieco Indifferent	0,2357	0,24163	0,764	-0,3961	0,8675
		Energieco Caring	,7183*	0,25350	0,028	0,0555	1,3810
	Energieco Indifferent	Rijksoverheid Indifferent	-0,1231	0,24597	0,959	-0,7662	0,5200
		Rijksoverheid Caring	-0,2357	0,24163	0,764	-0,8675	0,3961
		Energieco Caring	0,4825	0,25993	0,254	-0,1971	1,1622
	Energieco Caring	Rijksoverheid Indifferent	-0,6056	0,25764	0,094	-1,2792	0,0680
		Rijksoverheid Caring	-,7183*	0,25350	0,028	-1,3810	-0,0555
		Energieco Indifferent	-0,4825	0,25993	0,254	-1,1622	0,1971
Perceived bypass rationality	Rijksoverheid Indifferent	Rijksoverheid Caring	0,1909	0,28564	0,909	-0,5559	0,9378
		Energieco Indifferent	-0,3469	0,29377	0,640	-1,1150	0,4212
		Energieco Caring	0,1016	0,30771	0,987	-0,7029	0,9062
	Rijksoverheid Caring	Rijksoverheid Indifferent	-0,1909	0,28564	0,909	-0,9378	0,5559
		Energieco Indifferent	-0,5379	0,28859	0,251	-1,2924	0,2167
		Energieco Caring	-0,0893	0,30276	0,991	-0,8809	0,7023
	Energieco Indifferent	Rijksoverheid Indifferent	0,3469	0,29377	0,640	-0,4212	1,1150
		Rijksoverheid Caring	0,5379	0,28859	0,251	-0,2167	1,2924
		Energieco Caring	0,4486	0,31045	0,475	-0,3631	1,2603
	Energieco Caring	Rijksoverheid Indifferent	-0,1016	0,30771	0,987	-0,9062	0,7029
		Rijksoverheid Caring	0,0893	0,30276	0,991	-0,7023	0,8809
		Energieco Indifferent	-0,4486	0,31045	0,475	-1,2603	0,3631
Perceived covertness	Rijksoverheid Indifferent	Rijksoverheid Caring	0,1731	0,27085	0,919	-0,5351	0,8812
		Energieco Indifferent	-0,3869	0,27856	0,509	-1,1152	0,3414
		Energieco Caring	0,2683	0,29177	0,794	-0,4946	1,0312
	Rijksoverheid Caring	Rijksoverheid Indifferent	-0,1731	0,27085	0,919	-0,8812	0,5351

		Energieco Indifferent	-0,5600	0,27364	0,178	-1,2755	0,1555
		Energieco Caring	0,0952	0,28708	0,987	-0,6554	0,8458
	Energieco Indifferent	Rijksoverheid Indifferent	0,3869	0,27856	0,509	-0,3414	1,1152
		Rijksoverheid Caring	0,5600	0,27364	0,178	-0,1555	1,2755
		Energieco Caring	0,6552	0,29437	0,124	-0,1144	1,4249
	Energieco Caring	Rijksoverheid Indifferent	-0,2683	0,29177	0,794	-1,0312	0,4946
		Rijksoverheid Caring	-0,0952	0,28708	0,987	-0,8458	0,6554
		Energieco Indifferent	-0,6552	0,29437	0,124	-1,4249	0,1144
Perceived trickery	Rijksoverheid Indifferent	Rijksoverheid Caring	-0,0694	0,25989	0,993	-0,7489	0,6101
		Energieco Indifferent	-0,1562	0,26729	0,937	-0,8550	0,5427
		Energieco Caring	0,0229	0,27997	1,000	-0,7091	0,7549
	Rijksoverheid Caring	Rijksoverheid Indifferent	0,0694	0,25989	0,993	-0,6101	0,7489
		Energieco Indifferent	-0,0868	0,26257	0,987	-0,7733	0,5997
		Energieco Caring	0,0923	0,27546	0,987	-0,6280	0,8125
	Energieco Indifferent	Rijksoverheid Indifferent	0,1562	0,26729	0,937	-0,5427	0,8550
		Rijksoverheid Caring	0,0868	0,26257	0,987	-0,5997	0,7733
		Energieco Caring	0,1790	0,28246	0,921	-0,5595	0,9176
	Energieco Caring	Rijksoverheid Indifferent	-0,0229	0,27997	1,000	-0,7549	0,7091
		Rijksoverheid Caring	-0,0923	0,27546	0,987	-0,8125	0,6280
		Energieco Indifferent	-0,1790	0,28246	0,921	-0,9176	0,5595
Perceived indifference	Rijksoverheid Indifferent	Rijksoverheid Caring	0,3361	0,27699	0,620	-0,3881	1,0603
		Energieco Indifferent	-0,2415	0,28487	0,831	-0,9864	0,5033
		Energieco Caring	0,2448	0,29839	0,845	-0,5354	1,0250
	Rijksoverheid Caring	Rijksoverheid Indifferent	-0,3361	0,27699	0,620	-1,0603	0,3881
		Energieco Indifferent	-0,5776	0,27984	0,172	-1,3093	0,1541
		Energieco Caring	-0,0913	0,29359	0,990	-0,8589	0,6763
	Energieco Indifferent	Rijksoverheid Indifferent	0,2415	0,28487	0,831	-0,5033	0,9864
		Rijksoverheid Caring	0,5776	0,27984	0,172	-0,1541	1,3093
		Energieco Caring	0,4863	0,30104	0,375	-0,3008	1,2735
	Energieco Caring	Rijksoverheid Indifferent	-0,2448	0,29839	0,845	-1,0250	0,5354
		Rijksoverheid Caring	0,0913	0,29359	0,990	-0,6763	0,8589
		Energieco Indifferent	-0,4863	0,30104	0,375	-1,2735	0,3008

Table H.7: Tukey HSD, means for groups in homogeneous subsets are displayed based on observed means. Harmonic Mean sample size =24.723, alpha = .05 Type I error levels are not guaranteed.

	Source stance	N	Subset 1	Subset 2
Perceived emotions evoking	Rijksoverheid Indifferent	26	3,38	
	Energieco Indifferent	25	3,52	
	Rijksoverheid Caring	28	3,54	
	Energieco Caring	21	3,86	
	Sig.		0,321	
Perceived unconscious_influence	Rijksoverheid Indifferent	21	3,71	
	Energieco Indifferent	28	3,71	
	Rijksoverheid Caring	26	3,73	
	Energieco Caring	25	3,96	
	Sig.		0,780	
Perceived *non*-transparency	Rijksoverheid Indifferent	26	2,81	
	Energieco Indifferent	21	3,00	
	Rijksoverheid Caring	28	3,11	
	Energieco Caring	25	3,36	
	Sig.		0,361	
Perceived manipulation	Rijksoverheid Indifferent	26	4,23	
	Energieco Indifferent	28	4,25	
	Rijksoverheid Caring	25	4,28	
	Energieco Caring	21	4,29	
	Sig.		0,992	
Perceived guiding behaviour	Rijksoverheid Indifferent	26	4,23	
	Energieco Indifferent	28	4,25	2,4667
	Rijksoverheid Caring	25	4,28	2,5897
	Energieco Caring	21	4,29	2,7024
	Sig.		0,992	0,781
Negative attitude	Rijksoverheid Indifferent	28	2,4821	
	Energieco Indifferent	21	2,5714	
	Rijksoverheid Caring	26	2,6731	
	Energieco Caring	25	3,0200	
	Sig.		0,278	
Perceived bypassing ratioality	Rijksoverheid Indifferent	21	2,4048	
	Energieco Indifferent	28	2,5000	
	Rijksoverheid Caring	26	2,6731	
	Energieco Caring	25	3,0600	
	Sig.		0,101	
Perceived covertness	Rijksoverheid Indifferent	21	2,1310	
	Energieco Indifferent	26	2,1538	
	Rijksoverheid Caring	28	2,2232	
	Energieco Caring	25	2,3100	
	Sig.		0,912	
Perceived indifference	Rijksoverheid Indifferent	28	3,0357	
	Energieco Indifferent	21	3,1270	
	Rijksoverheid Caring	26	3,3718	
	Energieco Caring	25	3,6133	
	Sig.		0,196	

I. Demographic effects

Table I.1: Demographics of participants based on *Gender*.

Gender	Male = 39	Female = 59	Prefer not to say = 2
Education	Elementary = 2 MBO = 10 HBO = 10 University = 17	Elementary = 3 MBO = 10 HBO = 13 University = 33	Elementary = 0 MBO = 0 HBO = 1 University = 1
Religion	Not religious = 23 No belief = 5 Christian = 9 Muslim = 1 Jewish Hindu Buddhist = Others = Prefer not to say = 1	Not religious = 29 No belief = 13 Christian = 12 Muslim = 3 Jewish Hindu Buddhist = Others = 2 Prefer not to say =	Not religious = 1 No belief = 0 Christian = 1 Muslim Jewish Hindu Buddhist = Others = Prefer not to say =
Political afilliation	Left = 15 Right = 20 Prefer not to say = 4	Left = 34 Right = 20 Prefer not to say= 3 Others = 2	Left = Right = 1 Prefer not to say = 1
Profession	Automotive = 4 Construction. engineer= 6 Finance = 6 Healthcare = 1 Trade. sale = 2 Arts and culture = 0 Agriculture =1 Environment = 2 Education = 3 Government. public administration = 3 Student = 8 Technology and IT = 5 Transport and logistics = 1 Science and research = 2 Other = 2 Prefer not to say = 0	Automotive = 2 Construction. engineer = 3 Finance = 3 Healthcare = 10 Trade. sale = 5 Arts and culture = 2 Agriculture =1 Environment =1 Education = 8 Government. public administration = 2 Student = 19 Technology and IT = 3 Transport and logistics = 1 Science and research = 5 Other = 9 Prefer not to say = 0	Automotive = Construction. engineer = Finance = Healthcare = Trade. sale = Arts and culture = Agriculture = Environment = Education = Government. public administration = Student = Technology and IT =1 Transport and logistics = Science and research = Other = Prefer not to say = 1

Table I.2: Model *Perceived manipulation* with demographics.

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	,222[a]	0,049	-0,038	1,213

Table I.3: ANOVA of dependent value *Perceived manipulation* and predictors: *Familiarity social norm*, Gender, Age, Manipulated, Religiosity, right-winged, education level.

Model	Sum of Squares		df	Mean Square	F	Sig.
1	Regression	5,792	7	0,827	0,563	,784[b]
	Residual	111,780	76	1,471		
	Total	117,571	83			

Table I.4: Coefficients with dependent value Perceived *manipulation.*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,927	1,236		2,367	0,020
Gender	**0,392**	**0,278**	**0,163**	**1,411**	**0,162**
Age	0,007	0,009	0,100	0,750	0,455
Education level	-0,039	0,190	-0,030	-0,203	0,839
Religiosity	-0,038	0,090	-0,049	-0,420	0,676
Right-winged	-0,251	0,310	-0,106	-0,810	0,420
Manipulated	-0,049	0,286	-0,019	-0,170	0,865
Familiarity social norms	-0,043	0,282	-0,018	-0,154	0,878

Table I.5: Model summary *Acceptance of manipulative communication in the context of climate change* with predictors constant.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,355[a]	0,126	0,046	1,158

Table I.6: ANOVA of dependent value *Acceptance manipulative communication of climate action* and predictors: *Familiarity social norm, Gender, Age, Manipulated, Religiosity, right-winged, education level.*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14,730	7	2,104	1,568	,158[b]
	Residual	101,972	76	1,342		
	Total	116,702	83			

Table I.7: Coefficients with dependent value *Acceptance of manipulative communication in the context of climate change.*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2,985	1,181		2,528	0,014
Gender	-0,106	0,266	-0,044	-0,401	0,690
Age	-0,020	0,009	-0,292	-2,285	0,025
Education level	-0,074	0,181	-0,058	-0,409	0,683
Religiosity	-0,023	0,086	-0,030	-0,270	0,788
Right-winged	0,441	0,296	0,187	1,488	0,141
Manipulated	0,186	0,273	0,074	0,681	0,498
Familiarity social norms	-0,015	0,269	-0,007	-0,057	0,954

J. Impact of biases on dimensions

Table J.3: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + Climate change scepticism + Source scepticism + Negative attitude + Opposition to climate action + Source * Stance.

	F	df1	df2	Sig.
Perceived bypass rationality	0,786	3	96	0,505
Perceived covertness	0,385	3	96	0,764
Perceived trickery	1,103	3	96	0,352
Perceived indifference	0,436	3	96	0,728
Perceived emotions evoking	0,430	3	96	0,732
Perceived unconscious influence	1,072	3	96	0,365
Perceived non-transparency	0,397	3	96	0,755
Perceived manipulation	3,714	3	96	0,014
Perceived guiding_behaviour	0,991	3	96	0,400

Table J.4: Test of between-subjects effects.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	*Perceived bypass rationality*	11,832[a]	7	1,690	1,587	0,149	0,108
	Perceived covertness	18,230[b]	7	2,604	2,894	0,009	0,180
	Perceived trickery	12,264[c]	7	1,752	2,132	0,048	0,140
	Perceived indifference	13,400[d]	7	1,914	1,934	0,073	0,128
	Perceived emotions evoking	6,601[e]	7	0,943	1,008	0,431	0,071
	Perceived unconscious influence	5,335[f]	7	0,762	0,925	0,491	0,066
	Perceived non-transparency	10,363[g]	7	1,480	1,367	0,229	0,094
	Perceived manipulation	8,731[h]	7	1,247	0,884	0,522	0,063
	Perceived guiding_behaviour	7,869[i]	7	1,124	2,767	0,012	0,174
Intercept	*Perceived bypass rationality*	14,258	1	14,258	13,386	0,000	0,127
	Perceived covertness	13,308	1	13,308	14,788	0,000	0,138
	Perceived trickery	2,323	1	2,323	2,827	0,096	0,030
	Perceived indifference	26,342	1	26,342	26,617	0,000	0,224
	Perceived emotions evoking	61,376	1	61,376	65,628	0,000	0,416
	Perceived unconscious influence	66,050	1	66,050	80,140	0,000	0,466
	Perceived non-transparency	12,670	1	12,670	11,703	0,001	0,113
	Perceived manipulation	50,971	1	50,971	36,133	0,000	0,282
	Perceived guiding_behaviour	94,611	1	94,611	232,914	0,000	0,717

Climate_scepticism	*Perceived bypass rationality*	**4,973**	**1**	**4,973**	**4,669**	**0,033**	**0,048**
	Perceived covertness	**5,823**	**1**	**5,823**	**6,470**	**0,013**	**0,066**
	Perceived trickery	**4,016**	**1**	**4,016**	**4,886**	**0,030**	**0,050**
	Perceived indifference	0,342	1	0,342	0,345	0,558	0,004
	Perceived emotions evoking	1,702	1	1,702	1,820	0,181	0,019
	Perceived unconscious influence	1,632	1	1,632	1,980	0,163	0,021
	Perceived non-transparency	1,026	1	1,026	0,948	0,333	0,010
	Perceived manipulation	0,021	1	0,021	0,015	0,902	0,000
	Perceived guiding_behaviour	0,413	1	0,413	1,017	0,316	0,011
Source_scepticism	*Perceived bypass rationality*	1,597	1	1,597	1,499	0,224	0,016
	Perceived covertness	2,657	1	2,657	2,952	0,089	0,031
	Perceived trickery	2,318	1	2,318	2,820	0,096	0,030
	Perceived indifference	1,814	1	1,814	1,833	0,179	0,020
	Perceived emotions evoking	0,003	1	0,003	0,003	0,959	0,000
	Perceived unconscious influence	0,043	1	0,043	0,052	0,819	0,001
	Perceived non-transparency	2,775	1	2,775	2,563	0,113	0,027
	Perceived manipulation	0,303	1	0,303	0,215	0,644	0,002
	Perceived guiding_behaviour	0,963	1	0,963	2,370	0,127	0,025
Negative attitude	*Perceived bypass rationality*	0,031	1	0,031	0,029	0,864	0,000
	Perceived covertness	0,258	1	0,258	0,287	0,594	0,003
	Perceived trickery	1,504	1	1,504	1,830	0,179	0,020
	Perceived indifference	**3,951**	**1**	**3,951**	**3,993**	**0,049**	**0,042**
	Perceived emotions evoking	0,366	1	0,366	0,392	0,533	0,004
	Perceived unconscious influence	0,464	1	0,464	0,562	0,455	0,006
	Perceived non-transparency	1,801	1	1,801	1,664	0,200	0,018
	Perceived manipulation	2,221	1	2,221	1,575	0,213	0,017
	Perceived guiding_behaviour	**4,108**	**1**	**4,108**	**10,113**	**0,002**	**0,099**
Opposition_Climate_action	*Perceived bypass rationality*	1,458	1	1,458	1,369	0,245	0,015
	Perceived covertness	**6,263**	**1**	**6,263**	**6,959**	**0,010**	**0,070**
	Perceived trickery	0,442	1	0,442	0,538	0,465	0,006
	Perceived indifference	1,121	1	1,121	1,133	0,290	0,012
	Perceived emotions evoking	2,821	1	2,821	3,016	0,086	0,032
	Perceived unconscious influence	3,130	1	3,130	3,798	0,054	0,040
	Perceived non-transparency	0,682	1	0,682	0,630	0,430	0,007
	Perceived manipulation	1,228	1	1,228	0,871	0,353	0,009
	Perceived guiding_behaviour	0,614	1	0,614	1,511	0,222	0,016
Source_Stance	*Perceived bypass rationality*	3,207	3	1,069	1,004	0,395	0,032
	Perceived covertness	4,489	3	1,496	1,663	0,181	0,051
	Perceived trickery	0,133	3	0,044	0,054	0,983	0,002
	Perceived indifference	4,099	3	1,366	1,380	0,254	0,043
	Perceived emotions evoking	2,025	3	0,675	0,722	0,542	0,023
	Perceived unconscious influence	0,614	3	0,205	0,248	0,862	0,008
	Perceived non-transparency	1,908	3	0,636	0,587	0,625	0,019

	Perceived manipulation	2,372	3	0,791	0,560	0,643	0,018
	Perceived guiding_behaviour	0,754	3	0,251	0,619	0,605	0,020
Error	*Perceived bypass rationality*	97,996	92	1,065			
	Perceived covertness	82,798	92	0,900			
	Perceived trickery	75,618	92	0,822			
	Perceived indifference	91,049	92	0,990			
	Perceived emotions evoking	86,039	92	0,935			
	Perceived unconscious influence	75,825	92	0,824			
	Perceived non-transparency	99,597	92	1,083			
	Perceived manipulation	129,779	92	1,411			
	Perceived guiding_behaviour	37,371	92	0,406			
Total	*Perceived bypass rationality*	830,750	100				
	Perceived covertness	811,250	100				
	Perceived trickery	575,188	100				
	Perceived indifference	1184,667	100				
	Perceived emotions evoking	1360,000	100				
	Perceived unconscious influence	1510,000	100				
	Perceived non-transparency	998,000	100				
	Perceived manipulation	1081,000	100				
	Perceived guiding behaviour	1860,000	100				
Corrected Total	*Perceived bypass rationality*	109,828	99				
	Perceived covertness	101,028	99				
	Perceived trickery	87,882	99				
	Perceived indifference	104,449	99				
	Perceived emotions evoking	92,640	99				
	Perceived unconscious influence	81,160	99				
	Perceived non-transparency	109,960	99				
	Perceived manipulation	138,510	99				
	Perceived guiding behaviour	45,240	99				

a. R Squared = ,108 (Adjusted R Squared = ,040)
b. R Squared = ,180 (Adjusted R Squared = ,118)
c. R Squared = ,140 (Adjusted R Squared = ,074)
d. R Squared = ,128 (Adjusted R Squared = ,062)
e. R Squared = ,071 (Adjusted R Squared = ,001)
f. R Squared = ,066 (Adjusted R Squared = -,005)
g. R Squared = ,094 (Adjusted R Squared = ,025)
h. R Squared = ,063 (Adjusted R Squared = -,008)
i. R Squared = ,174 (Adjusted R Squared = ,111)

K. Determinants of perceived manipulation

Table K.1: Levene's Test of Equality of Error Variances, Design: Intercept + potential determinants + Source * Stance.

F	df1	df2	Sig.
2,771	3	96	0,046

Table K.2: Tests of between-subjects Effects.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	35,464[a]	10	3,546	3,063	0,002	0,256
Intercept	8,345	1	8,345	7,208	0,009	0,075
Perceived trickery	0,001	1	0,001	0,001	0,972	0,000
Perceived bypassing rationality	12,181	**1**	**12,181**	**10,521**	**0,002**	**0,106**
Perceived indifference	0,102	1	0,102	0,088	0,767	0,001
Perceived covertness	0,172	1	0,172	0,148	0,701	0,002
Perceived non-transparency	1,597	1	1,597	1,380	0,243	0,015
Perceived unconscious influence	2,684	1	2,684	2,319	0,131	0,025
Perceived emotions evoking	0,454	1	0,454	0,392	0,533	0,004
Source and Stance	2,380	3	0,793	0,685	0,563	0,023
Error	103,046	89	1,158			
Total	1081,000	100				
Corrected Total	138,510	99				

a. R Squared = ,256 (Adjusted R Squared = ,172)

Figure K.1: Perceived manipulation scores and related scores for all possible perceived potential determinants of perceived manipulation.

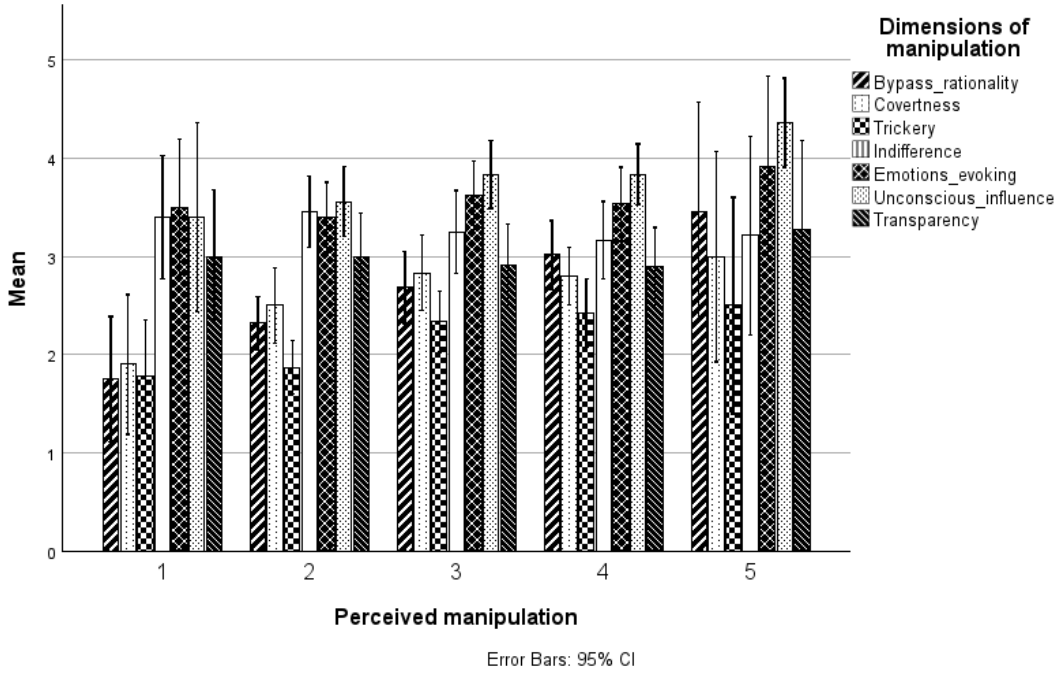
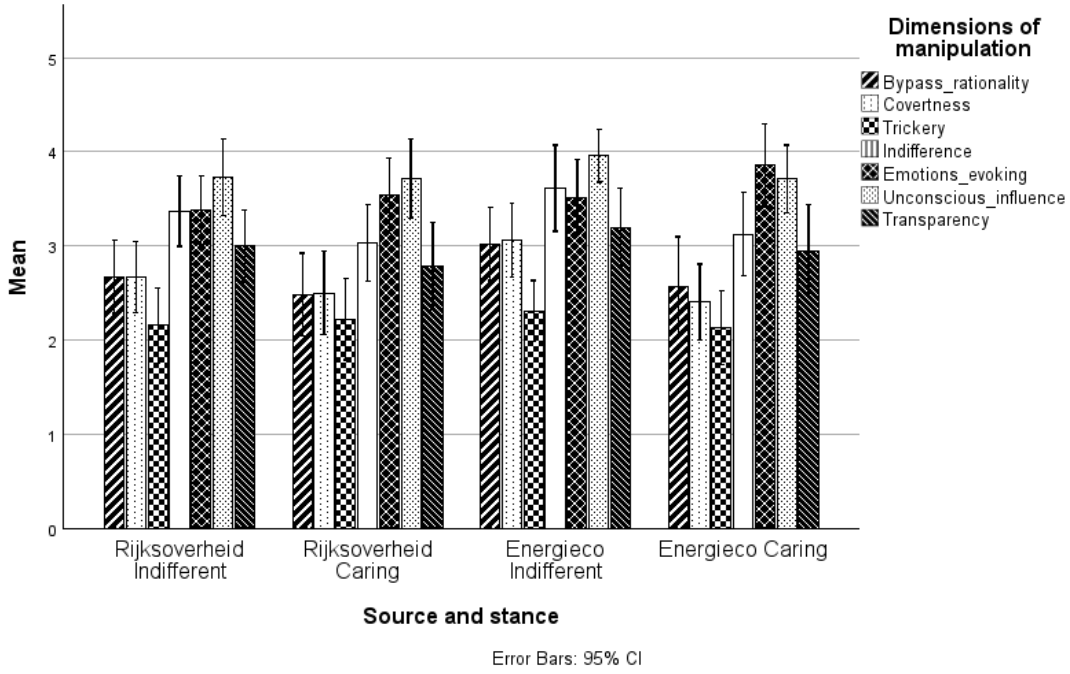


Figure K.2: All possible perceived determinants of perceived manipulation scores between Rijksoverheid versus Energieco and Caring versus careless



L. Evaluation of acceptance

Table L.1: Descriptive statistics.

Source		Mean	Std. Deviation	N
Perceived morality as always wrong	Rijksoverheid	3,02	1,038	52
	Energieco	3,04	1,095	46
	Total	3,03	1,060	98
Perceived morality as acceptable under circumstances	Rijksoverheid	3,48	0,980	52
	Energieco	3,35	1,120	46
	Total	3,42	1,045	98
Perceived morality as justified under circumstances	Rijksoverheid	2,81	1,049	52
	Energieco	2,74	1,042	46
	Total	2,78	1,041	98
Perceived autonomy undermining	Rijksoverheid	2,79	1,091	52
	Energieco	2,80	1,088	46
	Total	2,80	1,084	98
Perceived harm	Rijksoverheid	2,71	1,091	52
	Energieco	2,76	1,268	46
	Total	2,73	1,171	98
Acceptance of manipulative communication in the context of climate change	**Rijksoverheid**	**2,44**	**1,127**	**52**
	Energieco	**2,87**	**1,258**	**46**
	Total	**2,64**	**1,204**	**98**
Acceptance of manipulative communication in general	Rijksoverheid	2,33	1,004	52
	Energieco	2,43	0,981	46
	Total	2,38	0,990	98
Perceived unconscious control	Rijksoverheid	2,96	0,949	52
	Energieco	3,17	1,060	46
	Total	3,06	1,003	98
Perceived care for unconsciousness	Rijksoverheid	3,15	1,092	52
	Energieco	3,33	0,920	46
	Total	3,23	1,013	98

Table L.2: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + Source.

		Levene Statistic	df1	df2	Sig.
Perceived morality as always wrong	Based on Mean	0,477	1	96	0,492
	Based on Median	0,368	1	96	0,546
	Based on Median and with adjusted df	0,368	1	95,961	0,546
	Based on trimmed mean	0,371	1	96	0,544
Perceived morality as acceptable under circumstances	Based on Mean	1,245	1	96	0,267
	Based on Median	0,140	1	96	0,709
	Based on Median and with adjusted df	0,140	1	92,488	0,709
	Based on trimmed mean	1,080	1	96	0,301
Perceived morality as justified under circumstances	Based on Mean	0,136	1	96	0,713
	Based on Median	0,217	1	96	0,642
	Based on Median and with adjusted df	0,217	1	94,976	0,642
	Based on trimmed mean	0,123	1	96	0,727
Perceived autonomy undermining	Based on Mean	0,147	1	96	0,702
	Based on Median	0,173	1	96	0,678
	Based on Median and with adjusted df	0,173	1	95,123	0,678
	Based on trimmed mean	0,142	1	96	0,707
Perceived harm	Based on Mean	1,007	1	96	0,318
	Based on Median	0,658	1	96	0,419
	Based on Median and with adjusted df	0,658	1	93,807	0,419
	Based on trimmed mean	1,051	1	96	0,308
Acceptance of manipulative communication in the context of climate change	Based on Mean	0,725	1	96	0,397
	Based on Median	0,473	1	96	0,493
	Based on Median and with adjusted df	0,473	1	95,478	0,493
	Based on trimmed mean	0,782	1	96	0,379
Acceptance of manipulative communication in general	Based on Mean	0,058	1	96	0,810
	Based on Median	0,090	1	96	0,765
	Based on Median and with adjusted df	0,090	1	89,037	0,765
	Based on trimmed mean	0,042	1	96	0,839
Perceived unconscious control	Based on Mean	1,028	1	96	0,313
	Based on Median	0,727	1	96	0,396
	Based on Median and with adjusted df	0,727	1	94,547	0,396
	Based on trimmed mean	1,191	1	96	0,278
Perceived care for unconsciousness	Based on Mean	0,578	1	96	0,449
	Based on Median	0,414	1	96	0,521
	Based on Median and with adjusted df	0,414	1	94,104	0,521
	Based on trimmed mean	0,649	1	96	0,422

Table L.3: Test of between-subjects effects.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	*Perceived morality as always wrong*	,014[a]	1	0,014	0,013	0,911	0,000
	Perceived morality as accepted in circumstances	,431[b]	1	0,431	0,393	0,532	0,004
	Perceived morality as justified in circumstances d	,115[c]	1	0,115	0,105	0,747	0,001
	Perceived autonomy undermining	,006[d]	1	0,006	0,005	0,943	0,000
	Perceived harm	,059[e]	1	0,059	0,043	0,836	0,000
	Acceptance of manipulative communication in the context of climate change	4,456[f]	1	4,456	3,144	0,079	0,032
	Acceptance of manipulative communication in general	,284[g]	1	0,284	0,288	0,593	0,003
	Perceived unconscious control	1,101[h]	1	1,101	1,095	0,298	0,011
	Perceived care unconsciousness	,724[i]	1	0,724	0,703	0,404	0,007
Intercept	*Perceived morality as always wrong*	897,157	1	897,157	790,927	0,000	0,892
	Perceived morality as accepted in circumstances	1138,146	1	1138,146	1036,488	0,000	0,915
	Perceived morality as justified in circumstances d	750,972	1	750,972	686,953	0,000	0,877
	Perceived autonomy undermining	763,476	1	763,476	643,422	0,000	0,870
	Perceived harm	730,957	1	730,957	527,439	0,000	0,846
	Acceptance of manipulative communication in the context of climate change	688,701	1	688,701	485,983	0,000	0,835
	Acceptance of manipulative communication in general	553,427	1	553,427	560,748	0,000	0,854
	Perceived unconscious control	918,815	1	918,815	913,754	0,000	0,905
	Perceived care unconsciousness	1024,887	1	1024,887	995,057	0,000	0,912
Source	*Perceived morality as always wrong*	0,014	1	0,014	0,013	0,911	0,000
	Perceived morality as accepted in circumstances	**0,431**	**1**	**0,431**	**0,393**	**0,532**	**0,004**
	Perceived morality as justified in circumstances d	0,115	1	0,115	0,105	0,747	0,001
	Perceived autonomy undermining	0,006	1	0,006	0,005	0,943	0,000
	Perceived harm	0,059	1	0,059	0,043	0,836	0,000
	Acceptance of manipulative communication in the context of climate change	4,456	1	4,456	3,144	0,079	0,032
	Acceptance of manipulative communication in general	0,284	1	0,284	0,288	0,593	0,003
	Perceived unconscious control	1,101	1	1,101	1,095	0,298	0,011
	Perceived care unconsciousness	0,724	1	0,724	0,703	0,404	0,007
Error	*Perceived morality as always wrong*	108,894	96	1,134			
	Perceived morality as accepted in circumstances	105,416	96	1,098			

	Perceived morality as justified in circumstances d	104,946	96	1,093			
	Perceived autonomy undermining	113,912	96	1,187			
	Perceived harm	133,043	96	1,386			
	Acceptance of manipulative communication in the context of climate change	136,044	96	1,417			
	Acceptance of manipulative communication in general	94,747	96	0,987			
	Perceived unconscious control	96,532	96	1,006			
	Perceived care unconsciousness	98,878	96	1,030			
Total	*Perceived morality as always wrong*	1009,000	98				
	Perceived morality as accepted in circumstances	1251,000	98				
	Perceived morality as justified in circumstances d	860,000	98				
	Perceived autonomy undermining	880,000	98				
	Perceived harm	866,000	98				
	Acceptance of manipulative communication in the context of climate change	825,000	98				
	Acceptance of manipulative communication in general	649,000	98				
	Perceived unconscious control	1016,000	98				
	Perceived care unconsciousness	1125,000	98				
Corrected Total	*Perceived morality as always wrong*	108,908	97				
	Perceived morality as accepted in circumstances	105,847	97				
	Perceived morality as justified in circumstances	105,061	97				
	Perceived autonomy undermining	113,918	97				
	Perceived harm	133,102	97				
	Acceptance of manipulative communication in the context of climate change	140,500	97				
	Acceptance of manipulative communication in general	95,031	97				
	Perceived unconscious control	97,633	97				
	Perceived care unconsciousness	99,602	97				

a. R Squared = ,000 (Adjusted R Squared = -,010)
b. R Squared = ,004 (Adjusted R Squared = -,006)
c. R Squared = ,001 (Adjusted R Squared = -,009)
d. R Squared = ,000 (Adjusted R Squared = -,010)
e. R Squared = ,000 (Adjusted R Squared = -,010)
f. R Squared = ,032 (Adjusted R Squared = ,022)
g. R Squared = ,003 (Adjusted R Squared = -,007)
h. R Squared = ,011 (Adjusted R Squared = ,001)
i. R Squared = ,007 (Adjusted R Squared = -,003)

Table L.4: Levene's Test of Equality of Error Variances: Tests the null hypothesis that the error variance of the dependent variable is equal across groups. Design: Intercept + variables + Source.

	F	df1	df2	Sig.
Acceptance of manipulative communication in the context of climate change	0,006	1	97	0,936
Acceptance of manipulative communication in general	0,942	1	97	0,334

Table L.5 Test of between subjects effects.

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	*Acceptance of manipulative communication in the context of climate change*	60,120[a]	6	10,020	10,734	0,000	0,412
	Acceptance of manipulative communication in general	35,962[b]	6	5,994	8,370	0,000	0,353
Intercept	*Acceptance of manipulative communication in the context of climate change*	13,743	1	13,743	14,722	0,000	0,138
	Acceptance of manipulative communication in general	14,921	1	14,921	20,838	0,000	0,185
Perceived morality as always wrong	*Acceptance of manipulative communication in the context of climate change*	**11,857**	**1**	**11,857**	**12,702**	**0,001**	**0,121**
	Acceptance of manipulative communication in general	**10,699**	**1**	**10,699**	**14,942**	**0,000**	**0,140**
Perceived morality as accepted in circumstances	*Acceptance of manipulative communication in the context of climate change*	**8,893**	**1**	**8,893**	**9,527**	**0,003**	**0,094**
	Acceptance of manipulative communication in general	0,975	1	0,975	1,362	0,246	0,015
Perceived morality as justified in circumstances	*Acceptance of manipulative communication in the context of climate change*	0,301	1	0,301	0,323	0,571	0,003
	Acceptance of manipulative communication in general	0,499	1	0,499	0,696	0,406	0,008
Perceived autonomy undermining	*Acceptance of manipulative communication in the context of climate change*	1,718	1	1,718	1,841	0,178	0,020
	Acceptance of manipulative communication in general	0,229	1	0,229	0,319	0,573	0,003
Perceived harm	*Acceptance of manipulative communication in the context of climate change*	1,953	1	1,953	2,092	0,151	0,022
	Acceptance of manipulative communication in general	0,287	1	0,287	0,401	0,528	0,004
Source	*Acceptance of manipulative communication in the context of climate change*	5,138	1	5,138	5,504	0,021	0,056
	Acceptance of manipulative communication in general	0,309	1	0,309	0,432	0,513	0,005
Error	*Acceptance of manipulative communication in the context of climate change*	85,880	92	0,933			

	Acceptance of manipulative communication in general	65,876	92	0,716			
Total	*Acceptance of manipulative communication in the context of climate change*	850,000	99				
	Acceptance of manipulative communication in general	674,000	99				
Corrected Total	*Acceptance of manipulative communication in the context of climate change*	146,000	98				
	Acceptance of manipulative communication in general	101,838	98				

a. R Squared = ,412 (Adjusted R Squared = ,373)
b. R Squared = ,353 (Adjusted R Squared = ,311)

M. Qualitative results

Table M.1: The qualitative results categorised by theme.

Theme	Qualitative data
Bypassing rationality	4 manipulatie is een persoons gedrag beinvloeden op manieren waarop hij zich niet bewust is. 6 Het gedrag van mensen onbewust beÃ¯nvloeden 8 onbewuste beÃ¯nvloeding 13 Het bewust sturen van mensen waarbij communicatie methodes worden gebruikt om hun gedrag onbewust te sturen. 15 Iemand onbewust doen veranderen van mening/ idee of gedrag 21 Proberen mensen te overtuigen om iets te doen zonder dat ze weten dat je ze probeert te overtuigen. 22 Mensen laten doen wat jij (de manipulator) wilt. zonder dat ze het zelf doorhebben. 23 Zonder dat iemand het door heeft. iemand wat te laten doen of wijs te maken. 25 Een doel bereiken door informatie op een bepaalde manier te presenteren zodat het onderbewuste een bepaalde boodschap oppikt 32 Onbewuste beÃ¯nvloeding van gedrag. door toepassing van psychologie of gedragswetenschap. 37 Het onbewust of bewust sturen van gedrag. In principe toepasbaar op alle reclame uitingen 40 Iemands denkbeeld veranderen/ beinvloeden zonder dat deze persoon zich daar bewust van is. 46 Mensen beÃ¯nvloeden zonder dat ze het door hebben 52 Enigerlei vorm van beÃ¯nvloeding die inspeelt op/gebruik maakt van dwang. drang of het onderbewustzijn om een bepaalde keuze of actie uit te lokken. 56 Iemand een bepaalde kant opwijzen. waarbij het lijkt dat het de keuze is van de persoon zelf 58 Het onbewust beÃ¯nvloeden van iemand zijn mening en/of handelen 59 Iemand zijn standpunt of mening omvormen door onbewust of bewust op iemand in te spelen. 61 Manipulatie is dat er overtuigingstechnieken worden gebruikt in communicatie waar mensen zich niet bewust van zijn. of zich slecht tegen kunnen weren. 64 Manipulatie is het beÃ¯nvloeden van gedrag. zonder dat het doelwit zich bewust is van het aanpassen van hun gedrag. Dit kan autonomie ondermijnen
Covertness	7 Met behulp van selectieve informatie mensen een richting op duwen 17 Doelbewust informatie verstrekken/achterhouden/foutief informeren van de medemens om een doel te kunnen bereiken

	33 Het sturen van informatie voorzieningen zodat de kans vergroot wordt dat iemand jouw suggesties zal volgen 34 De waarheid zo vervormen zodat het degene goed uitkomt. 38 Communicatie naar anderen met achtergehouden informatie om een bepaald (achtergehouden/verscholen) doel te bereiken. 39 Ik denk dat manipulatie inhoud dat iemand de intentie heeft om de waarheid niet (volledig) te vertellen aan iemand als een tool om mensen hun gedrag te veranderen tov hoe ze zouden handelen als ze de "waarheid" weten 43 Informatie bewust achterlaten voor eigen belang en in spelen op de gevoelens en emoties van anderen 45 Informatie geven maar belangrijke feiten achterhouden. zodat je iemands denken een bepaalde richting kan sturen. 66 Manipulatie is naar mijn inzicht het brengen van bepaalde feiten en zienswijze. op een dusdanige manier dat de mening van een ander wordt beÃ¯nvloed. Al dan niet door het bewust weglaten van bepaalde feiten. 68 Misleiden met trucs of verbergen van informatie op oneenrlijke manier. dan doet iemand iets wat ze anders niet zou doen.
Trickery	11 Als ik word belazerd 12 Het op een bepaalde manier iets aan iemand vertellen waardoor deze persoon bijvoorbeeld denk dat hij of zij het juiste doet terwijl dat niet het geval is 17 Doelbewust informatie verstrekken/achterhouden/foutief informeren van de medemens om een doel te kunnen bereiken 20 Wanneer je iemand dmv slinkse tactieken ergens van probeert te overtuigen 24 Op een sluwe wijze het gedrag van anderen beÃ¯nvloeden 26 Manipulatie is het overhalen van iemand door middel van drogredenen. Het doel kan goed of slecht zijn. maar het middel dat gebruikt wordt is over het algemeen slecht. 28 Iemand om de tuin leiden. Er voor zorgen dat de ander niet weet hoe het werkelijk is. 44 Iets of iemand op een verkeerde manier beÃ¯nvloeden 47 iemand laten doen of denken volgens door anderen opgelegde normen 49 het opzettelijk en misleidend beÃ¯nvloeden van iemand om hem of haar te laten handelen op een manier die tegen zijn of haar eigen belang of ethische principes ingaan. 50 Iemand onder valse voorwendselen ergens toe aanzetten. 53 Misleidende informatie aan iemand geven waar je zelf beter van wordt / om een eigen doe te bereiken 57 Bewust misleiden van mensen op basis van selectieve of onjuiste informatie 62 Eigen doelen/belangen behalen door middel onjuiste informatie/bedrog/verdraaien van de waarheid. 63 Opzettelijk anderen misleiden om eigen voordeel te behalen 66 Manipulatie is naar mijn inzicht het brengen van bepaalde feiten en zienswijze. op een dusdanige manier dat de mening van een ander wordt beÃ¯nvloed. Al dan niet door het bewust weglaten van bepaalde feiten.

	68 Misleiden met trucs of verbergen van informatie op oneenrlijke manier. dan doet iemand iets wat ze anders niet zou doen.
Indifference	
Emotions evoking	14 Manipulatie is het bewust beÃ¯nvloeden van een ander persoon. Er wordt vaak gebruik gemaakt van de emoties van het persoon om hem of haar te beÃ¯nvloeden. De manipulator heeft er een voordeel aan om iemand te manipuleren. 27 Het inspelen op kwetsbare psychologische punten. waardoor er bij mensen gevoelens als schaamte of erbij willen horen ontstaat. met als doel meer mensen mee te krijgen 43 Informatie bewust achterlaten voor eigen belang en in spelen op de gevoelens en emoties van anderen
Coercion	2 Dat ze je verplichten om iets te doen . En dat je zelf liever niet doe of zelf eerst even over na wil denken 3 Mensen een bepaalde hoek indringen. 18 Een mening doordrukken bij een ander voor eigen gewin. 51 Gericht een bepaalde gedachtegang opleggen aan diegene die je wenst te overtuigen van eigen gelijk en/of doeleinden. 52 Enigerlei vorm van beÃ¯nvloeding die inspeelt op/gebruik maakt van dwang. drang of het onderbewustzijn om een bepaalde keuze of actie uit te lokken. 54 Een ander persoon jou wil opleggen 55 Dwangmatig mensen jouw wil opleggen
Behavioural direction	1 Mensen een kant op proberen te duwen die een belang dienen 5 Mensen beÃ¯nvloeden naar je eigen wil. 9 Manipulatie is in principe sturing. maar heeft een negatieve bijklank. voelt als kwaadaardig sturen. voor eigen gewin. Daarom kon ik de vorige set vragen ook lastig beantwoorden. Ik vind sturende communicatie van de overheid in bepaalde gevallen acceptabel (denk aan postbus 10 Het gedrag van een persoon beÃ¯nvloeden op een niet altijd positieve manier / methode 36 Het sturen van gedrag/acties/antwoorden 51-achtige boodschappen). maar manipulatie eigenlijk nooit. vanwege de kwaadaardige associatie. Maar volgens mij bedoel je dat niet met deze vragenlijst? Nouja. daardoor kon ik niet goed antwoord geven op de vragen. omdat het geen neutrale term is. 19 Het sturen van een maken van een besluit passende bij de agenda van de vrager 29 Proberen een doelgroep een bepaalde richting op te krijgen. 30 Het subtiel duwen van mensen in een bepaalde richting. waar ze misschien niet heen willen 41 de mening en het gedrag van mensen te sturen door ze te laten horen of ze te belonen met iets dat voor hun uitkomt 42 Iemand bewust sturen in het uitvoeren van gedrag dat wenselijk is voor degene die de manipulatie uitvoert

	60 Het behalen van een doel door het beÃ¯nvloeden van een ander
Connotation	9 Manipulatie is in principe sturing. maar heeft een negatieve bijklank. voelt als kwaadaardig sturen. voor eigen gewin. Daarom kon ik de vorige set vragen ook lastig beantwoorden. Ik vind sturende communicatie van de overheid in bepaalde gevallen acceptabel (denk aan postbus 51-achtige boodschappen). maar manipulatie eigenlijk nooit. vanwege de kwaadaardige associatie. Maar volgens mij bedoel je dat niet met deze vragenlijst? Nouja. daardoor kon ik niet goed antwoord geven op de vragen. omdat het geen neutrale term is. 16 BeÃ¯nvloedbaar houden we niet van 48 Vaak iets negatiefs 67 Manipulatie heeft een negatieve annotatie. Maar als het â€˜nudgingâ€™ is. kan het prima gerechtvaardigd worden. Let op: in deze context van slim energiegebruik. niet in de context van bijvoorbeeld vet en zout eten. 69 Manipulatie heeft een negatieve context
Excluded	31 Manipulatie is in mijn ogen 35 Vanaf de geboorte wordt ons gedrag leven beïnvloed door anderen 65 beïnvloeden

N. AI-reflection

For this thesis, artificial intelligence (AI) was utilised. The aim was to rely on AI as minimally as possible, as the author of this thesis believes this might lead to biases and reduce personal productivity .
First of all, Lean Library, associated with TU Delft, was used to generate citations for literature. When Lean Library was unable to retrieve the citation, the Scribbr citation generator was used to cite articles both automatically and manually. However, due to the importance of academic writing and using the correct citations, all citations were checked in the final bibliography. This approach allowed for the effective generation of citations while maintaining academic accuracy.
ChatGPT was initially used to get a first idea of philosophical literature that was difficult for the author to understand on first reading. After receiving explanations from ChatGPT, re-reading the literature led to greater understanding. It could be that ChatGPT might interpret the literature differently, however as the philosophical literature was first difficult, at least twice every article was read reducing the potential biases.
Furthermore, when researching literature on manipulation in the context of psychiatry, no valuable results were found initially because manipulation in research often relates to the manipulation of experimental conditions. Due to these difficulties, ChatGPT was used to suggest key search terms in ScienceDirect. While this yielded somewhat more results, it was still not as fruitful as expected.
Since I had not previously used SPSS for quantitative analyses, some errors occurred in my codes. ChatGPT was then utilised to understand what these errors could mean. After half a day of using SPSS, these errors no longer occurred, and ChatGPT was no longer needed.

Since my first language is Dutch, some sections were initially written in Dutch as it was easier to explain phenomena. Occasionally, parts of sentences were translated into UK English using the translator DeepL. Additionally, when certain words or sentences did not fit properly in the context, synonyms were searched for with DeepL by translating it multiple times. To further identify and correct grammatical errors and spelling mistakes, Grammarly was used to enhance academic writing.

AI tools were implemented to increase efficiency, assist in further analysis, and improve the professionalism of the work. However, I did not rely solely on the AI tool to ensure academic integrity. Combining the capabilities of AI with critical judgement allowed me to effectively incorporate the benefits of these technological advances in the thesis.