Norwegian School of Economics

Bergen, Fall 2017

A Study of Moral Motivation in Paternalistic Behavior

A study of how two variations of information asymmetry affect the willingness to make paternalistic decisions.

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Master Thesis in Strategy and Management (STR) and Finance (FIN)

NORWEGIAN SCHOOL OF ECONOMICS

Abstract

The purpose of this thesis is to study moral motivation in hard paternalistic interferences, and further contribute to the understanding of the nature behind paternalistic behavior. Based on the evidence that people are morally motivated, and that people value both autonomy and others wellbeing, we investigate which preferences are dominant when faced with a trade-off between these moral values. By doing this, we combine research from different fields, namely literature on paternalism and literature on moral motivation and preferences. This study aims to contribute to the research in the intersection of these fields.

We approach this by conducting an incentivized economic experiment in which spectators are asked to decide whether to allow a stakeholder to make a choice that only affects the stakeholder's own pay-off. To create a situation where the moral trade-off is present, the spectators are exposed to one of four treatments that will differ in information asymmetry in favor of the spectator, and information asymmetry in favor of the stakeholder. This allows us to examine how information asymmetry casually affects the willingness to act paternalistically.

Using statistical analysis, our findings indicate that the willingness to act paternalistically, increases when the spectator has an informational advantage, and therefore can increase the wellbeing of the stakeholder by restricting his autonomy. This indicates that people are morally motivated by other people's wellbeing when faced with this trade-off. However, we also find that across all treatments, a majority of the spectators chooses not to act paternalistically. This reveals a strong aversion against interfering with the autonomy of peers, implying that people put a high value on other's autonomy. Further on, we find no significant effect on the spectator's willingness to act paternalistically when the stakeholder has more information. This indicates that people disregard the stakeholder's risk preferences when making paternalistic decisions.

In addition to the main findings, we find several significant differences in the willingness to act paternalistically across subgroups. Our results indicate that gender, age, education and political orientation all have statistically significant effects on the willingness to act paternalistically.

Preface

This paper is a master thesis written as a part of our Master of Science in Economics and Business Administration at the Norwegian School of Economics (NHH). We specialize in the fields of Finance (FIN) and Strategy and Management (STR).

This thesis will account for 30 credits within our majors. The topic of the thesis is within the field of behavioral economics. Our aim with this thesis is to get a better understanding of the nature of paternalistic behavior, and hopefully contribute to the study of moral motivation in behavioral economic. This by introducing a new dimension to studies of people's moral preferences. The reason behind this choice of topic is our interest in behavioral economics, but we also were inspired and motivated by the Choice Labs project "Understanding Paternalism".

First, we would like to express our gratitude to our enthusiastic and positive supervisor, Professor Alexander Wright Cappelen, for valuable feedback throughout the process. He has been a great source of both motivation and inspiration behind our research theme, and how we conducted our experiment.

We would also like to thank Sebastian Fest, PhD student at The Choice Lab, for his valuable help to conduct the Qualtrics survey through Amazon Mechanical Turk. Fest is experienced with conducting experiments through mTurk, and using Qualtrics surveys as the platform for the working task. Fest helped us by testing that the survey settings and connections was running as intended, as well as extracting the data from the survey.

We are also very thankful to The Choice Lab for their financial contribution which made it possible to carry out the experiment. Further we want to thank Janina Ramona Juranek from the Choice Lab for helping us conducting the experiment, and Silje Landsøe in coordinating our experiment through Norstat.

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1. Introduction

Paternalism is a widespread phenomenon that influences many areas of our society, including both public and interpersonal relations. By paternalism, we mean the interference of a state or an individual with another person, against their will or knowledge, motivated by a claim that the person interferred with will be better off or protected from harm (Dworkin, 2002). Recent research has focused on the role of paternalism in public policymaking, but little research exists on the nature of paternalistic behavior in human interactions. In this thesis, we focus on hard paternalism in interpersonal relations. We approach this by studying when people are willing to restrict another person's autonomy, with the intent of promoting the other person's wellbeing. More specifically, we investigate which preferences are dominant when faced with the trade-off between the moral values of others' autonomy and others' wellbeing. We also take a broader approach than the existing literature by focusing on paternalistic behavior in non-hierarchical relationships. Do people place the highest value on their peer's autonomy, or do they prefer to interfere with the intent of promoting their peer's wellbeing?

Previous research shows that people value both others' autonomy and others' wellbeing. Some studies show that people place a high value on autonomy (Fehr, Herz, & Wilkening, 2013; Bartling, Fehr, & Herz, 2014), while other studies show that people are intrinsically motivated by promoting others wellbeing (Fehr & Fischbacher, 2002; Charness & Rabin, 2002). We are interested in how people make a trade-off when forced to choose between the two moral values.

It is well established in behavioral literature that people are morally motivated and have moral preferences when making decisions (Kahneman, Knetsch, & Thaler, 1986 a,b; Camerer & Fehr, 2004). However, the nature behind moral behavior, and which preferences that drive our decisions is still a complex and incomplete field. Based on the evidence that people are morally motivated, and that people value both others' autonomy and others' wellbeing, we assume that when faced with a trade-off situation between these moral values, people will choose according to their moral preferences. Thus, by studying when people are willing to make paternalistic decisions, we contribute to the study of moral motivation by introducing a new dimension to the studies of people's moral preferences, namely how people make trade-offs between others' autonomy and others' wellbeing. In doing so, we hope to contribute with new insights into the moral foundations of human behavior, and the nature behind paternalistic interferences.

By studying this moral trade-off, we take a broader approach to paternalism than the existing and recent literature. Newer literature has in mostly focused on a narrower field of paternalism, primarily inspired by the work of Cass Sunstein and Richard Thaler[1]. Their variant of soft paternalism, often referred to as Libertarian paternalism, and their concept of nudges is inspired by research in behavioral economics on the many ways human capacities are limited in optimal decision-making. Their work has resulted in broad attention in the public debate on when and how the government should intervene to protect individuals from their own decisions. It has also contributed to an increased interest on the role of paternalism amongst economists and scientists.

Although Libertarian paternalism and the concept of nudges has important implications for private and public policy designing, it embraces only a limited part of paternalistic interferences. Paternalistic interferences refer to all interactions that aim to promote others' best interest, and are therefore an important part of all interpersonal relations, in particular how we interact with each other. By focusing on hard paternalistic interferences in non-hierarchical relations, we move beyond the narrow focus of Libertarian paternalism, and examine the nature behind paternalistic behavior in interpersonal relations.

To create a situation where the moral dilemma between autonomy and promoting another person's wellbeing is present, we find it useful to introduce information asymmetry between a spectator and a stakeholder. By doing this, we can adjust the amount of influence that a spectator has on the wellbeing of the stakeholder. First, we look at information asymmetry in favor the spectator, making the spectator in a better position to make a decision on the stakeholder´s behalf. Second, we look at information asymmetry in favor of the stakeholder, to see how this affects the spectator's decision to interfere with the stakeholder's autonomy.

[1] After the publication of *Nudge- Improving decisions about health, wealth and happiness by Thaler and Sunstein 2008,* policymaking in several countries have been influenced by liberitarian thinking in their policymaking, including pension saving, healthcare, and education. In 2015, US president Barack Obama signed a propsal for" using behavioral science insights to better serve the American people" (Samson & Gigerenzer, 2016).

By doing this, we can see how the risk of acting against the other person's true interests affects the willingness to act paternalistically.

To contribute with empirical evidence on the trade-off between autonomy and others wellbeing, this thesis aims to answer the following questions:

To what degree are people willing to restrict another person's autonomy with the intent of promoting that other person's wellbeing?

and

How does information asymmetry in favor of the spectator and stakeholder affect this choice?

We approach these two questions by conducting an incentivized economic experiment on how the average willingness to act paternalistically causally depends on the level of asymmetry between the spectator and the stakeholder. To conduct the experiment, we use an empirical approach where we combine the international online market platform, Amazon Mechanical Turk, and the Norwegian data collection agency, Norstat. This combination of online platforms enables us to gather data on how representative samples make choices in real-life situations.

In the experiment, the spectators are asked to decide whether or not to allow a worker (stakeholder) to make a choice that only affects the stakeholders' own pay-off. After the stakeholder has completed a task, the spectator is presented with two alternative options of how the stakeholder will receive the payment. First, the spectator has to decide whether or not to allow the stakeholder to choose between the two payment alternatives. If the stakeholder is denied the freedom to choose between the alternatives, then the spectator must make the choice on his or her behalf. The spectators are assigned to one of four different treatments, where we test the effects of information asymmetry in favor of the spectator, and information asymmetry in favor of the stakeholder on the willingness to act paternalistically. To obtain causal evidence on the willingness to act paternalistically in the different treatments, we use a between subject design where the spectators are randomly allocated into the different treatments.

Our main findings show that information asymmetry in favor of the spectator has a significant positive effect on the willingness to act paternalistically. In other words, when the spectator can clearly increase the expected value of the payment option for the worker, and thus the expected wellbeing the worker would get from receiving the payment option, more spectators

choose to act paternalistically. Compared to the base treatment, about 75% more spectators choose to renounce the stakeholder's autonomy for the stakeholder's wellbeing when the spectators are in a better position to make the decision than the stakeholder.

Suprisingly, we observe that 68.2% of the spectators decided to let the workers choose for themselves, even when the spectators clearly had more information about the outcomes. This reveals a strong aversion against interfering with the autonomy of peers. This indicates that the spectators in general place a higher value on respecting others' autonomy than promoting others' wellbeing.

Further on, we find no significant effect on the spectator's willingness to act paternalistically when the stakeholder has more information. This implies that the spectators disregard the stakeholder's risk preferences when making paternalistic decisions. This could indicate that people are less able or less willing to take into account information about preferences than information about outcomes.

When information asymmetry in favor of the spectator and in favor of the stakeholder is present at the same time, we find no significant interaction effect.

In addition to the main analysis, we find that the willingness to act paternalistically varies significantly across subgroups. We find that men are significantly more willing to act paternalistic than women across all treatments. We also find that the willingness to act paternalistically significantly decreases with age, and that this effect is prevalent in all age groups. Spectators that voted for wing parties[2] in the previous election, are significantly less willing to act paternalistically than others.

[2] Spectators that voted for the Progress Party (*Fremskrittspartiet*) and the Socialist Left Party (*Sosialistisk Venstreparti*) were significantly less willing to act paternalistically than others.

Structure of Thesis

Our thesis consists of six parts. First, we have provided an introduction and presentation of our research questions. In chapter 2, we present the existing literature that we find relevant to approach our research questions. In chapter 3, we introduce the methodology used in this study. In chapter 4, we present the hypotheses and the empirical strategy. In chapter 5, we present the results of our analysis. In chapter 6, we discuss our findings, as well as limitations of our study and suggestions for further research.

2. Literature Review

In this chapter, we present the theoretical foundation of our study. We have divided the chapter into two parts. In part one, we define paternalism and explain where we are in the paternalistic literature. In the second part, we look at moral motivation and the moral values at conflict when making paternalistic decisions.

2.1 Defining paternalism

Dworkin (2002) defines paternalism as "the interference of a state or individual with another person, against their will, defended or motivated by a claim that the person interfered with will be better off or protected from harm." It is understood as an infringement of a person's autonomy with a beneficent or protective intent. Depending on characteristics with the interference in how one affects the person's autonomy, literature differentiate between traditional (*hard*) and libertarian paternalism (*soft*) (Pope, 2004; Thaler & Sunstein, 2008 Dworkin, 2002).

In this paper, we will use the terms hard and libertarian paternalism. In the following section, we explain what is accounted as hard paternalistic interferences, followed by a distinction of hard and libertarian paternalism.

2.1.1 Paternalistic interferences

In determining what counts as paternalistic interferences, there are three conditions that an interference must include (Pope, 2004; Grill, 2011; Dworkin, 2006). Following Dworkin´s (2006) definition one can say that X acts paternalistically towards Y if:

1: X interferes with the liberty or autonomy of Y.

2: X does so without the consent of Y.

3: X does so only because X believes it will improve the welfare of Y (where this includes preventing his welfare from diminishing), or in some way promote the interests, values, or good of Y.

In the following we explain what the different conditions entails.

1: Interference with liberty or autonomy

First, paternalistic behavior involves some kind of limiting of the stakeholder' liberty or autonomy (Dworkin, 2002; Grill, 2011). Liberty can be understood as the availability of an adequate range of options. Interference that limit liberty can then be understood as the restriction of this range by the exclusion of some alternatives (Grill, 2011). For example, governmental laws on compulsory pensions savings limit the options of how citizens can choose to save for pension.

In this thesis, we focus on limiting autonomy. Autonomy is typically understood as self-determination. Interfering with autonomy in the context of paternalism refer to substitution of a person's judgment or agency, where the paternalist judges or acts in place of the subject (Grill, 2011; Pope, 2004).

2: Consent

For the interference to be paternalistic, it must be done without the stakeholders' consent (Dworkin, 2002; Grill, 2011). It is indifferent if the stakeholder is aware of the interference, or if the spectator does not know whether or not the stakeholder has consented (Grill, 2011) Thus, if the stakeholder voluntarily gives consent to some interference to promote his/her wellbeing, it is not a case of paternalism. For example, if a husband concerned about getting overweight asks his wife to make healthier dinners, his wife would not act paternalistically by doing so. In other words, if a stakeholder explicitly has asked a spectator to make a choice for him/her, it is not an instance of paternalism. This can be interpreted as violating the condition of restriction of autonomy, as the latter example is a voluntary choice.

3: Benevolence

The interference with another person's liberty or autonomy must also satisfy the condition of benevolence, meaning that the subject have the motive of imposing a benefit upon or preventing harm from the stakeholder (Pope, 2004; Grill, 2011). The benevolence is normally a psychological motive for the interference, referring to actions that the subject believes is in the stakeholder's best interest (Grill, 2011). In other words, it is the spectator who decides what the best interest consists of regardless of whether the stakeholder agrees or not. The good or "best interest" that benevolent reasons refer to can be of any kind. It typically refers to physical health or survival, but may also aim to promote people´s finances (Grill, 2011). In

this study, benevolence is referred to as promoting another person's wellbeing by maximizing the expected outcome of a payment.

2.1.2 Libertarian vs. hard paternalism

In this thesis, we focus on hard paternalistic interventions made by individuals in non-hierarchical relationships. By studying interferences in interpersonal relations, we are interested in when people are willing to interfere and restrict another person's autonomy to promoting their wellbeing. Does a husband prefer hiding sleeping pills from his depressed wife, thereby promoting her wellbeing? Or does he respect her autonomy in making own decisions about whether or not to take sleeping pills?

When we are interfering with another person's voluntary *ends* (decisions, desires), and thereby their autonomy, to promote the person's wellbeing, it is characterized as hard paternalism (Le Grand & New, 2015, p. 27). In other words, a hard paternalist recognizes that autonomy will be compromised, but believes there is an acceptable trade-off between autonomy and the persons wellbeing The husband from the previous example will interact in a hard paternalistic manner if he hides the sleeping pills. He is then considering his wife's long term wellbeing as more important than her right to make own choices.

In recent years' paternalism has become of great interest for both policy makers and academia. A great deal of this interest can be attributed to the work of Cass Sunstein and Richard Thaler (e.g Thaler & Sunstein, 2008), with their variant of soft paternalism and the concept of nudges. As this has become an important part of recent literature on paternalism, we find it useful to differentiate between soft paternalism, which the authors exemplify as Libertarian paternalism, and traditional (hard) paternalism.

The idea behind Libertarian paternalism is to affect the behavior of both private individuals and public institutions through policymaking (Thaler & Sunstein, 2008). It is influenced by studies in behavioral economics on how human errors affect decision-making. Behavioral studies show that people violate the standard economic assumptions of being fully rational, as we suffer from bounded rationality (Simon, 1955), use heuristics (Kahneman & Tversky, 1971,1979), behave inconsistently and have limited self-control (Ariely & Wertenbroch, 2002; DellaVigna & Malmendier, 2005). Consequently, people are not necessarily good decision makers, and sometimes make decisions that not are optimal or desirable (Schwartz, et al., 2002).

Libertarian paternalists suggest that governments should work as "choice architects" and thereby help people take optimal or desirable decisions (Thaler & Sunstein, 2008). The choice architects interfere in a paternalistic manner by designing choices that minimizes biases and heuristics/errors that arise as a result of bounded rationality. This can for example be done through the number of choices presented, or the manner in which options are presented. A common used example of libertarian paternalistic policy interventions is placing of healthy foods at eye level in the school cafeteria, while putting unhealthy food out of immediate sight. Consequently, people are encouraged or "nudged" to take healthy food choices, but at the same time remain their freedom of choice (Thaler & Sunstein, 2008).

Moreover, libertarian paternalists, unlike hard paternalists, interfere with the *means* in how individuals choose to achieve their desired *ends* (Le Grand & New, 2015, p. 27) This is done by changing the presentation of the individuals' choices in a way that "makes choosers better off, as judged by themselves" (Thaler & Sunstein, 2008, p. 5). By interfering with choice presentation, one "nudges" people in directions that will improve their welfare, while still respecting the individual's autonomy. Thaler and Sustain (2008) explains this by suggesting that libertarian paternalism only interfere with our intuitive, unconscious, automatic decisions, while calculating, conscious and cognitive decisions are not interfered with.

Although libertarian paternalism has important implications for designing private and public policy, it embraces only a narrow part of paternalistic interferences and does not correspond to the traditional definition of paternalism (Dworkin, 2002). In hard paternalistic interferences, as opposed to libertarian, one typically interferes with both unconscious and and conscious decisions, thereby restricting or blocking a person's autonomous decisions and freedom of choice in order to make them better off (Le Grand & New, 2015).

2.2 Moral motivation

"Respect for autonomy has only prima facie (first face) standing, and can be overridden by competing moral considerations." – Beauchamp & Childress (1994, p. 126)

2.2.1 Moral motivation

The study of motivation explores the direction of behavior, e.g. how people are motivated to make different choices (Kaufmann & Kaufmann, 2011, p. 93). Traditional economic theory

stresses that people are only motivated by self-interest when making decisions. However, real-life observations like voting, people risking their own lives to save others, volunteer work, and charitable giving are all examples that defy the logic of self-interest. Behavioral studies on the trade-off between self-interest and moral values, show that people are morally motivated and have moral preferences when making decisions (e.g Kahneman, Knetsch, & Thaler, 1986; Camerer & Fehr, 2004). In example, studies show that we care about fairness (Engel, 2011) and contributing to the "common good", even if this compomises our own payoff (Fehr & Schmidt, 1999; Fischbacher & Gächter, 2010). Moreover, moral motivation refers to people being motivated by what is considered morally right in a situation.

Based on the evidence of moral motivation, we are further interested in people's moral preferences. Moral preferences refer to people's choices, and particularly to the trade-offs between different moral values.

2.2.2 Moral tradeoffs

The issue of hard paternalistic interventions can be interpreted as facing a moral dilemma, where one must choose between the moral values of letting a person remain his autonomy, or promoting his wellbeing. Are people concerned about letting other people decide for themselves, regardless of the outcome? Or do people place higher value on promoting others wellbeing, even if it compromises autonomy? Research show that people value both autonomy and are intrinsically motivated by promoting others wellbeing. When faced with a trade-off situation between these moral values, the outcome can be interpreted as revealing one's moral preferences.

The Value of Autonomy

The value of autonomy is well engrained in Western societies. Autonomy means the ability to make own choices, to live one's life as one chooses, without the effect of distorting or manipulative forces (Christman, 2003). It concerns a person's freedom to self-government, and is associated with the idea that people have moral rights to choose for themselves. To respect a person's autonomy is therefore to respect a person right to make own choices (Beauchamp & Childress, 2001).

In hard paternalistic interventions, one restricts or block a person's autonomous decisions and freedom of choice in order to make them better off. Thus, placing a high value on autonomy,

one would expect a person to resist from paternalistic interference. Thereby allowing a stakeholder to make own choices, even if it is clear that one is in a better position to promote the stakeholders' wellbeing.

According to research, people place a high value on autonomy. Bartling, Fehr and Herz (2014) conducted a study on how people value their right to make own decisions (autonomy) versus their instrumental benefits (wellbeing). They find that people assign positive intrinsic value to decision rights. They also find that this is a relatively stable preference. However, they argue that this might vary depending on situation, like the stake size or the decision (Bartling, Fehr, & Herz, 2014).

This is also consistent with findings from a study on authority by Fehr et al (2013). Their research indicates that people are willing to sacrifice their material interests in order to maintain authority. In their experiment, they create an authority game where stakeholders can choose to delegate decisions to a spectator. The central finding is that the stakeholders will prefer not to delegate, even if it affects pecuniary interests. They explain this as suggesting that people don't like to be overruled, and by delegating authority to a spectator, the spectator may disregard their wishes. Another experiment that supports these findings, show that people are less willing to delegate authority over decisions to others, even if the delegation would maximize their awards. In other words, people are willing to forego rewards to retain autonomy. This preference is not only observed when people are willing to forego potential gains, but also when not delegating results in losses. (Owens, Grossman, & Fackler, 2014).

Knowing that people are morally motivated, and following the above research on autonomy, there is reason to belive that autonomy is a moral value people consider as important in all moral matters. This indicates that people not only consider own autonomy, but also have preferences towards respecting other peoples' rights to make own decisions. When faced with a paternalistic issue, one would therefore expect that people are reluctant to interfere in a paternalistic manner even if it could enhance another persons' wellbeing. In other words, respecting autonomy may override other moral considerations, like wellbeing, when faced with a moral trade-off.

The Value of Wellbeing

On the other hand, research also show that people feel a strong moral obligation of acting for the benefit of others, and helping others further their interests (Fehr & Fischbacher, 2002;

Charness & Rabin, 2002). For example, studies show that people are willing to take costly actions to increase the payoffs of others, even when there is no reward for their behavior (Camerer & Fehr, 2004). This evidence show that people care about and have preferences towards promoting others' wellbeing. Moreover, this indicates that people may choose to act paternalistically, if they are able to promote others wellbeing, even if this compromises the other person's autonomy.

Based on the evidence that people are morally motivated, and studies that indicates that people care both about autonomy and others' wellbeing, it is reason to believe that when faced with a situation of hard paternalistic interferences, people will make a trade-off between the moral values. The outcome, if one chooses to act paternalistically or not, can be interpreted as revealing one's moral preferences.

3. Methodology

In this chapter, we present the methodology of our research. In the first subchapter, we present our experimental design. In the second subchapter, we explain how the experiment was conducted and how data was collected.

In our thesis, we look at paternalistic behavior, by investigating to what degree people are willing to restrict another person's autonomy with the intent of promoting this persons wellbeing. As research indicates that people care both about autonomy and others wellbeing, we examine how people behave when forced to choose between these moral values. This allows us to reveal which preferences are dominant when faced with the trade-off.

We approach this by conducting an incentivized economic experiment in which spectators are given the opportunity to decide on a stakeholder's behalf, or to let a stakeholder decide for him/her self in a situation that only affects the stakeholders' own payoff. To create a situation where the moral trade-off is present, we find it useful to create a situation of information asymmetry between a spectator and a stakeholder. By doing this, we see how information asymmetry, and thereby the potential influence on another person's wellbeing, casually determines paternalistic behaviour.

We use a 2x2 experimental design, thereby four different treatments. In one dimension, we want to test the effect of information asymmetry in favor of the spectator, and in the other dimension we want to test the effect of information asymmetry in favor of the stakeholder. The spectators are randomly assigned to one of the four treatments; one with symmetric information, serving as a control group, one where the spectator has an informational advantage, one with stakeholder informational advantage, and a fourth treatment combining the information asymmetry in favour of the spectator and the stakeholder.

We find this to be an appropriate research strategy, as it allows us to manipulate information asymmetry between stakeholders and spectators, thereby obtaining causal estimates on how information asymmetry affects paternalistic behavior. This by comparing the behavior of those in the manipulated conditions, with behavior in the condition with symmetric information. Further, we create a situation where deciding to act on behalf of the stakeholder, reveals a preference towards promoting others wellbeing, and deciding that the stakeholder should make the decision himself/herself, reveals a preference towards promoting autonomy.

Between-subject analyses are also statistically simple to perform if random assignment is achieved across treatments. By applying a deductive approach and having structured research questions, we examine the causal relationship between these variables using statistical analyses, thereby having a quantitative approach.

3.1 Design of the experiment

In this section, we first provide an overview of the three stages of the experiment. Second, we present the two types of participants, the workers and the spectators. Third, we give a detailed presentation of the four treatments variations.

3.1.1 Experimental stages

The experiment consists of three stages. The first stage of the experiment is included as an instrument for decisions in the second and main part of the experiment. In the first stage, a random selection of workers performs a task on an online working platform. The workers are paid a small participation fee, but are informed that they can earn an additional payment. The tasks last for 10 minutes for all the workers and performance is not measured. Afterwards, the workers can choose between two different options for the additional payment. They are also informed that a second person, the spectator, can decide to choose which of the two payment options the worker will receive, in which case the worker's own decision will be ignored.

In the second stage of the experiment, spectators are randomly assigned to one of four treatments, where they are given the opportunity to decide which payment option the worker from the previous stage will receive, alternatively to let the worker decide for himself/herself. The spectators are not informed of the initial preference of the worker. Finally, we make a random matching of spectators and workers, and the workers are paid according to the spectator's decision, their own decision, and in some cases the outcome of a lottery. The three stages of the experiment are summarized in Table 1.

Stages	*Participants*	*Objective*	*Platform*
Stage 1	*Workers*	*- Completing a task* *- Choosing which payment option they prefer if they are allowed to choose for themselves* *- Answering background questions* *- Receives participation fee of 1 USD*	*mTurk* *Qualtrics*
Stage 2 (Main stage)	*Spectators*	*- Randomly assigned to one of four treatments with variations of information asymmetry* *- Answering background questions* *- Choosing to make the decision on which payment option the worker will receive on behalf of the worker, or letting the worker choose for themselves*	*Norstat*
Stage 3	*Workers*	*- Receives additional payment of 0, 7.5, 10 or 30 USD depending on the spectators' decisions, their own decision and outcome of potential lotteries.*	*mTurk*

Table 1: The table show an overview of the three experimental stages, including which participants and platform that is relevant in each stage.

3.1.2 The Participants

The experiment consists of two types of participants, workers and spectators. The workers are the stakeholders of the decisions made by both the spectators and by the workers. The workers are included in our study as an instrument to create a real-life situation so that the spectators can make decisions for real stakeholders. The actions and decisions of the workers are therefore not relevant for our analysis, other than as a means to study the actions of the main participants, the spectators.

The Workers (stakeholders)

By using the online work market, Amazon Mechanical Turk, we recruit 100 workers who each complete a task. When recruited, the workers are promised a participation fee of 1 USD, and told that they can receive an additional payment. They are informed that the size of the additional payment depends on their own decisions, the decisions of a second person in the experiment and the outcome of a lottery. The workers are not provided with any information about the other person's choices. The additional payments vary across the different treatments, and the worker can receive 0 USD, 7.5 USD, 10 USD or 30 USD in additional payment

depending on which treatment he is assigned to, the decision of the second person, and the outcome of a potential lottery.

The Spectators

The spectators in the experiment are recruited through the Norwegian data collection agency Norstat. In the beginning of the survey, the spectators answer background questions about gender, age, geography, occupation, education, household income, household members, number and age of children, and political orientation. We use these data to ensure that our sample is representative and to control for background variables that might affect our dependent variable, the willingness to act paternalistically. After the background questions, the spectators are asked the main experiment question, which varies by treatment, about whether they will restrict the worker's freedom.

We emphasize to the spectators that, in contrast to traditional survey questions, they are presented with a real-life situation and that their decisions could have real consequences for another person. The spectators are informed that a worker has received a participation fee of 1 USD to complete a job online, and that the worker is qualified for an additional payment.

The spectators are given information about the two payment options the worker can choose between according to the treatment group. Further, we inform them that the workers know that a second person, the spectator, can choose which payment option the worker will receive. The spectators are fully informed about the information that the worker has about the payment options and what they don't know, hence they are aware of any information asymmetry. The task of the spectator is to determine whether the worker should be allowed to choose between two payment alternatives him/herself, or to make a choice on his/her behalf. The spectators are also informed that their decisions are anonymous.

The spectators do not know anything about the background of the worker, and the information is written in a gender-neutral way. The worker is referred to as "person" in the text to make it easier for the spectator to relate to the worker as an equal individual. Furthermore, as we want to test paternalism in non-hierarchical relationships, we considered "person" to be a more neutral term than "worker".

3.1.3 Treatment variations

In our experiment we use a 2x2 experimental design, thereby four different treatments which all vary in the level of information asymmetry. The four groups are similar with regards to all relevant aspects of the research without the manipulation of information asymmetry they receive.

The stakeholder is a neutral individual to the spectator and does not change any characteristics in the different treatments. Further, the decision has no consequences for the spectator, and the spectator has no self-interest in the outcome. Hence, the decision problems the spectators are faced with in the treatments represents a pure moral dilemma for the spectator. When the spectator acts paternalistically by choosing payment option on behalf of the worker, the spectator may increase the utility the worker receives from the payment, but reduce the utility that the worker experience from the abridged autonomy. Our intention is to reveal underlying moral motivations for paternalistic behavior. We can assume that the extent of value that the spectator places on autonomy is relatively stable across the treatments.

First we test if information asymmetry in favor of the spectator affects the spectator's willingness to act paternalistically. In two of the treatments, the worker and the spectator have the same information about the payment options, while in the other two treatments the spectator has more information about the payment options than the worker, thus creating a state of information asymmetry in favor of the spectator. This allows us to causally examine how being in a better position to make a decision affects the willingness to act paternalistically. The spectator faces a moral dilemma on being able to improve the stakeholder's well-being but restrict his freedom of choice, or to give the stakeholder full autonomy but not using his information to increase the stakeholder's well-being.

Second, we test if information asymmetry in favor of the stakeholder affect the spectator's willingness to act paternalistically. In two of the treatments, it is clear to the spectators which of the two payment options that have the highest expected value. In the other two treatments, the two payment options have the same expected value, but one of them includes risk-taking. Which payment option that is in the best interest of the worker is consequently affected by the worker's risk aversion. As the spectator do not know the worker's degree of risk aversion, there is a state of information asymmetry about what the stakeholder's preferences really are.

This allows us to examine how the risk of acting against the stakeholder's true interests affects the willingness to act paternalistically.

This gives us four different treatment groups. The first with no information asymmetry - the *base treatment*. The second with information asymmetry in favor of the spectator – the *spectator informational advantage treatment*. The third with information asymmetry in favor of the stakeholder – the *stakeholder informational advantage treatment*. Lastly, the fourth has information asymmetry in favor of the spectator and the stakeholder simultaneously – the *combined treatment*. Only minor changes were made between each of the treatment groups, specifically designed to let us analyze the causal effect of specific conditions on the potential difference in the average number of spectators acting paternalistically. The 2x2 design of the experiment is illustrated in Figure 1 below.

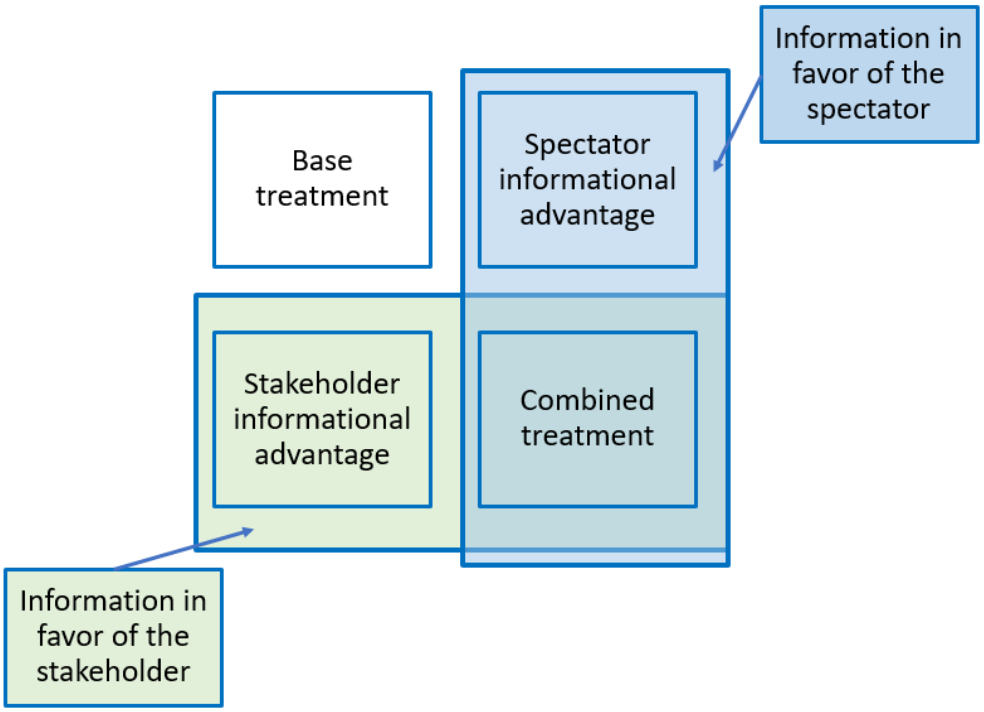


Figure 1: Conceptual model of the treatments in the experiment.

Base treatment

In the first treatment, there is no information asymmetry, meaning that the spectator and stakeholder has the same information.

The worker first completes the task and is then presented with two different payment options for the additional payment. Thereafter, the spectator decides whether the worker is allowed to choose payment option himself/herself, or whether to make the choice on behalf of the worker. For the additional payment, the participants can choose between alternative A or alternative B. Both the worker and the spectator are informed that one of the alternatives will lead to a payment of 10 USD and the other 0 USD. The probabilities of getting the 10 USD in alternative A and alternative B, are 75% and 25% respectively. The spectator is informed that the worker has the same knowledge about the payment options as themselves, hence there is no information asymmetry between the worker and the spectator. Furthermore, we argue that there is no uncertainty about which payment option that is in the best interest of the worker, as alternative A has a higher expected value than alternative B, but with the same possible outcomes.

In this treatment, it is therefore no apparent moral trade-off, as one can assume that the worker will decide the alternative which is in his/her best interest. In other words, the spectator does not have to compromise the worker's autonomy in order to promote the best outcome for the worker, as the worker can do this himself. We therefore expect that spectators will not decide on the worker's behalf in this treatment. We therefore expect that spectators will not decide on the worker's behalf in this treatment. The purpose of this treatment is to have a baseline measure (control group) in comparison with the other treatment groups that receives the manipulation of information asymmetry. In other words, it allows us to see how the willingness to act paternalistically changes when we include information asymmetry in the other treatments.

Spectator informational advantage

In the second treatment, the spectator has more information about the possible outcomes than the worker, giving the spectator an informational advantage. The payment options are the same as in the first treatment, but this time the worker is provided with less information about the options than the spectator. The spectator is informed that the worker has no information about the probabilities of receiving 10 USD in each of the alternatives. By revealing the different

probabilities of the outcomes in the lottery to only the spectator, we create a state of information asymmetry in favor of the spectator. As in the base treatment, we argue that there is no uncertainty about which payment option is in the best interest of the worker, as alternative A has a higher expected value than alternative B.

When the spectator has an informational advantage, he has power to improve the wellbeing of the stakeholder, by restricting the stakeholder's autonomy. By forcing the spectators to choose between improving the stakeholders' well-being and letting the stakeholders retain their autonomy, one can observe which preferences are dominant when faced with this trade-off. We expect that people will make more paternalistic decisions in this treatment, compared to the control treatment. Acting paternalistically in this case, reveal that the stakeholder has preferences towards promoting the workers wellbeing, comprising his autonomy. In this case, the spectator reveals that there is an acceptable trade-off between autonomy and the person's wellbeing. However, if the spectator chooses not to interfere, we interpret this as being more concerned about the worker's autonomy.

Stakeholder informational advantage

In the third treatment, we introduce information asymmetry in favor of the stakeholder by making changes to the payment options. To isolate the effect of stakeholder informational advantage, there is no information asymmetry in favor of the spectator in this treatment. Like in the other treatments, the spectator is informed that a worker has completed a task, and is presented with two alternative payment options. The worker can either receive a secure payment of 7.5 USD, or participate in a lottery with a possibility to win 30 USD. Both the worker and the spectator are informed that there is a 25% chance of winning 30 USD and 75% chance of losing and receive nothing. The two payment options therefore have the same expected numerical value, but the expected utility is not necessarily the same. Which payment option that is in the best interest of the worker is dependent on the worker's risk aversion. As the spectator do not know the worker's degree of risk aversion, there is a state of information asymmetry about what the worker's preferences really are. The spectator is fully informed about what information the worker has regarding the payment options. This creates an informational advantage in favor of the worker (stakeholder), as the worker has this information. This allows us to examine how the risk of acting against the stakeholder's true interests affects the willingness to act paternalistically.

In this case, the spectator must assume the preferences of the stakeholder to be able to improve the stakeholder's wellbeing. Consequently, a paternalistic decision is an even stronger interference with the stakeholder's autonomy. We therefore expect that the spectators will let the worker decide for himself/herself in this treatment.

Combined treatment

In the fourth treatment, we apply both information asymmetry in favor of the spectator and information asymmetry in favor of the stakeholder. The spectator has more information about the payment outcomes, while the stakeholder has more information about his own preferences. The combined treatment allows us to examine any interaction effects between the two variations of information asymmetry. The payment options and probabilities are the same as in the stakeholder informational advantage treatment. The worker is informed about the payment options and the possible outcomes of the lottery, but do not know the probabilities to win or lose in the lottery. The spectator know that the worker has no information about the probabilities of the different outcomes, thereby knowing he/she is in a better position to make the decision with regards to the expected value of the outcomes. However, the spectator does not have information about the risk preference of the worker. In total, neither the worker nor the spectator have the full information about which payment option will lead to the best outcome for the worker.

There is no clear answer on what behaviour to expect from the spectators in this treatment. However, if the spectator acts paternalistically, it shows that he values the possibility of promoting another's wellbeing more than concerning about his/her autonomy. On the other hand, withstanding from paternalistic action, show that people put more value on autonomy when there is a risk of acting against another person's true interest.

3.2 Conducting the experiment

This section describes how we executed the experiment and how we collected the data. In the first part of this subchapter, we present the power calculations conducted to estimate the required sample size for our study. Second, we describe the implementation and execution of the experiment. Third, we provide a discussion of data collection through online experiments, the platforms used in our design, and a presentation of our data sample.

3.2.1 Power Calculations

Power calculations are performed to help determine the sample size in a research study, when data is collected from a sample of the population to study the whole population (Cohen, 1992). The required sample size is a result of the desired level of statistical significance and statistical power, and the size of the effect that should be detected. The statistical power is the probability that the null hypothesis is correctly rejected, i.e. the chance that a true effect is detected. The statistical significance is the probability that the null hypothesis is wrongly rejected, i.e. the chance that an effect is detected when there is no true effect. Power calculations are based on several assumptions, most importantly the expected effect size of the research, thus the output must be considered indicative. In general, the concept is that to detect a smaller effect, a larger sample size is needed (Cohen, 1992).

The analyses we conducted to answer our research questions are based on the spectators' actions. As such, the worker's actions are means to provide a real-life situation for the spectators to consider. Consequently, it is the number of spectators that are bearing for the statistical significance of our data. We made use of G*Power to conduct the power calculations, which is a statistical analysis tool especially appropriate for this purpose (Faul, et .al , 2007). Cohen (1992, p. 98-101) recommends using a significance level of 0.05 (α) and a power of 0.80 (1-β) for research in behavioral sciences, which is what we applied for our tests. As behavioral research on the willingness to act paternalistically is relatively new terrain, it was difficult to predict the effect size, so we tested for three different levels.

In the analysis, we made use of multiple regressions. For multiple regressions, Cohen defines the effect size f^2, as the squared multiple correlation divided by one minus the squared multiple correlation:

$$f^2 = \frac{R^2}{1 - R^2}$$

Cohen regards an f^2 of 0.02 to be a small effect, an f^2 of 0.15 as a medium effect and an f^2 of 0.35 to be a large effect. For the multiple regressions, we had 3 tested predictors (information asymmetry in favor of the spectator, information asymmetry in favor of the stakeholder, and combined of the two). The total number of predictors including background variables was 8. For the multiple regressions, the required sample size to detect a small effect would be 550,

for a medium effect we would need 77 spectators, while 37 spectators would be enough to detect a large effect. Figure 2 shows the obtained effects size dependent on the sample size, based on a significance level of 0.05 (α) and a power of 0.80 (1-β).

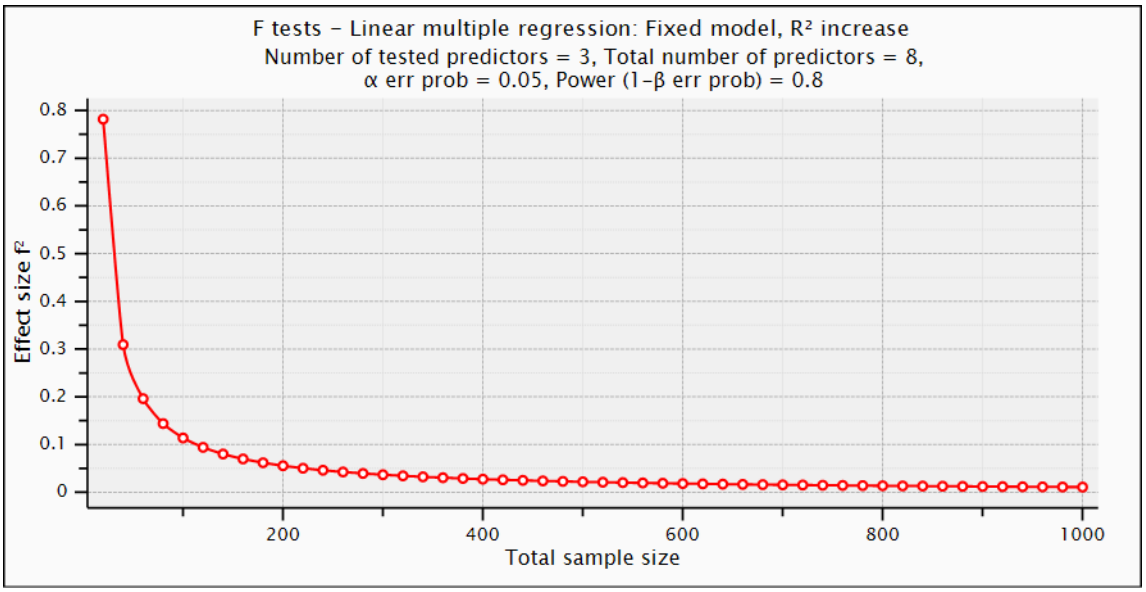


*Figure 2: The figure shows the effect size by the total sample size. Generated from G*Power, 2017*

To accommodate budget constraints, we wanted to prioritize a high number of spectators, and decided on a 10:1 ratio of spectators to workers. This allowed us to have a sample size of 1000 spectators, including 250 spectators in each group. With this sample size, we would be able detect a very small effect of $f^2 = 0.01$.

3.2.2 Data collection

The experiment was conducted by using three different online platforms, Norstat, Amazon Mechanical Turk and Qualtrics. The experiment stages conducted on Amazon Mechanical Turk and Qualtrics were only means to create a real-life situation in the main stage of the experiment. Thus, the data for our analysis was collected by the Norwegian data collecting agency Norstat. In the first section, we will look at the main advantages and disadvantages of conducting online studies. Thereafter, we will present the data collecting agency Norstat, followed by a brief presentation of Amazon Mechanical Turk and Qualtrics.

Online experiments

Online experiments have recently become very popular, and have several potential advantages in comparison with traditional lab experiments (Birnbaum, 2004; Reips, 2002). First, online

experiments facilitate easy and quick access to large and diverse participant pools, where a more representative population allow increased generalizability of the results (Reips, 2002). Second, online platforms allow the experimental procedures to be automatized, which make the experiments easier to conduct, and helps to ensure a uniform process across participants. This may also reduce resources, costs, and time spent managing the experiment (Reips, 2002; Dandurand, Shultz, & Onishi, 2008). Compared with experiment conducted in a laboratory setting, online experiments often allow more flexibility concerning when and where to participate. Hence, a participant may conduct the experiment in the comfort of his own home at a more convenient time, which may serve as a more natural decision-making environment than a lab (Salgado & Moscoso, 2003). Online experiments can also make it easier to maintain ethical standards, because the experiment is publicly available for criticism, and reduces the possibility of coercion of the participants (Barchard & Williams, 2009)

There are also some disadvantages in conducting online experiments compared to lab experiments. First, the participants are situated in different locations and environments, which is less controllable concerning noise, lighting and aspects with the technical equipment. Second, online experiments are more vulnerable for the risk of multiple submissions, higher dropout and selection biases, i.e. only motivated and interested participants undertake and complete the experiment (Reips, 2002). However, this also occur in lab experiments (Dandurand, Shultz, & Onishi, 2008).

Norstat

The spectators' decisions were collected by Norstat, a Norwegian data collection agency specializing in surveys. Norstat has a pool of 90 000 potential respondents, that are primarily recruited to the participant pool through landline phone. Norstat conducts a weekly web-based survey, called "WEBbuss". This includes some standardized background questions, as well as questions from Norstat's customers, e.g. the questions we had designed for the spectators. The web-survey is sent out to a representative selection of the participant pool by email, excluding non-internet-users and people under the age of 18. It is voluntarily for potential respondents to participate. Surveys through Norstat are incentivized as the respondents receive points for each survey they participate in, which later can be exchanged in material rewards, e.g. gift cards. (Silje Landsøe, Norstat, 2017)

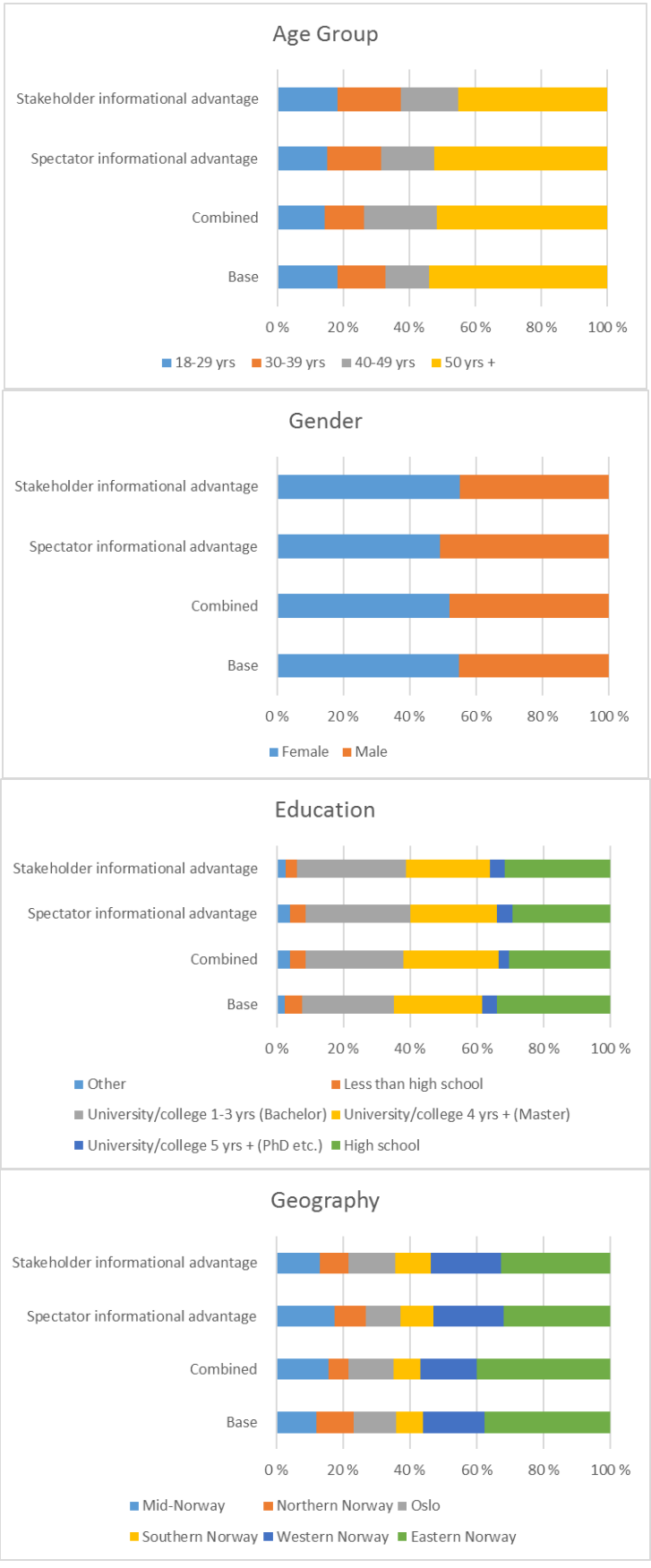
Amazon Mechanical Turk and Qualtrics

The workers in our study were recruited through the online working platform Amazon Mechanical Turk. This is a global crowdsourcing platform created by Amazon, where anonymous workers are recruited to complete small tasks online. On this platform, requesters post working tasks and registered workers choose which tasks they will do for pay (Mason & Suri, 2012). We used the online survey tool Qualtrics to design the working task, and then posted it on Amazon Mechanical Turk. Qualtrics is a customized tool that provides an easy way to build and design online surveys and to distribute to participants on other platforms.

Sample

Our planned sample size was 100 workers and 1000 spectators. On our behalf, Norstat recruited 1000 spectators from their respondent pool, who constitute a nationally representative sample over the age of 18, on a selection of observable background characteristics. We recognize that the Norwegian sample may only be partially representative for other nationalities, but due to budget constraints and ease of executing the experiment, we chose to have a national sample. However, the experiment can easily be replicated with other nationalities to test if our findings are relevant across nationalities. Our sample was slightly older and included somewhat more women than the general population (SSB, 2017). 250 respondents were randomly assigned to each of the four treatments. This enabled the demographic distribution of spectators to be relatively equal across the four treatments, which allowed us to assume equal variance across the treatment groups. In Figure 3, the distribution of spectators is shown in total and in the four treatments across a selection of background characteristics.

Figure 3: Demographic distribution of spectators across treatments and in total (age group, gender, geography and education)



3.2.3 Implementation and execution

After the design of the experiment was completed and approved, the experiment was executed through mTurk and Norstat. In the layout of the experiment stages, the workers would work before the spectators started to answer their questions. However, the two parts of the experiments were conducted during the same week. This was due to practical reasons as Norstat has certain dates that online surveys are sent out to the respondent pool and general time constraints for our thesis work. The Norstat survey ran through one week, while the mTurk survey finished within half an hour. Consequently, some spectators had answered their questions before the workers had worked. As this had no real consequences for neither the workers nor the spectators, we believe this does not affect the validity of our results.

In order to ensure the quality of our responses, we set criteria for potential workers to be eligible for our working task (HIT[3]). Only workers who had completed at least 500 HITs previously, and with an approval rate of at least 98% were accepted to take part in our HIT. After everything was prepared, the HIT on mTurk was finished within half an hour.

Norstat sent the survey out on their weekly Norwegian web-survey panel, and provided us with 1000 respondents. The Norstat's infrastructure ensured that the respondents were nationally representative and that there were no duplicate answers.

After a week, we got all answers back from Norstat as well as the answers from mTurk. To finalize the experiment, we calculated the additional payment for each worker. This was done by randomly drawing 25 spectators from each treatment group, and randomly assigning them to the workers in the same treatment group. As there were 1000 spectators and 100 workers, we had a 10 to 1 matching, and there was a 10% chance that a spectator's decision was applied to a worker's situation. Secondly, we validated whether the spectator would let the worker choose for oneself, or if the spectator had chosen for the worker. Thirdly, we found which payment option that had been chosen according to their respective choices, and if the payment option included a lottery, the lottery was run according to the chances given in the experiment. In the end, each worker had been assigned an additional payment according to their treatment, the choice of the spectator, their own choice and the outcome of any lottery. The payments

[3] Human Intelligence Task

were distributed by the The Choice Lab within two weeks after the workers had completed the working task.

The workers were paid in US dollars, and the information we provided them about the payment options were stated in USD. However, the spectators were recruited in Norway and provided with information in Norwegian. To reduce noise in our results due to spectators having to calculate the currency exchange from US dollars to Norwegian kroner, the payment options were stated in NOK to the spectators. Furthermore, to make it easier for the test subjects to make calculations with respect to the payment options probabilities in either currency, we used a USD/NOK exchange rate of 1:10. While this is a bit off the nominal exchange rate in of 1:8.5, we argue that it is sufficiently close to the purchasing power parity adjusted exchange rate of 1:9.5, to make the incentive roughly equivalent in magnitude across both populations (World Bank, 2017).

4. Hypotheses and empirical strategy

In this chapter, we present the hypotheses that we use to answer our research questions, as well as the empirical strategy to test our hypotheses.

4.1 Hypotheses

In this subchapter, we give an overview of the effects we expect our different stimuli to have on the willingness to act paternalistically, i.e. the hypotheses.

The output we measure from each treatment is the share of spectators making a paternalistic decision. By comparing the average share of paternalists across treatments, we can test the effect of different stimuli on the willingness to act paternalistically. Table 2 below presents an overview of the stimulus and output from each treatment.

Treatment	Stimuli	Output
1. Basis	No information asymmetry	Share of Paternalists
2. Spectator informational advantage	Information asymmetry in favor of the spectator	Share of Paternalists
3. Stakeholder informational advantage	Information asymmetry in favor the stakeholder	Share of Paternalists
4. Combined	Information asymmetry in favor of the spectator and in favor the stakeholder	Share of Paternalists

Table 2: The table shows an overview of the treatments, stimuli and output.

Our hypotheses describe the expected effect of the different stimuli on the output. Hypothesis 1 represents the change in the willingness to act paternalistically when we add information asymmetry in favor of the spectator. Hypothesis 2 represents the change in willingness to act paternalistically when we add information asymmetry in favor of the stakeholder.

Hypothesis 1: Information asymmetry in favor of the spectator will increase the willingness to act paternalistically

Hypothesis 2: Information asymmetry in favor of the stakeholder will decrease the willingness to act paternalistically.

We do not include a hypothesis on the interaction effect as there is no theoretical foundation that indicates how the two types of information asymmetry will interact when applied at the same time.

4.2 Empirical strategy

In this subchapter, we present the empirical strategy to test the hypotheses. First, we explain the main empirical specification that we apply to answer our research questions and test the hypotheses. Second, we present the heterogeneity analysis used to test the results across subgroups of our sample.

4.2.1 Main analysis

We make use of multiple regressions to test our hypotheses. This allows us to investigate the magnitude that the explanatory variables (treatments) have on the dependent variable (the willingness to act paternalistically), and to control for background variables.

The main variable of interest to answer our research questions is the willingness to act paternalistically. The spectators could decide to let the worker make his/her own choice, or decide to take the choice on behalf of the worker. We measure the willingness to act paternalistically as the share of spectators that decided to choose payment option on behalf of the worker, and we will refer to these spectators as *paternalists*. If a spectator made the choice on behalf of a worker, it is less important for our analysis which of the payment options the spectator chose. This is because we are primarily interested in *whether or not the spectators chose to act paternalistically*, not what outcome this resulted in for the worker. Equation (1) is the main empirical specification used in the analysis:

$$Paternalist_i = \beta_i + \beta_{SP}SP_i + \beta_{ST}ST_i + \beta_{SP*ST}SP_i*ST_i + \beta x_i\mathbf{X_i} + \varepsilon_i \quad (1)$$

Paternalist is the share of spectators that decided to choose payment option on behalf of the worker. If all spectators decided to choose on behalf of the worker the variable would have the value 1. If all spectators decided to let the worker choose for themselves, the value would be 0. SP is an indicator variable for information in favor of the spectator, and has the value 1 if the spectator was assigned to the spectator informational advantage or combined treatment, and the value 0 if not. ST is an indicator variable for information in favor of the stakeholder,

and has the value 1 if the spectator was assigned to the stakeholder informational advantage or combined treatment, otherwise 0. SP*ST is an indicator variable with the value 1 if the spectator was treated with both dimensions of information asymmetry at the same time, i.e. assigned to the combined treatment. $\mathbf{X_i}$ is a vector for the control variables. The reference group is the spectators assigned to the base treatment. We will report and discuss variations of the main empirical specification.

The constant, β_0, represents the willingness to act paternalistically when there is no information asymmetry. The estimated causal effect of information asymmetry in favor of the spectator is given by β_1. The estimated causal effect of information asymmetry in favor of the stakeholder is given by β_2. The estimated interaction effect when the two dimensions of information asymmetry are applied simultaneously is β_3.

The output of the multiple regression gives the estimated magnitude of the effect each independent variable has on the willingness to act paternalistically. It also includes p-values that indicates the statistical significance of each estimated coefficients. The p-value represents the chance that the null-hypothesis is true. In our case the null hypothesis for all independent variables, is that the variable has no effect on the willingness to act paternalistically. Opposite, the alternative hypothesis is that the variable has a real effect on the dependent variable, the willingness to act paternalistically. A p-value of 0.05 indicates that there is a (1 – 0.05) 95% chance that the coefficient represents a true effect of the variable, and that we reject the null-hypothesis of no effect. A high p-value indicates that we cannot reject the null-hypothesis, and thus that there is not enough statistical evidence to argue that there is a true effect of the respective independent variable on the dependent variable. As discussed in section 3.2.1 Power Calculations, we use a significance level of 0.05 to reject the null-hypothesis (Cohen, 1992).

4.2.2 Heterogeneity analysis

In the heterogeneity analysis, we test if the results from our main analysis applies to all subgroups of our sample. We conduct this analysis by testing the interaction between the different subgroups and the treatments, and compare the results to the treatment effects for the whole sample. If the treatment effects for the different subgroups are equal to the treatment effects of the whole sample, we can conclude that our results are robust across subgroups.

Norstat record data on a broad range of background variables. We made a selection of background variables to include in our regression, based on the statistical explanatory

significance and the internal correlation between the background variables. We adjusted for the following background characteristics; gender, age, socioeconomic status and political orientation. Equation (2) is the extended empirical specification, used for the heterogeneity analysis:

$$Paternalist_i = \beta_i + \beta_i\delta_i + \beta_{SP}SP_i + \beta_{SP}SP_i\delta_i + \beta_{ST}ST_i + \beta_{ST}ST_i\delta_i + \beta_{SP*ST}SP_i*ST_i + \beta_{SP*ST}SP_i*ST_i\delta_i + \beta x_i\mathbf{X_i} + \varepsilon_i \quad (2)$$

δ_i is an indicator variable for spectator *i* being either male, having higher education or voted for certain political parties in the last election. Age is added as a continuous variable as one of the background variables in the vector $\mathbf{X_i}$ and has the value of the spectator's age in years. Male is an indicator variable for gender, and has the value 1 if the spectator is a male and 0 if the spectator is a female. Higher education is an indicator variable that has the value 1 if the spectator has at least 1 year of university or college education, and the value 0 otherwise. Both income and education can be a proxy for the socioeconomic status of the spectator. To avoid including several variables that essentially measure the same feature, we have included only education, as education had a higher statistical significance than income. Income also had more missing observations as more spectators chose to not specify their income level.

In the background questionnaire, the spectators stated which party they voted for in the previous election on a list of 10 different political parties in Norway. As we have four different treatments and 10 different parties, we adjust for political orientation by grouping the parties in two indicator variables, Conservative and Socialist, representing the political orientation of the spectator. The parties that are included in each party group are listed in Table 3. Each variable has the value 1 if the spectator voted for a party in the respective party group in the last election, otherwise 0. If the spectator did not vote, did not state which party he voted for, or voted for a party that is not listed in Table 3, both political indicator variables have the value 0. As an additional test, we will include an indicator variable for each political party in a separate regression.

Political indicator variables	**Political party voted for in last election[4]**
Conservative	The Christian Party, the Liberal Party, the Conservative Party and the Progress Party
Socialist	The Red Party, the Socialist Left Party, the Labor Party, and the Centre Party

Table 3: The table shows the political parties included in each subgroup of our division of the political landscape in Norway.

[4]Norwegian party names: *Rødt* (the Red Party), *Sosialistisk Venstreparti* (the Socialist Left Party), *Arbeiderpartiet* (the Labor Party), *Senterpartiet* (the Centre Party), *Kristelig Folkeparti* (the Christian Party), *Venstre* (the Liberal Party), *Høyre* (the Conservative Party), *Fremskrittspartiet* (the Progress Party). The spectators could also select *Miljøpartiet De Grønne* (the Green Party) and *Kyspartiet* (Coastal Party), but was not included due to size and difficulty of categorizing in the Socialist-Conservative dimension.

5. Results and Analysis

In this chapter, we will present the results of our experiment. In the first subchapter, we provide descriptive statistics of the spectator choices. In the second subchapter, we present our findings from the main analysis answering our research questions. In the third subchapter, we will present the results from the heterogeneity analysis. In the fourth subchpater, we provide additional results.

5.1 Descriptive statistics

The share of paternalists in each treatment is illustrated in Figure 4. In the base treatment, the share of paternalists is 18.00%. This implies that 18.00% of spectators chose to make a paternalistic decision that promotes the stakeholder's wellbeing when the spectators are in the same position to make the decision as the stakeholders. This indicates that a fifth spectators place little value in others' autonomy, even when there is no apparent trade-off.

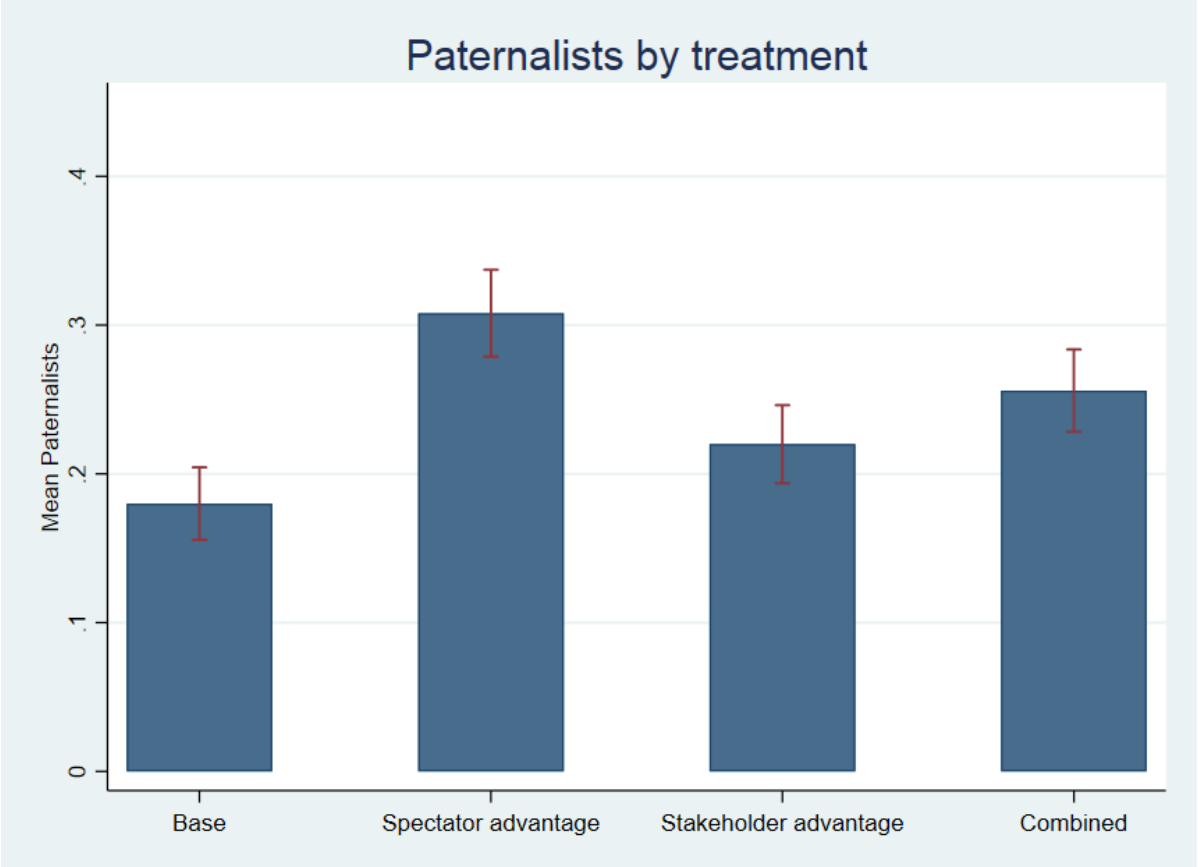


Figure 4: The figure shows the share of spectators acting paternalistically in each treatment. The standard errors are indicated by the bars.

The share of paternalists increases to 31.80% in the spectator informational advantage treatment. This is 13.80 percentage points higher than the base treatment, meaning that the spectators were roughly 75% more likely to act paternalistically under these conditions. Accordingly, more spectators decided to restrict the freedom of the stakeholder when the spectators had more information about the possible outcomes and therefore knew they were in a better position to make the decision.

However, 68.2% of the spectators decided to not interfere and let the stakeholder make the decision themselves in the spectator informational advantage treatment. In this treatment, the spectator clearly had more information about the outcomes, and could increase the wellbeing of the stakeholder by restricting his autonomy. There was no uncertainty regarding which payment option that was best for the stakeholder, and the spectator knew that he or she was in a better position to make the decision. As only a third of the spectators chose to interfere in this situation, our results show a strong aversion against interfering with the autonomy of peers. This indicates that people generally place a higher value on other's autonomy over promoting their wellbeing.

The share of paternalists also increases from the base treatment to the stakeholder informational advantage treatment, where 22.00% of the spectators acted paternalistically, an increase of 4.00 percentage points. While this is a relatively small effect, its direction is the opposite of what we initially expected. It may also appear to be irrational, as adding uncertainty about the stakeholder's preferences leaves the spectator with less information about the expected utility of the different payment options than the stakeholder.

In the combined treatment, there is a share of 25.60% paternalists, which is 7.60 percentage points more than the no asymmetry treatment. This is 6.20 percentage points less than the spectator informational advantage treatment, but 3.60 percentage points more than the stakeholder informational advantage treatment. Thus, indicating an interaction effect between information asymmetry in favor of the spectator and in favor of the stakeholder.

The total share of paternalists across all treatments is 24,10%, and paternalists represents a minority in all four treatments. This indicates that a majority of the spectators have a moral preference for autonomy in non-hierarchical one-to-one relationships.

5.2 Main analysis

In Table 4, the output of the regressions made to test our hypotheses are shown. Regression (1) – (4) show the explanatory variables according to the main empirical specification explained in 4.2.1. Thus, the variables represent the two dimensions of information asymmetry and the interaction of the two. The findings of the main analysis is presented below.

Table 4: Output of Regression (1) – (5). Generated from Stata, 2017.

	(1) Paternalist	(2) Paternalist	(3) Paternalist	(4) Paternalist
Information asymmetry in favor of spectator, SP	0.082** (0.027)		0.128*** (0.038)	0.126*** (0.038)
Information asymmetry in favor of stakeholder, ST		-0.006 (0.027)	0.040 (0.038)	0.038 (0.038)
Interaction effect, SP*ST Information asymmetry			-0.092 (0.054)	-0.089 (0.054)
Male				0.078** (0.027)
Age				-0.002** (0.001)
Higher education				-0.053 (0.028)
Conservative				-0.0056 (0.033)
Socialist				0.0138 (0.035)
Constant	0.200*** (0.019)	0.244*** (0.019)	0.180*** (0.027)	0.286*** (0.053)
N	1000	1000	1000	1000
lincom: Spectator advantage to combined treatment			-0.052 (0.038)	-0.053 (0.038)
Stakeholder advantage to combined treatment			0.036 (0.038)	0.044 (0.038)
Base treatment to combined treatment			0.076* (0.038)	0.079* (0.038)

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Result 1: Significant positive effect of information asymmetry in favor of the spectator on the willingness to act paternalistically

The effect of information asymmetry in favor of the spectator is examined in regression (1), (3) and (4). In regression (1) the only explanatory variable, SP, is the indicator variable of whether the spectators were treated with information asymmetry in favor of the spectator or not. In other words, the share of paternalists in the spectator informational advantage treatment and the combined treatment are compared to the share of paternalists in the base treatment and the stakeholder informational advantage treatment. The constant shows that the share of paternalists where there is no information asymmetry in favor of the spectator is 20.0%, and the coefficient shows the share of paternalists is 28.2% when it is present. Both the constant and the coefficient has a p-value less than 0.01. This indicates that information asymmetry in favor of the spectator has a significant positive effect on the willingness to act paternalistically. However, the two groups are not directly comparable as it partly includes information asymmetry in favor of the stakeholder as well.

In regression (3) and (4), the other explanatory variables stated in the main empirical specification are added, with and without background variables. In both regressions, the coefficient of SP has a magnitude of 12.6-12.8% with a p-value less than 0.001. This represents strong results of the magnitude and the statistical significance of the explanatory variable. We conclude that there is statistical evidence for Hypothesis 1, and that information asymmetry in favor of the spectator causally affects the willingness to act paternalistically to increase.

This implies that when the spectator clearly can increase the expected value of the payment option for the worker, and thus the expected wellbeing the worker will get from receiving the payment option, more spectators make a paternalistic decision. The results show that people are more inclined to interfere with another person's autonomy when they can improve their wellbeing.

Result 2: No significant effect of information asymmetry in favor of the stakeholder on the willingness to act paternalistically

To examine the effect of information asymmetry in favor of the stakeholder, we first look at the output of regression (2) where the only variable is the indicator variable of whether the spectator was treated with information asymmetry in favor of the stakeholder or not. The coefficient shows that the average willingness to act paternalistically is 0.6% less when there

is information asymmetry in favor of the stakeholder present. However, the coefficient is not significant, and this regression does not take the dimension of information asymmetry in favor off the spectator into account.

In regression (3) and (4), both dimensions of information asymmetry as well as the interaction effect is accounted for. The coefficient for information asymmetry in favor of the stakeholder, ST, has a magnitude of 3.8% and a p-value of 0.33 when controlling for background variables. This means the coefficient is not significant, and that the 4.0% difference in the average share of paternalists cannot be explained by a causal effect of information asymmetry in favor of the stakeholder. We conclude that there is no statistical evidence for hypothesis 2, and we cannot reject the null hypothesis of no effect of information asymmetry in favor of the stakeholder on the willingness to act paternalistically.

In this state, we would expect the spectators to interfere less than in the base treatment, as the spectator must assume the preferences of the stakeholder to be able to improve the stakeholder's wellbeing. Consequently, a paternalistic decision is an even stronger interference with the stakeholder's autonomy. No effect implies that the spectators disregard the stakeholder's risk preferences when making paternalistic decisions. This could indicate that people are less able or less willing to take into account information about preferences than information about outcomes. One explanation could be that many spectators do not perceive there to be a case of information asymmetry when the only thing the spectators do not know about is the risk preferences. From a strict economic point of view, unknown risk preferences are fundamentally no different from unknown preferences about ice cream flavor. Accordingly, it is interesting if people find it particularly difficult to identify the state of unknown risk preferences.

However, we find that information asymmetry in favor of the stakeholder affects men and women differently. These findings are presented as Result 4 in section 5.3 Heterogeneity analysis.

Result 3: No significant interaction effect when information asymmetry in favor of spectator and in favor of stakeholder is applied at the same time

In regression (3) and (4), the interaction effect of the two dimensions of information asymmetry is included as the variable SP*ST. The coefficient of the variable is negative at a magnitude of 8.9% when controlled for background variables. This indicates that the combined effect of the two dimensions of information asymmetry is 8.9% less than the two

effects added together. However, the coefficient has a p-value of more than 0.05, and the interaction effect is not statistical significant. This implies that there is no additional effect of the two types of information asymmetry when they are applied together.

To test how the effect of information asymmetry in favor of the spectator is affected when adding information asymmetry in favor of the stakeholder, and vice versa, we look at the linear combination of the coefficients of information asymmetry in favor of the spectator (SP) and stakeholder (ST), and the interaction variable (SP*ST). This lincom coefficients are -5.2% and +3.6% respectively, which is the difference between the spectator informational advantage treatment and the combined treatment, and the stakeholder informational advantage treatment and combined treatment. The coefficients have a p-value larger than 0.05 and is not significant. Thus, the effect of adding one type of information asymmetry to a situation where there already exists another type of informational asymmetry is not statistically significant.

We also test the effect of applying both variations of information asymmetry to a situation of no information asymmetry. In other words, we test if the difference between the base treatment and the combined treatment is significant. This linear combination of all the three treatment coefficients, ST, SP and ST*SP, is 7.6%. This reflects that the share of paternalists in the combined treatment is 7.6% higher than the share of paternalists in the base treatment. The p-value is less than 0.05, thus the effect is significant. As neither the interaction effect nor the effect of information in favor of the stakeholder is significant, we conclude that the effect of adding the two types of information asymmetry at the same time reflects the effect of adding information asymmetry in favor of the spectator.

We find a significant effect between the base treatment and the combined treatment, as well as a significant positive effect of information asymmetry in favor of the spectator. However, we do not find a significant effect between the base treatment and stakeholder informational advantage treatment, and not a significant effect between the stakeholder informational advantage and combined treatment. This indicates that there might be some countereffects when adding the two dimensions of information asymmetry at the same time, but we do not have enough statistical evidence to reject the null hypothesis of no interaction effect.

5.3 Heterogeneity analysis

In the heterogeneity analysis, we test if the findings from our main analysis applies to all subgroups of our sample. We find that in general the results are robust across subgroups. However, we find two exceptions, one related to gender and one to the education level of the spectator. Table 5 show the regression outputs for the heterogeneity analysis.

Table 5: Output of regressions (1) – (2), heterogeneity analysis generated from Stata, 2017.

	(1) Male	(2) High education
SP	0.122*	0.0202
	(0.052)	(0.060)
ST	-0.001	0.024
	(0.051)	(0.060)
SP*δ	0.020	0.185*
	(0.076)	(0.077)
ST*δ	0.080	0.023
	(0.076)	(0.077)
Male	0.061	0.078**
	(0.054)	(0.027)
Age	-0.002**	-0.002**
	(0.001)	(0.001)
Higher education	-0.062*	-0.155**
	(0.028)	(0.054)
Political orientation	Yes	Yes
Constant	0.298***	0.342***
	(0.058)	(0.061)
N	1000	1000

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Result 4: Men are significantly more willing to act paternalistically when there is information asymmetry in favor of the stakeholder

In the main analysis, we find no effect of information asymmetry in favor of the stakeholder on the willingness to act paternalistically. Interestingly, we find clear results when testing the

effect separately for men and women. Regression (1) in Table 5 show the results of the heterogeneity analysis. While women seem unaffected by the presence of information asymmetry in favor of the stakeholder, men are significantly more willing to act paternalistically. This implies that the male spectators are significantly more willing to restrict the stakeholder's autonomy when they are in a poorer position to choose payment option on behalf of the stakeholder, compared to a state when they are in the same position as the stakeholder. This could indicate that men are significantly more willing than women to impose their own risk-taking preference on others.

One explanation could be that the spectators identify that the workers may have a different perception of which payment option has the highest expected utility, and the male spectators decide to interfere to make sure that their own perception of the best option is chosen. In other words, they project their own preferences to the worker. In contrast, the spectator has no reason to believe that the worker will choose differently from the spectator in the base treatment. It could also indicate that men are inferior at recognizing unknown risk preferences.

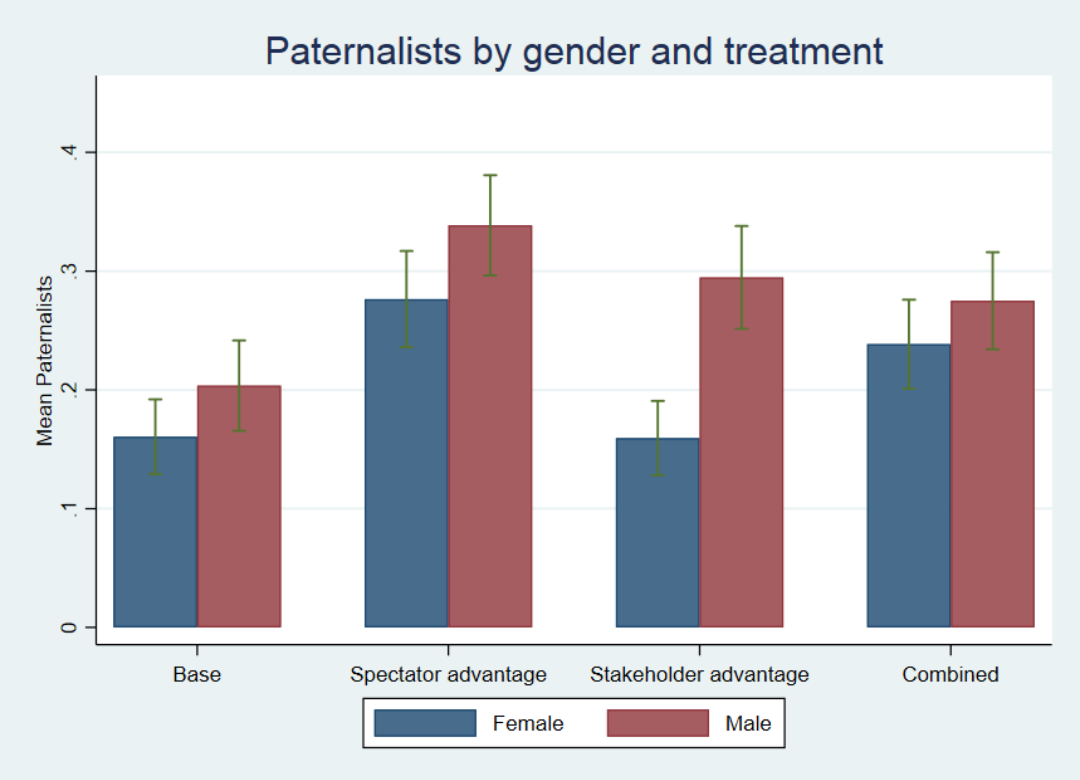


Figure 5: The figure shows the share of paternalistic men and women across treatments. The standard errors are indicated by the bars.

Result 5: Spectators without higher education are not affected by information asymmetry

From the heterogeneity analysis, we find that spectators without higher education are not affected by information asymmetry. There is no significant difference of the share of paternalists across the four treatments. For spectators with higher education, the difference is significant. Regression (2) in Table 5 shows the results of the heterogeneity analysis. The coefficient for SP*δ has a p-value of less than 0.05, thus indicating a significant positive effect of information in favor of the stakeholder for male spectators. The coefficient for SP has a p-value higher than 0.05, thus indicating that spectators without higher education are not affected by getting an informational advantage when making paternalistic decisions.

One explanation for this finding could be that the treatments in our experiment design are easier to understand for spectators with higher education, as they have had more exposure to similar types of problems in a university setting, while the spectators without higher education may have been relatively less likely to differentiate between the treatments. The difference can be observed in Figure 5.

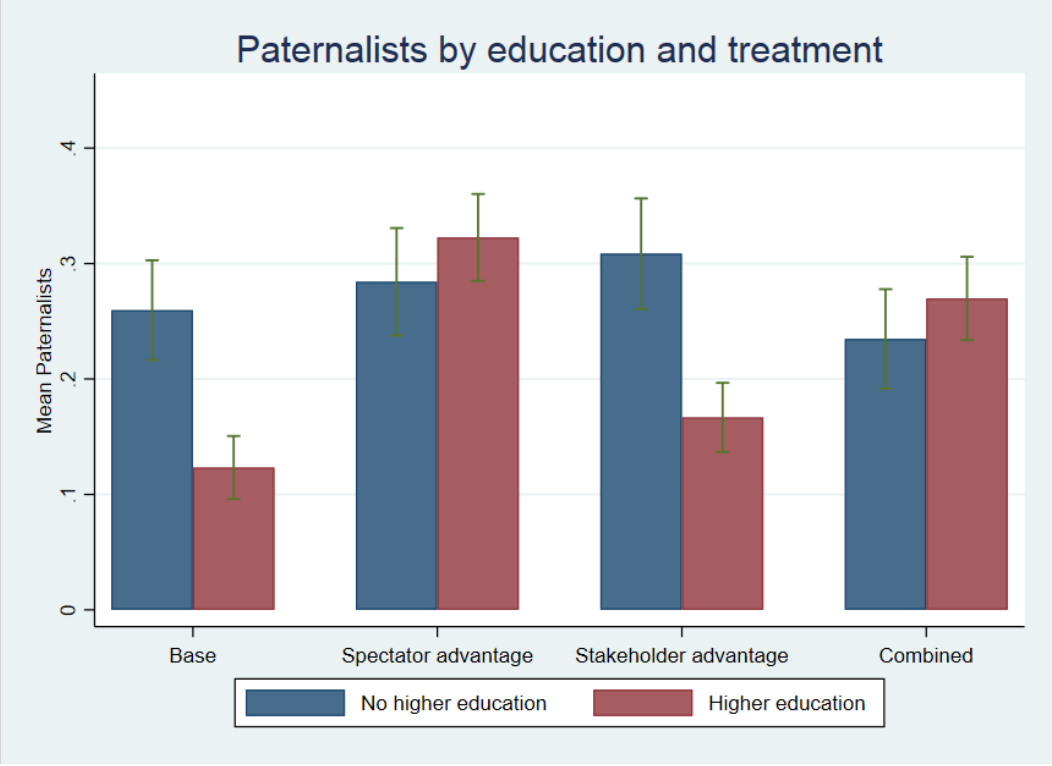


Figure 6: The figure shows the share of paternalists with and without higher education across treatments. The standard errors are indicated by the bars.

5.4 Additional analysis

Table 6 shows output from regressions that examine the relationships between a selection of the background variables and the dependent and independent variables. We find significant level differences in the willingness to act paternalistically across treatments between subgroups. Our results indicate that gender, age, education and political orientation all have statistically significant effects on the willingness to act paternalistically.

Table 6: Output of regressions (1) – (6), including control variables. Generated from Stata, 2017. Full table in Appendix, A.7 Tables and Figures.

	(1) Paternalist	(2) Paternalist	(3) Paternalist	(4) Paternalist	(5) Paternalist	(6) Paternalist
Male	0.069*	0.075**	0.077**	0.078**	0.079**	0.084**
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
Age		-0.002**	-0.002**	-0.002**	-0.002**	-0.002**
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Higher education			-0.053	-0.053	-0.053	-0.065*
			(0.027)	(0.027)	(0.028)	(0.028)
Conservative				-0.013	-0.006	
				(0.028)	(0.033)	
Socialist					0.014	
					(0.035)	
All political parties						Yes
Constant	0.149***	0.258***	0.288***	0.291***	0.286***	0.290***
	(0.030)	(0.049)	(0.051)	(0.051)	(0.053)	(0.054)
N Observations	1000	1000	1000	1000	1000	1000

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

- **Gender:** Men are significantly more willing to act paternalistically than women across all treatments

In regression (1) – (6) male is applied as an explanatory variable for the willingness to act paternalistically. The coefficient for male has a p-value of less than 0.01 in all regressions

where additional control variables are included, which indicates that there is a significant gender difference in the willingness to act paternalistically. The coefficients for male in the regressions suggest that the share of men making a paternalistic decision will be 7 to 8 percentage points higher than the share of paternalistic women.

We conclude that men are significantly more willing to act paternalistically than women. This indicates that women have a stronger moral preference for autonomy over promoting others' wellbeing than men.

- **Age:** Age has a significant negative effect on the willingness to act paternalistically

In regression (2) - (6), age is added as an explanatory variable for the willingness to act paternalistically. We find that age has a negative effect on paternalistic behavior, and the coefficient indicates that the share of paternalists will decrease by 0.2% percentage points per year of added age. The p-value is less than 0.01 in all regressions. We also tested the variable age*age, to see if there is a non-linear effect of age on paternalistic behavior, for example a diminishing effect. However, we could not find a non-linear relationship. This indicates that the effect of reduced willingness to act paternalistically is prevalent in all age groups.

We conclude that the willingness to act paternalistically significantly decreases when the spectator's age increases. This indicates that older spectators have a stronger preference for respecting the stakeholders' autonomy over promoting their wellbeing, than the younger spectators. However, our data cannot indicate if this is a generational effect, or if it is an effect of increased age. That is, if people that are young today in general are more paternalistic throughout life than people that are old today, or if people become less and less paternalistic as they grow older.

- **Education:** Higher education has a significant negative effect on the willingness to act paternalistically

In regression (3) - (6), higher education is added as an explanatory variable. The p-value of the education coefficient is 0.054 in regression (3) – (5), which indicates some evidence that higher education is a relevant predictor for the willingness to act paternalistically. When we include indicator variables for all political parties in regression (6), the p-value falls to less than 0.05, thus indicating a statistical significant effect of education on the willingness to act paternalistically. The magnitude of the coefficient indicates that spectators with higher

education are 5.3-6.3% less willing to act paternalistically than spectators without higher education. Our data does not give any indication on whether higher education makes people less willing to act paternalistically, or if people that choose to take higher education are less paternalistic to begin with. The results suggest that people with higher education are less likely to act paternalistically than people without higher education. Thus, educated spectators have a stronger preference for respecting the stakeholders' own decision rights over promoting their wellbeing, than less educated spectators.

- **Political orientation:** Political orientation has a significant effect on the willingness to act paternalistically

To examine the effect of political orientation on the willingness to act paternalistically, we use two variables representing two different subgroups of political parties[5]. The subgroups are along the traditional left-right dimension in politics, respectively the socialist parties and the conservative parties. Regression (4) and (5) show that none of the coefficients for these groups are statistically significant. Hence, we find no significant effect on the willingness to act paternalistically if the spectator voted for a party in any of these groups compare to other spectators.

We also test for political orientation by adding one indicator variable for each of the 9 parties. We find that spectators who voted for the Socialist Left Party (SV) and the Progress Party (Frp), are less paternalistic than others with a p-value of less than 0.01. The coefficients for all other political partiy variables have a p-value above 0.05 and are not significant. This suggests that the willingness to act paternalistically is affected by the political orientation of the spectator, however, not along the traditional left-right dimension. The results indicate that wing party voters on both sides of the traditional left-right dimension, place a higher value on respecting the stakeholders' autonomy than on promoting their well-being, compared to other spectators.

[5] The parties included in each subgroup is described in section 4.2.2 Heterogeneity analysis

6. Conclusion

In this chapter, we will summarize and discuss the results from the analysis. First, we will summarize our findings. Second, we will discuss limitations of our research and suggest further research on this topic.

6.1 Discussion of results

In this thesis we have studied moral motivation in hard paternalistic interferences. Based on the evidence that people are morally motivated, and that people value both autonomy and others' wellbeing, we have investigated which preferences are dominant when forced with a trade-off between these moral values. We appraoched this by studying when people are willing to make paternalistic decisions in a real-life situation. More specifically, we have looked at how information asymmetry, and thereby the potential influence on another person's wellbeing, casually determines paternalistic behaviour. In doing so we contribute to the study of moral motivation by introducing a new dimension to the study of peoples' moral preferences. We hope this will provide novel insights on the nature behind paternalistic interferences, and on the moral foundations of human behaviour.

Our main findings include a significant treatment effect of information asymmetry in favor of the spectator, indicating that people are more inclined to interfere with another person's autonomy when they can improve their wellbeing. However, our results reveal that in general, people have a strong aversion of interfering with other's autonomy in non-hierarchical relationships.

We find that information asymmetry in favor of the spectator has a significant positive effect on the willingness to act paternalistically. When the spectator clearly can increase the expected value of the payment option for the worker, and thus the expected wellbeing the worker will get from receiving the payment option, more spectators choose to interfere with the stakeholder's autonomy. About 75% more spectators chose to act paternalistically when the spectators had an informational advantage compared to the base treatment. This indicates that people are more inclined to act paternalisitcally when they are in a better position to make a decision that promotes the other person's wellbeing.

However, we find that 68.2% of the spectators decided to not interfere and let the stakeholder make the decision themselves in the spectator informational advantage treatment. In this treatment, the spectator clearly had more information about the outcomes, and could increase the wellbeing of the stakeholder by restricting his autonomy. There was no uncertainty regarding which payment option that was best for the stakeholder, and the spectator knew that he or she was in a better position to make the decision. As only a third of the spectators chose to interfere in this situation, this reveals a strong aversion against interfering with the autonomy of peers, implying that people put a high value on other's autonomy.

Further on, we find no significant effect on the spectator's willingness to act paternalistically when the stakeholder has more information. In this state, we would expect the spectators to interfere less than in the base treatment as the potential influence on the stakeholder's wellbeing is less prevalent. No effect implies that the spectator's disregard the stakeholder's risk preferences when making paternalistic decisions. This could indicate that people are less able or less willing to take into account information about preferences than information about outcomes. One explanation could be that many spectators do not perceive there to be a case of information asymmetry when the only thing the spectators do not know about is the risk preferences. From a strict economic point of view, unknown risk preferences are fundamentally no different from unknown preferences about ice cream flavor. Accordingly, it is interesting if people find it particularly difficult to identify the state of unknown risk preferences.

We find no significant interaction treatment between the two variations of information asymmetry. The effect of information asymmetry in favor of the spectator is not significantly affected by the presence of information asymmetry in favor of the stakeholder. Vice versa, the effect of information asymmetry in favor of the stakeholder is not stastically significantly affected by information asymmetry in favor of the spectator.

In addition to the main analysis, we find two heterogeneities in the treatment effects. First, we find that spectators without higher education are less affected by information asymmetry than spectators with higher education. One explanation could be that the treatments in our experiment design are easier to understand for people who have had more exposure to similar types of problems in a university setting, while the spectators without higher education may have been relatively less likely to differentiate between the treatments. Second, we find a gender difference in the treatment effect of information asymmetry in favor of the stakeholder.

While women seem unaffected by the presence of information asymmetry in favor of the stakeholder, we find that men are significantly more willing to act paternalistically when there is information asymmetry in favor of the stakeholder. This implies that the male spectators are significantly more willing to restrict the stakeholder's autonomy when they are in a lesser position to choose payment option on behalf of the stakeholder, compared to a state when they are in the same position as the stakeholder. This indicates that men are significantly more willing than women to impose their risk-taking preference on others. It could also indicate that men are significantly inferior at recognizing unknown risk preferences.

Our results show several significant differences between subgroups in the overall willingness to act paternalistically. Our results indicate that gender, age, education and political orientation all have statistically significant effects on the willingness to act paternalistically across treatments. Men are significantly more paternalistic than women in our sample, on average making 35% more paternalistic decisions. We find a significant decreasing effect of age on the willingness to act paternalistically. This effect is prevalent in all age groups. We also find this to be a non-diminishing effect, for every year added to the spectator's age, he or she is 0.2% less likely to make a paternalistic decision, regardless of which age group we look at. We find that socioeconomic status, measured by education level, has a negative effect on the willingness to act paternalistically. Spectators without higher education were around 6% more paternalistic than spectators with higher education. Political orientation has a substantial effect on the willingness to act paternalistically, however, not along the traditional left-right dimension. Instead, we find that wing[6] party voters on each side of the traditional left-right dimension are significantly less paternalistic than others.

[6] Spectators that voted for the Progress Party (*Fremskrittspartiet*) and the Socialist Left Party (*Sosialistisk Venstreparti*) were significantly less willing to act paternalistically than others.

6.2 Limitations and suggestions for further research

6.2.1 Limitations

Some aspects of the experimental design are important regarding limitations of our research.

The purpose of our study is to examine the mechanisms of paternalistic behavior, specifically the effect of how information assymetry casually affects paternalistic bahavior. A main feature of our research is that the experiment is stylized, so that the attitudes or associations to specific daily-life situations will not affect the willingness to act paternalistically. A consequence of making the experiment stylized, may be that it is more demanding for the participants to visualize and engage in a situation that is perceived as constructed or abstract.

The magnitude of the payment options is important to mention. The expected value of the additional payment was 7.5 USD across all treatments. As the expected value is the same across treatments, we can compare the share of paternalists. However, we cannot know if the results are relevant for other magnitudes of the payment. 7.5 USD is less than the average hourly wage in Norway (SSB, 2017). Consequently, the participants may not perceive that there is much at stake. The results will most likely vary with the magnitude of the potential impact that the spectators can have on the wellbeing of the stakeholder. We chose the magnitude of the payment to accommodate the budget constraints of our study while having a sufficiently large sample size to analyze.

The degree of information asymmetry may also affect the results. In two of the treatments, the spectators had more information about the probabilities than the stakeholders did, but the spectators did not have complete information about which payment option would lead to which outcome. We wanted this ambiguity to create a moral dilemma, where whether to make a paternalistic decision would not be an obvious choice. The result of our study show that there is a trade-off between others' autonomy and others' wellbeing, but our research does not explore the sensitivity of this trade-off.

To create a state of information asymmetry in favor of the stakeholder, we made the risk preferences of the stakeholder unknown to the spectator. This means that our findings are only relevant in the specific context where information asymmetry in favor of the stakeholder takes

the form of unknown risk preferences. Other proxies for information asymmetry in favor of the stakeholder may give other results.

Our experiment had some complexity, and was presented to the spectators in written text. This could have caused a difference between respondents with and without higher education, as former group may be more experienced with analyzing abstract situations presented to them as written text and making conclusions about it.

6.2.2 Further research

The findings of our study provide many questions for further research. Our study assumes that there exists a moral trade-off between other's autonomy and other's wellbeing, but does not examine the sensitivity of the trade-off. This could be interesting to explore further. Our findings include significant heterogeneities in paternalistic behavior across subgroups, in particular gender, age, and political affiliation. Further research is needed to better understand the nature and reason for these differences, for. It could potentially also be interesting to link paternalistic behavior to other behavioral or psychological aspects to explain the heterogeneity.

One of our most interesting findings, is the strong aversion against interefering with the autonomy of our peers, even when we are in a better position to make a decision. This could be an interesting topic to explore with further research.

Regarding information asymmetry in favor of the stakeholder, it could be valuable to experiment with other proxies than unknown risk preferences in order to examine how this affects the spectators' ability and willingness to take into account information about others' preferences. One potential inference from our findings is that spectators treat risk preferences differently from other preferences, but this needs further research.

Another avenue for further research could be to reduce the complexity of the experiment or change the methodology, to examine if this is the source of difference between spectators with and without higher education.

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Appendix

A.1 Survey in Norstat

The original text that was presented to the spectators in the survey is given in Norwegian below. A total of 1000 spectators participated and each spectator was asked only one of the four treatments below. Each treatment had 250 spectators.

Treatment 1: Base treatment

I motsetning til en vanlig spørreundersøkelse, vil du nå bli bedt om å ta et valg som kan ha reelle konsekvenser for en annen person.

For noen dager siden ble en person rekruttert gjennom et online arbeidsmarked for å utføre en arbeidsoppgave. Personen mottok 10 kr for å delta. Siden personen fullførte arbeidsoppgaven, er vedkommende også kvalifisert til å motta en bonusbetaling. Som bonusbetaling kan personen velge mellom ett av to alternativer, enten alternativ A eller alternativ B. Det ene alternativet gir en betaling på 100 kr og det andre alternativet gir 0 kr. Sannsynligheten for at det er alternativ A som gir 100 kr er 75 %, og sannsynligheten for at det er alternativ B som gir 100 kr er 25 %. Personen har fått oppgitt disse sannsynlighetene.

Personen har fått vite at en annen person kan bestemme om han/hun skal få velge betalingsalternativ selv, eller om den andre personen skal ta valget for han/henne. Du er den andre personen og kan bestemme om personen skal få velge selv, eller du kan velge betalingsalternativ på hans/hennes vegne. Beslutningen din er anonym.

Kryss av for hva du velger

1. Jeg velger at personen selv skal få bestemme hvilket betalingsalternativ han/hun skal motta
2. Jeg velger at personen ikke skal få bestemme selv
    a. jeg velger at han/hun skal motta alternativ A
    b. jeg velger at han/hun skal motta alternativ B

Treatment 2: Spectator informational advatage treatment

I motsetning til en vanlig spørreundersøkelse, vil du nå bli bedt om å ta et valg som kan ha reelle konsekvenser for en annen person.

For noen dager siden ble en person rekruttert gjennom et online arbeidsmarked for å utføre en arbeidsoppgave. Personen mottok 10 kr for å delta. Siden personen fullførte arbeidsoppgaven, er vedkommende også kvalifisert til å motta en bonusbetaling. Som bonusbetaling kan personen velge mellom ett av to alternativer, enten alternativ A eller alternativ B. Det ene alternativet gir en betaling på 100 kr og det andre alternativet gir 0 kr. Sannsynligheten for at det er alternativ A som gir 100 kr er 75 %, og sannsynligheten for at det er alternativ B som gir 100 kr er 25 %. Personen har ikke fått oppgitt disse sannsynlighetene.

Personen har fått vite at en annen person kan bestemme om han/hun skal få velge betalingsalternativ selv eller om den andre personen skal ta valget for han/henne. Du er den andre personen og kan bestemme om personen skal få velge selv, eller du kan velge betalingsalternativ på hans/hennes vegne. Beslutningen din er anonym.

Kryss av for hva du velger

1. Jeg velger at personen selv skal få bestemme hvilket betalingsalternativ han/hun skal motta
2. Jeg velger at personen ikke skal få bestemme selv
    a. jeg velger at han/hun skal motta alternativ A
    b. jeg velger at han/hun skal motta alternativ B

Treatment 3: Stakeholder informational advantage treatment.

I motsetning til en vanlig spørreundersøkelse, vil du nå bli bedt om å ta et valg som kan ha reelle konsekvenser for en annen person.

For noen dager siden ble en person rekruttert gjennom et online arbeidsmarked for å utføre en arbeidsoppgave. Personen mottok 10 kr for å delta. Siden personen fullførte arbeidsoppgaven, er vedkommende også kvalifisert til å motta en bonusbetaling. Som bonusbetaling kan personen velge mellom å motta enten en sikker betaling på 75 kr eller å delta i et lotteri. Lotteriet har to mulige utfall, enten kan man få 300 kr eller 0 kr. Sannsynligheten for å få 300 kr er 25 % og sannsynligheten for å få 0 kr er 75 %. Personen har fått oppgitt disse sannsynlighetene.

Personen har fått vite at en annen person kan bestemme om han/hun skal få velge betalingsalternativ selv eller om den andre personen skal ta valget for han/henne. Du er den andre personen og kan bestemme om personen skal få velge selv, eller du kan velge betalingsalternativ på hans/hennes vegne. Beslutningen din er anonym.

Kryss av for hva du velger

1. Jeg velger at personen selv skal få bestemme hvilket betalingsalternativ han/hun skal motta
2. Jeg velger at personen ikke skal få bestemme selv
    a. jeg velger at han/hun skal motta en sikker betaling på 75 kr
    b. jeg velger at han/hun skal delta i lotteriet

Treatment 4: Combined treatment

I motsetning til en vanlig spørreundersøkelse, vil du nå bli bedt om å ta et valg som kan ha reelle konsekvenser for en annen person.

For noen dager siden ble en person rekruttert gjennom et online arbeidsmarked for å utføre en arbeidsoppgave. Personen mottok 10 kr for å delta. Siden personen fullførte arbeidsoppgaven, er vedkommende også kvalifisert til å motta en bonusbetaling. Som bonusbetaling kan personen velge mellom å motta enten en sikker betaling på 75 kr eller å delta i et lotteri. Lotteriet har to mulige utfall, enten kan man få 300 kr eller 0 kr. Sannsynligheten for å få 300 kr er 25 % og sannsynligheten for å få 0 kr er 75 %. Personen har ikke fått oppgitt disse sannsynlighetene.

Personen har fått vite at en annen person kan bestemme om han/hun skal få velge betalingsalternativ selv eller om den andre personen skal ta valget for han/henne. Du er den andre personen og kan bestemme om personen skal få velge selv, eller du kan velge betalingsalternativ på hans/hennes vegne. Beslutningen din er anonym.

Kryss av for hva du velger:

1. Jeg velger at personen selv skal få bestemme hvilket betalingsalternativ han/hun skal motta
2. Jeg velger at personen ikke skal få bestemme selv
    a. jeg velger at han/hun skal motta en sikker betaling på 75 kr
    b. jeg velger at han/hun skal delta i lotteriet

A.2 Survey in Amazon Mechanical Turk

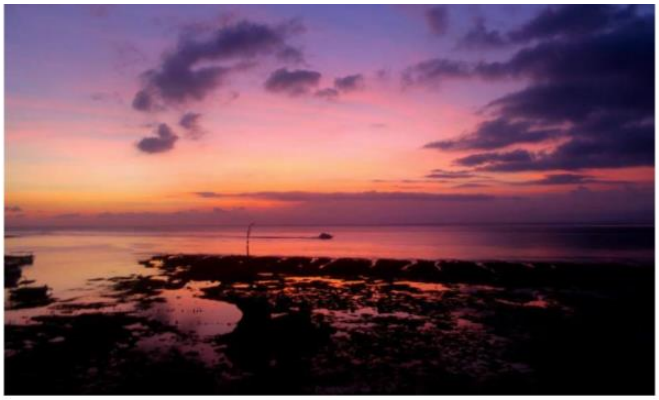
Welcome! Please note that your participation will be registered on the following Amazon Mechanical Turk worker ID: ${e://Field/workerId} The worker ID was retrieved automatically when you clicked on the link that brought you here. This step is necessary for assigning payments to the right account and to ensure that you only participate in this study once.

In the main part of the study, you will be working on a picture categorization task. You will see a picture on your screen and are asked to select the categories from the menu below the picture that you think fit to the picture and its content. You can select multiple categories from the menu if you think that the picture fits into that category as well.

Your answer will be submitted automatically after 30 seconds and you will be given a new picture. The task will last for 10 minutes and we ask you to work thoroughly with each picture.

Click the button below if you have read and understood the instructions.

>>



Please select the elements below that you can identify in the picture:

People	Animals	Plants
Beach	Sea	Snow
Forrest	Mountains	Jungle
Desert	Farmland	Sunny
Rainy	Cloudy	Snowy
Day	Night	Food & Drink
Houses	Industry	Roads
Cars	Bicycles	Boats

Please select the elements below that you can identify in the picture:

People	Animals	Plants
Beach	Sea	Snow
Forrest	Mountains	Jungle
Desert	Farmland	Sunny
Rainy	Cloudy	Snowy
Day	Night	Food & Drink
Houses	Industry	Roads
Cars	Bicycles	Boats

[Note: 18 more picture categorization tasks]

You have completed the main part of the study. In the second part we will ask you two questions about your preferences regarding the payment for your participation in the study.

>>

You have completed the second part of the survey. We would now like to ask you five more questions before we conclude this survey.

What is your gender?

- Male
- Female

How old are you?

What is the highest level of education you have completed?

- Less than High School
- High School / GED
- Some College
- 2-year College Degree
- 4-year College Degree
- Masters Degree
- Doctoral Degree
- Professional Degree (JD, MD)

As an additional payment for this job you can either receive a sure payment of 7.5 dollars, or participate in a lottery to receive a higher payment. In the lottery you can either receive 30 dollars or 0 dollars. You have no further information about the chances.

However, there is a second person that can make the decision on your behalf. The second person can decide whether they wish to choose payment on your behalf, or whether your choice will be effectuated. The second person will not be informed about your initial choice.

- I wish to recieve a sure payment of 7.5 dollars
- I wish to participate in the lottery with a chance to receive 30 dollars

If you could choose to decide for yourself which payment option to receive, or to let someone make the decision for you, what would you prefer?

- I would like to make the decision for myself
- I would like someone else to make the decision on my behalf

Would you describe yourself as politically on the "left" (eg. a liberal) or on the "right" (eg. a conservative)?

1 - Very liberal	2	Neutral	4	5 - Very conservative

Do you trust this requester?

- Yes
- No

Finally, if you have any comments or suggestions related to this study please write them down in the field below. Your feedback is very important to improve our research.

Thanks for your participation!

Your completion code is:

1041217

Please copy and paste the code above into the survey code field on the AMT web page when you submit the HIT.

A.3 Ethical Considerations

Research ethics relates to the standards and principles that guides appropriate conduct of the experiment and behavior by the researcher. Following such standards and principles help secure the research projects integrity, reliability, and validity (Saunders et.al, 2016). While some of the ethical standards applies to all research methods in the sense of presenting accurate and honest information, ethical considerations surrounding experimental procedures may vary depending on how it is conducted (Barchard & Williams, 2009).

In this study, we have conducted our experiment through the online platforms, Amazon Mechanical Turk and Norstat. In contrast to traditional lab experiments, online experiments are characterized by absence of the researcher, and a third party collecting, obtaining the data, and controlling the technical environment surrounding the experiment. These characteristics may pose threats to the ethical treatment of of the participants regarding adequate informed consent, debriefing, and potential loss of participant anonymity or confidentiality. However, absence of face to face interactions between the participants and researchers, reduces the main source of coercion, which is important in maintaining ethical standards towards participants (Barchard & Williams, 2009).

We do not know all details about how Norstat has carried out the experiment. However, all of Norstat´s systems and routines are in accordance with ICC/ESOMAR international code of conduct (Norstat, 2017). This is an international code on market, opinion, social research and data analytics, which sets out global standards for researchers and data analysis's (ICC/ESOMAR, 2016) This also apply to Amazon Mechanical Turk, who follows strict guidelines in accordance to these standards.

In the following sections, we will discuss some of the main ethical concerns/issues with conducting an online experiment. We will focus on debriefing, informed consent, data transmission, security, restricted populations, compensations and confidentiality as central to our experiment.

Informed consent and withdrawal

One of ESOMARS basic codes of conducts is to be transparent about the information they plan to collect, the purpose for which it will be collected, with whom it might be shared and in what form" (ESOMAR, 2016, p .7). This includes informed consent, in that participation is

voluntary and based on information about the general purpose and nature of the research that is adequate and not misleading. This is especially important in online experiments as they participants cannot clarify questions after starting the experiment (Reips, 2002). To avoid participant biases, the instructions sent to Norstat did not include information about the main purpose of measuring willingness to act paternalistically. In M-Turk, we had in information page explaining important aspects of the project, with a consent question at the bottom of the page. This allowed participation without written signature (Barchard & Williams, 2009). As stated in the code of conduct, participants were free to withdraw at any time, by exiting the surveybrowser, in both the experiments. This is one of the ethical advantages of online experiments, as participants feels less pressure to remain in online studies (Barchard & Williams, 2009).

Debriefing

Debriefing is not included as a code of conduct in the ESOMAR standards, and we have no information if opportunity for debriefing was given to the participants in the Norstat experiment. Debriefing is mainly included as an instrument to provide participants with the opportunity of giving feedback, and suggestions regarding the survey. In M-Turk, participants were asked to write down comments or suggestions if they had any feedback regarding the survey. As M-Turk was not a part of our main study, this was mainly for our participants, and not for improving our research design. We do not find debriefing as a very important issue in our research as there are no deceptions (in example brand crisis) in our study. Moreover, we do not consider the experiment in either Norstat or M-Turk to provide any harm for our participants (Barchard & Williams, 2009).

Restricted populations

As restricted populations, including children, young people and other venerable individuals, are part of the ESOMAR standards, Norstat provides sufficient ethical standards regarding this matter. In example we were informed that they did not include minors (people under the age of 18) in their participant pool. This is also stated in Mechanical Turks policies and enforced by making it harder for minors to be accepted as worker, by requiring that payments are linked to verifiable US accounts. (“Mechanical Turk”, 2017).

Compensation

Ethical considerations regarding compensation in online surveys, are concerned with the compensation being appropriate for the time and effort subjects devote to participation (CPHS,

2017). The level of payment should not be high enough to cause subjects to take risks that they otherwise would not take. A to high payment could also induce subjects to lie in order to receive a payment. However, participants should also be paid according to time and effort used, and the use of no compensation should be justified. Surveys through Norstat are incentivized as the respondents receive points for each survey they participate in, which later can be exchanged in material rewards, e.g. gift cards. (Silje Landsøe, Norstat, 2017). Regarding the timespan in answering one treatment question, we consider this as a fair payment in line with ethical considerations.

In Amazon Mechanical Turk, the participants are doing an online task that takes approximately 10 minutes, where each respondent receive a participation fee of 1 dollar when completed. Compensations on Mechanical Turk has been debated due to low wages. However, as participation is voluntary and working hours are decided by participants, this could justify the small payment (Mason and Suri, 2011). We therefore decided to use a standard participation fee used in the platform.

As the workers only is included as instruments for decisions in our main study, the potential additional payments from the main experiment, are only potential bonuses that do not depend on the worker's performance of the task. Thus, this should not be a concern regarding giving the participant a too high payment.

Anonymity and confidentiality

One of the ESOMAR standards includes strict policies regarding data protection and privacy. In example, one must inform respondents about privacy conditions, including anonymity. Further researchers must ensure that data cannot be traced, and that the individual's identity is disclosed without explicit concent. They must also take all reasonable precautions to ensure personal data is held securely. Given that Norstat is following these standards, we believe this is ensured by their behalf in the experiment. The data obtained from Norstat was sent to us without names, personal numbers, private IP-addresses, or other personal characteristics. Further, the data collected has only been used for the purpose of this study, it has been stored at one of our computers, that has an access code only known to the owner of the computer (researcher). Thus, only us as researchers, and those helping us conducting the experiment has excess to the data.

For the Study conducted in Amazon Mechanical Turk, the participants are provided with worker ID´s, that does not contain private information. They are informed about their anonymity in the beginning of the survey. Further their performance is not measured, but preferred payment options are registered. Assignment of fees and the additional payments are done using an assignment ID, making it impossible to trace this payment to specific individuals (Mason and Suri, 2011).

A.4 Validity and Reliability

The quality and trustworthiness of our study are influenced by the reliability and validity of our research design (Saunders, Lewis, & & Thornhill, 2016). In the following section we will evaluate the validity of this thesis, dividing between four different forms of validity, namely internal-, external- construct and statistical conclusion validity. Second, we will look at the reliability of our study. The workers in our study are included as an instrument to create a real-life situation for the spectators in the experiment. The actions and decisions of the workers are therefore not relevant for our analysis and results, and will not be a focus in this chapter.

A.7.1 Validity

One of the main concerns with experimental research is its validity. In general, validity is an indication of how well the research has been conducted, and concerns the influence of systematic error (Saunders, et al, 2016). Given the unobserved nature of the concepts we are measuring, validity can not be proven, but one can develop support for validity. In our study, we created a setting that had real-life consequences for the participating workers. This may strengthen the external validity of our studies, but compromises the internal validity.

A.7.1.1 Internal Validity

Internal validity refers to the extent our findings can be attributed to intervention rather than flaws in our research design (Saunders, et al, 2016). In this case it relates to whether we can infer if the relationship beween informaton assymetry and willingness to act paternalistic actually is responsible for the effects we do observe. Moreover, we are concerned about our conclution not being affected by flaws within the study itself, and that our results do not occur because of alternative explinations.

In this thesis, we obtain our data from an online experiment, wich provides us with less experimental control of other variables influencing our dependent variable (willingsness to act paternalisticaal) , compared to a laboratory setting (Reips, 2002; Dandurand, et al, 2008). This may weaken the internal validity of our study, as the decision-making environment is less controllable, leadning to more variety in environmental factors, like noise, lighting and aspects with the technical equipment. Reduced experimental control also arise a challenge where participants are prone to unfavourable effects of distractions like working on other task at the same time, being stressed, or other external factors. This can result in decreased accuracy

(Dandurand, et al, 2008; Mason & Suri, 2011). However, this is more likely to be a treat for more extensive studies that requires more concentration than in a simple, short and incentivized study like ours (Dandurand et al., 2008).

Multiple submissions might also present a challenge to the internal validity in online experiments. This might impair the research results, as it does not provide unique and independent observations. This could be a problem using online agencies as they often are incentivised by monetary rewards. However, as Horton et al (2011, p. 6) points out, agencies often depend on formal reputation, which gives the agency incentives to punish and provide systems that discourage such behavior. In online collecting agencies like Norstat, users are given unique ID´s, and have agreed to solid user terms of agreement. Even tough it is impossible to regain full control of multiple submissions, we believe Norstat strict guidelines reduces this treat.

Events (history) that takes place before or during the experiment, or high drop out rates (mortality), may also represent threats to the internal validity (Saunders, et al, 2016). If subjects drop out of a treatment because of the nature of a treatment, it might lead to selection bias i.e. only motivated and interested participants undertake and complete the experiment (Reips, 2002). There is evidence of higher dropout rates compared to lab experiment. However, problems with dropout and self-selection may also occur in a lab experiment (Dandurand et al., 2008). As we do not have information about the details of how Norstat conducts its studies nor its dropout rates we can not be sure if this has affected our study. However, this also occurs in laboratory experiments, and its impossible to reduce this problem completely (Reips, 2002).

To be sure that the treatments have causal effect on willingness to act paternalistically, randomization help assuring that subjects are assigned to treatments (control group) in a way that does not depend on how they react to the treatment or environment. As the only difference in the treatment were information asymmetry, it is reasonable to assume that the difference in the answers provided by participants, occur because of the manipulation and not other factors. This removes the possible effects of an alternative explanation to the manipulation of information asymmetry, and eliminate treats to internal validity.

A.7.1.2 External Validity

External validity refers to the extent to witch the research results are generalizable to other contexts. Two factors affect the external validity of experimental results (Saunders, et al, 2016).

The first concerns how representative the experimental sample is for the population at interest. Norstat has a large respondent pool of 90.000 people, witch increases the heterogeneity and diversity of the population (Duersch et al., 2009). This should increase the generalizability of our results, compared to the traditional student samples often used in master thesis. However, to draw a general conclusion it is important that the sample is representative of the population it is supposed to predict an effect on. Because of time and budget constraints on our behalf, Norstat made use of a Norwegian sample, which may only be partially representative for other nationalities. Whether our findings can be generalized to other nationalities, may also differ on other areas like in example culture, which is difficult to predict. Our sample was also slightly older and included somewhat more women than the general population (SSB, 2017). It is also important to mention that people who chose to be a part of Norstat respondents pool, may represent a smaller segment of the population, and there will always be a degree of self selection of participant in conducting experiment.

The second refers to how similar the experimental set-up is to the real world context, that is whether our findings are equally applicable to other research settings. (Saunders, et al, 2016) First, the use of online experiments in itself strengthen the external validity as it is carried out in a more natural decision-making environment compared to a laboratory setting (Reips, 2002). In this study, we have also created a real – world experiment, where the actions of the spectators may have consequences for real workers. The spectators were also given this information, in which might affect how seriously individuals considered their answers, wich in turn might strengthen the external validity of our study.

However, the monetary amount at stake may be too small to have triggered real world behavior. Compared to real-life scenarios, 7.5 USD, 10 USD or 30 USD might seem low as a payment for a worker. But as the spectators where informed that the workers had completed a “simple task” this may be considered as a decent payment. Based on our discussion we believe this study has a strong extern validity.

A.7.1.3 Construct Validity

Construct validity refers to how our measurement questions actually measure the presence of those constructs we intend to measure (Saunders, et al, 2016). As there to our knowledge do not exisit previos research on the willingness to act paternalistic, we had to operationalise the the concepts our selves. We carefully designed the questions in the different treatments together with our superwisor. Furter we pretested the different questions to familymembers, friends and students. This to clarify any misinterpretations of concepts and terms used in the treatments. Furthermore, this helped avoid leading and charged questions. We added information assymetry as means to adjust the amount of influence that the spectator has on the well-being of the stakeholder. This to assure that we actually measured the tradeoff between being able to promote another persons wellbeing (here, expected payoff), or to let him/her decide for him/her self. As we did not use preexsisting scales, this may have reduced the content validity. However, we belive pretesting the questions, and the feedback from our experienced superwisor helped streghtening the construct validity, assuring that the measured used seems reasonable for what we intend to measure.

Assuring the respondents full anonymtiy and confitentionality may also have reduced the possibilty of spectators answering how they think we as researchers want them to answer, or that the experiment itsels have an effect on provided answers. This is refered to as the Hawthorn effect (Saunders, et al, 2016).

A.7.1.4 Statistical Conclusion Validity

Statistical conclusion validity is the degree to which conclusions drawn about effects or casual relation is reflecting the effect in the population or if it is due to random events (Mason & Suri, 2011). To ensure conclusion validity in our study we have assessed statistical power, effect size and significant testing. This is explained in further details in our chapter on power calculations in section 3.2.1.

A.7.2 Reliability

Reliability refers to the extent to which our data sample techniques or analysis procedures gives consistent findings. If the same research is conducted again, under the same conditions, with same measurement procedures it should give the same results. As validity concerns with systematic errors, a study is relible if random errors are removed. This means that respondents will respond the same to the same measures in a later point in time (Saunders, et.al, 2016).

Saunders et al (2016 p.156) points out four different threats to reliability: participant error, participant bias, observer error and observer bias. As we do not have control over when Norstat conducts its surveys, participant error may occur on our research. However, carefully formulating treatment questions, and instructing the participants may eliminate participant error. Participant bias may occur if respondents answers what they think the researcher want them to answer. By ensuring anonymity and confidentiality, and not informing the participants directly about the objective of our study, we have tried to limit this type of error. Regarding observation bias, we used closed questions, where the answer are not up for interpretation, which in turn reduces this type of bias. Further we reduce the possibility of observation error by importing data from both Qualtrics and Norstat into STATA, reducing errors due to manual plotting. Based on this discussion we we consider the reliability in this study to be good.

A.5 Descriptive Statistics

Gender

#	Answer		Respondents	%
1	Male		472	47%
2	Female		528	53%
Total			**1000**	**100%**

Age group

#	Answer		Respondents	%
1	18-29 years		166	17%
2	30-39 years		155	16%
3	40-49 years		171	17%
4	50 years +		508	51%
Total			**1000**	**100%**

Region

#	Answer		Respondents	%
1	Northern Norway		87	9%
2	Mid-Norway		146	15%
3	Western Norway		192	19%
4	Southern Norway		92	9%
5	Eastern Norway		356	36%
6	Oslo		127	13%
Total			**1000**	**100%**

Community type

#	Answer		Respondents	%
1	Rural		147	15 %
2	Small Town		135	14 %
3	Medium town		303	30 %
4	City		282	28 %
5	Oslo		127	13 %
6	Don't know		6	1 %
Total			**1000**	**100 %**

Education

#	Answer		Respondents	%
1	Less than High School		45	5 %
2	High School		313	31 %
3	College/University 1-3 years		302	30 %
4	College/University 4 years		265	27 %
5	College/University 5 years +		42	4 %
6	Other		33	3 %
Total			1000	100 %

Occupation

#	Answer		Respondents	%
1	Fulltime		440	44%
2	Part-time		88	9%
3	Self-employed		40	4%
4	Maternal/Paternal Leave		6	1%
5	Looking for a job		26	3%
6	Retired		234	23%
7	Temporarily laid off		1	0%
8	On social security		66	7%
9	Homemaker		17	2%
10	Student		81	8%
11	Military/Civil Service		1	0%
Total			1000	100%

Household

#	Answer		Respondents	%
1	1		230	23%
2	2		420	42%
3	3		149	15%
4	4		131	13%
5	5 or more		68	7%
6	Don't want to answer		2	0%
Total			1000	100%

Household Children

#	Answer		Respondents	%
1	None		729	73 %
2	1		120	12 %
3	2		106	11 %
4	3		33	3 %
5	4		8	1 %
6	5 or more		2	0 %
7	Don't want to answer		2	0 %
Total			1000	100 %

Civil Status

#	Answer		Respondents	%
1	Single		269	27%
2	Married/Partnership (with		378	38%
3	Married/Partnership (with		257	26%
4	Widow/Widower		33	3%
5	Live with my parents		28	3%
6	Other		28	3%
7	Don't want to answer		7	1%
Total			1000	100%

Political Orientation

#	Answer		Respondents	%
1	Socialist-Communist Party		25	3%
2	Socialist Party		43	4%
3	Labour Party		208	21%
4	Agrarian Centrist Party		109	11%
5	Environmental Green Party		31	3%
6	Christian Party		37	4%
7	Social-Liberalist Party		35	4%
8	Conservative Party		165	17%
9	Progress Party		112	11%
10	Other		11	1%
11	Don't want to answer		29	3%
12	Not Sure		159	16%
13	Would not vote		19	2%
14	Not eligible to vote		17	2%
Total			1000	100%

Household income

#	Answer		Respondents	%
1	0-100.000 NOK		16	2%
2	100.001-200.000 NOK		20	2%
3	200.001-300.000 NOK		47	5%
4	300.001-400.000 NOK		70	7%
5	400.001-500.000 NOK		91	9%
6	500.001-600.000 NOK		111	11%
7	600.001-700.000 NOK		76	8%
8	700.001-800.000 NOK		68	7%
9	800.001-900.000 NOK		68	7%
10	900.001-1.000.000 NOK		63	6%
11	1.000.001-1.100.000 NOK		51	5%
12	1.100.001-1.200.000 NOK		26	3%
13	1.200.001-1.300.000 NOK		20	2%
14	1.300.001-1.400.000 NOK		15	2%
15	1.400.001-1.500.000 NOK		13	1%
16	1.500.001 NOK or more		31	3%
17	Don't want to answer		184	18%
18	Don't know		30	3%
Total			1000	100%

A.6 Paternalistic behavior based on background variables

Gender

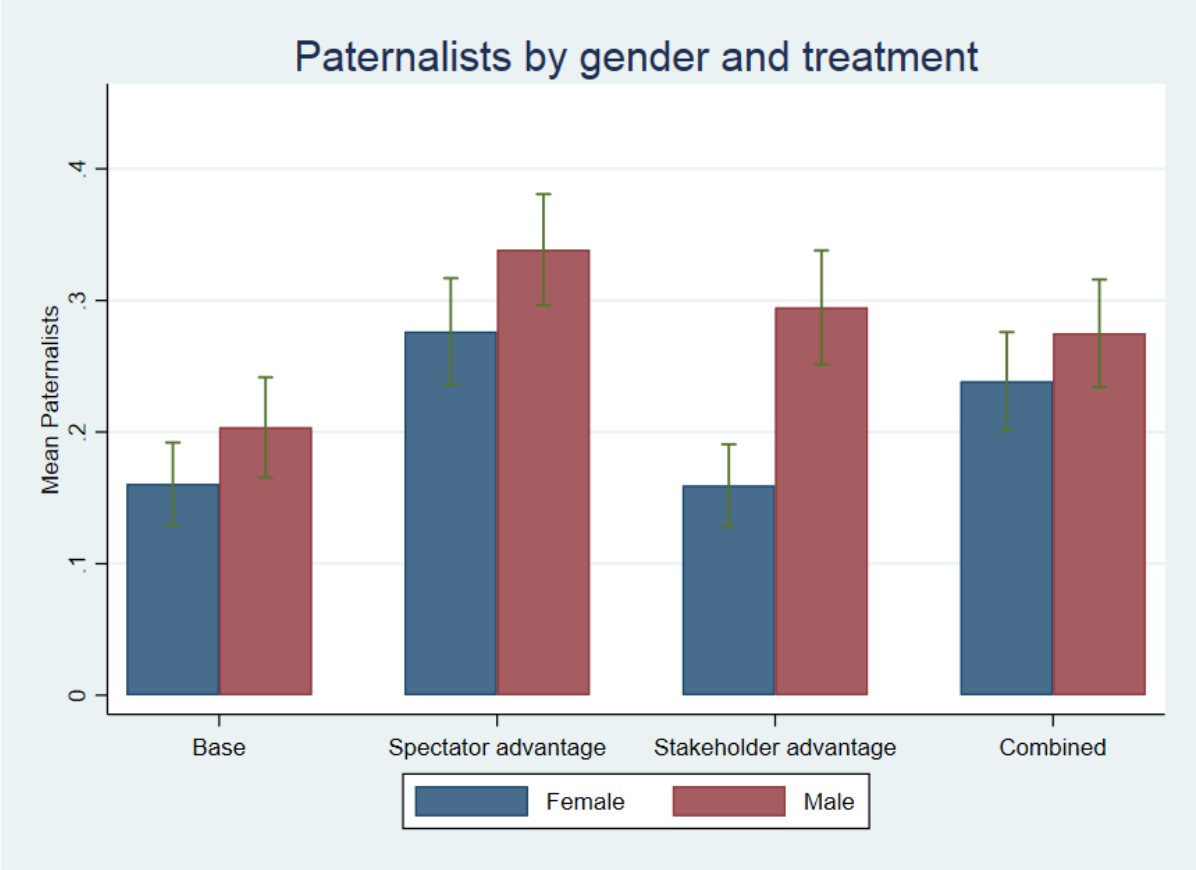


Figure 7: This figure shows the share of paternalists by gender and treatment. The standard errors are indicated by the bars.

Gender	Base	Spectator informational advantage	Stakeholder informational advantage	Combined
Female	16,06% (n:137)	27,64% (n:123)	15,94% (n:138)	23,85% (n:130)
Male	20,35% (n:113)	33,86% (n:127)	29,46% (n:112)	27,50% (n:120)

Age group

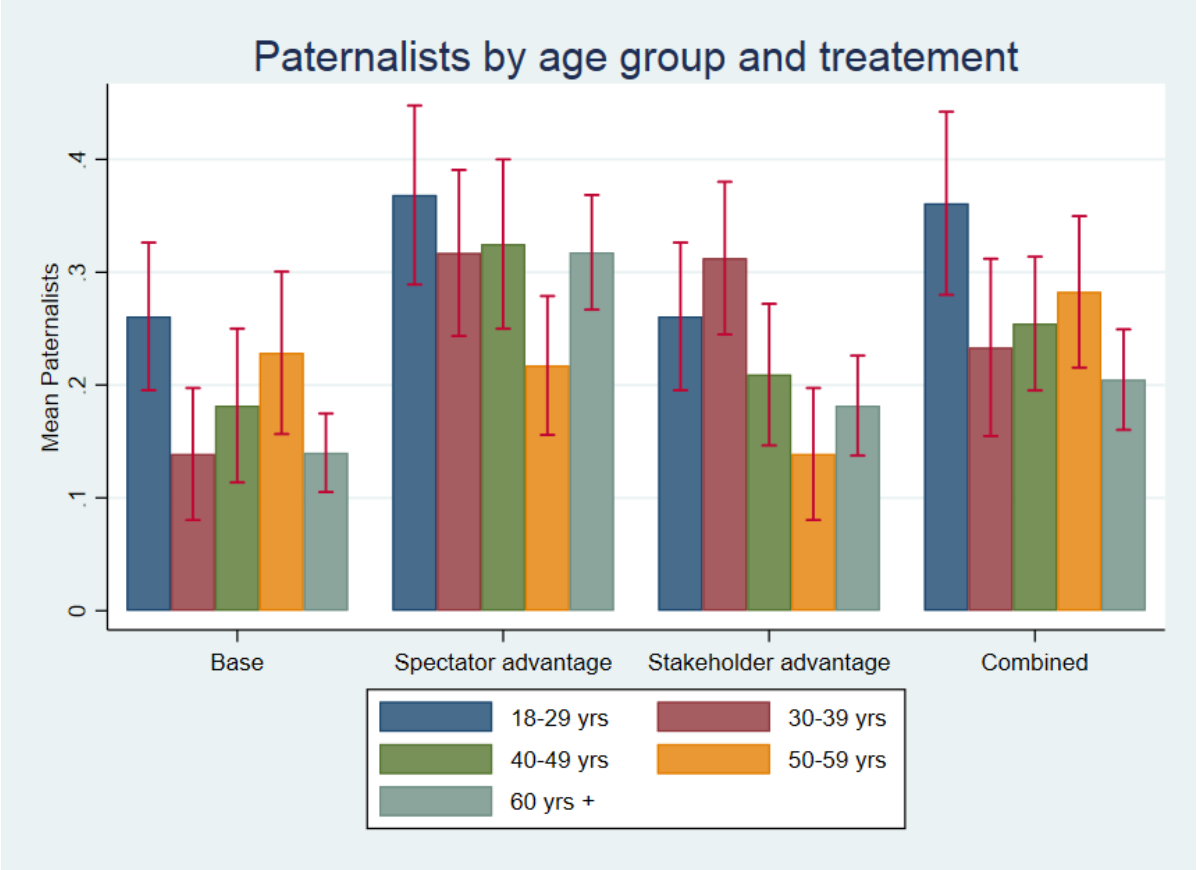


Figure 8: This figure shows the share of paternalists by age group and treatment. The standard errors are indicated by the bars.

Region	Base Group	Information Asymmetry	Uncertainty	Combined
18-29 years	26,09% (n: 46)	36,84% (n: 38)	26,09% (n: 46)	36,11% (n: 36)
30-39 years	13,89% (n: 36)	31,71% (n: 41)	31,25% (n: 48)	23,33% (n: 30)
40-49 years	18,18% (n: 33)	32,50% (n: 40)	20,93% (n: 43)	25,45% (n: 55)
50 years +	16,30% (n:135)	28,24% (n:131)	16,81% (n:113)	23,26% (n:129)

Region

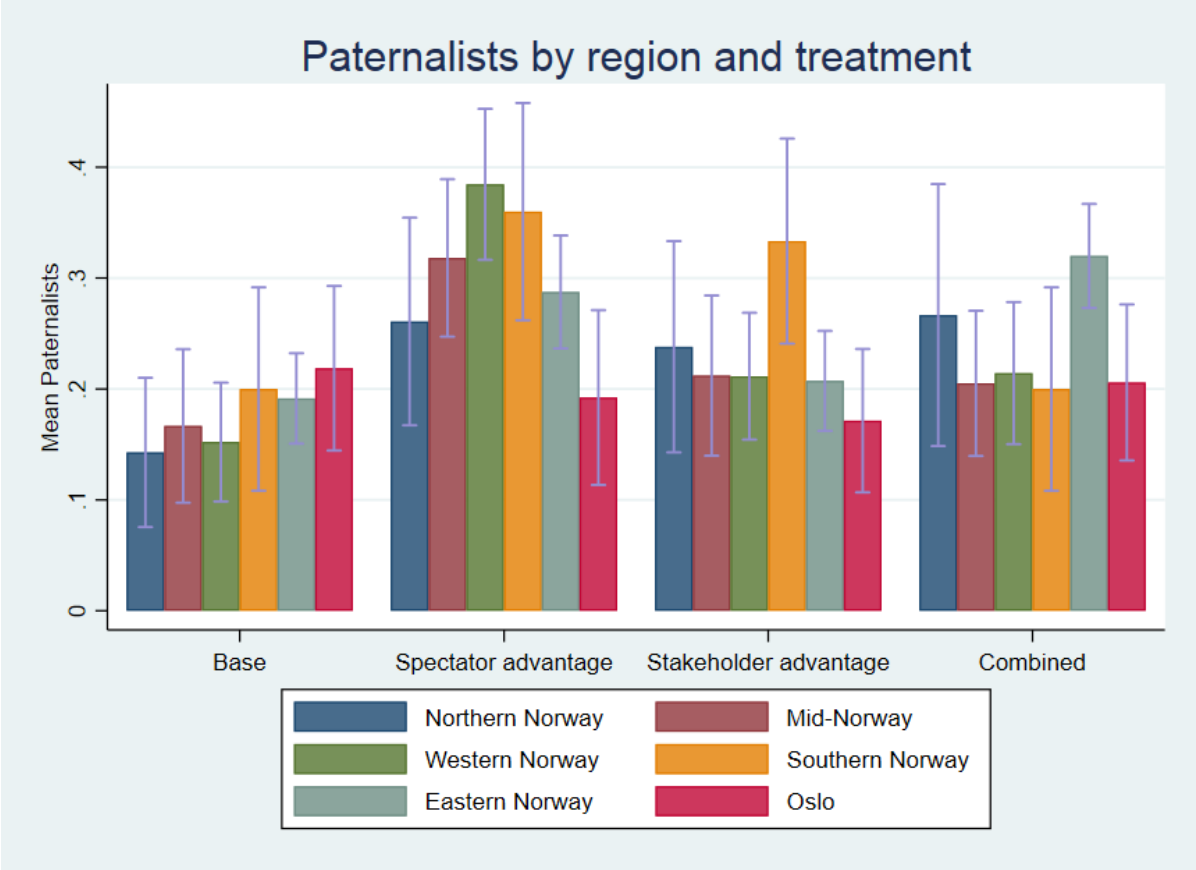


Figure 9: This figure shows the share of paternalists by age group and treatment. The standard errors are indicated by the bars.

Region	Base	Spectator informational advantage	Stakeholder informational advantage	Combined
Northern Norway	14,29% (n: 28)	26,09% (n: 23)	23,81% (n: 21)	26,67% (n: 15)
Mid-Norway	16,67% (n: 30)	31,82% (n: 44)	21,21% (n: 33)	20,51% (n: 39)
Western Norway	15,22% (n: 46)	38,46% (n: 52)	21,15% (n: 52)	21,43% (n: 42)
Southern Norway	20,00% (n: 20)	36,00% (n: 25)	33,33% (n: 27)	20,00% (n: 20)
Eastern Norway	19,15% (n: 94)	28,75% (n: 80)	20,73% (n: 82)	32,00% (n: 100)
Oslo	21,88% (n: 32)	19,23% (n: 26)	17,14% (n: 35)	20,59% (n: 34)

Community type

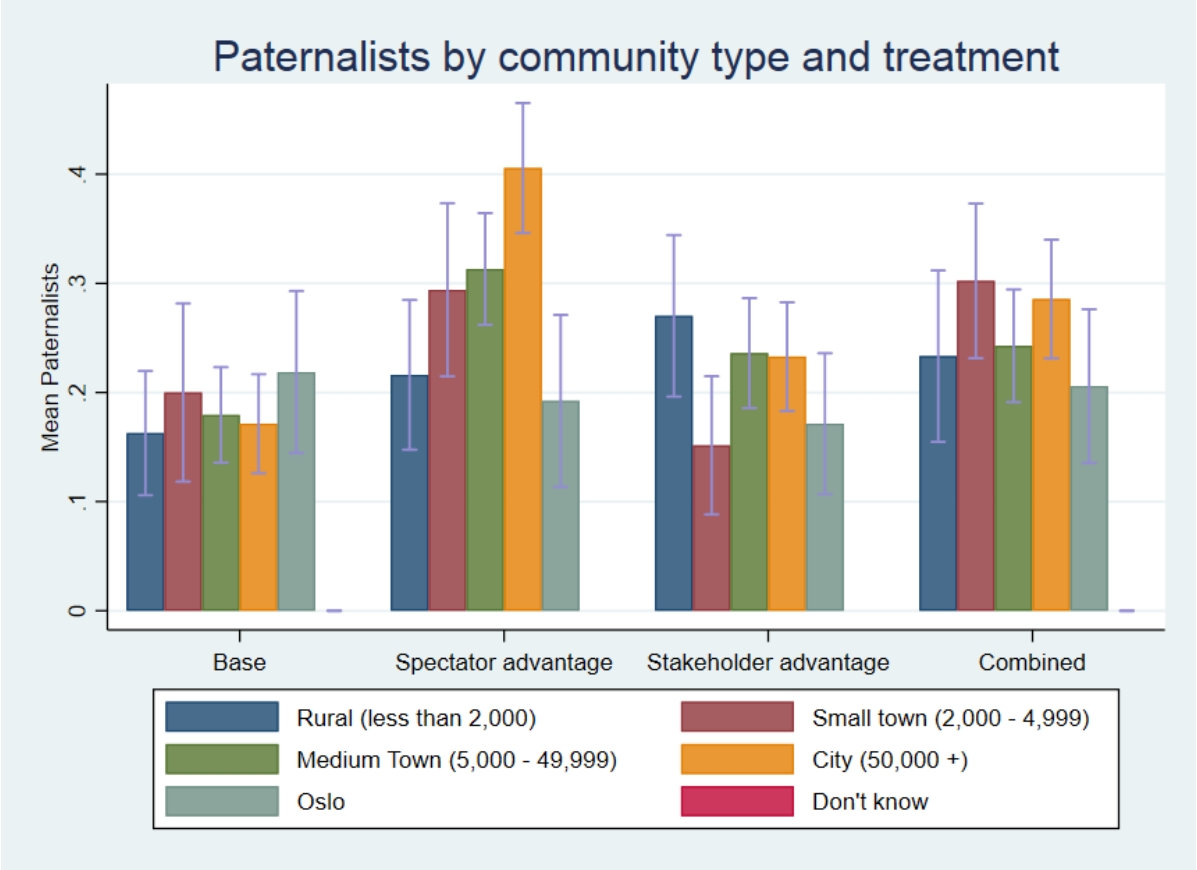


Figure 10: This figure shows the share of paternalists by age group and treatment. The standard errors are indicated by the bars.

Region	Base	Spectator informational advantage	Stakeholder informational advantage	Combined
Rural	16,28% (n: 43)	21,62% (n: 37)	27,03% (n: 37)	23,33% (n: 30)
Small town	20,00% (n: 25)	29,41% (n: 34)	15,15% (n: 33)	30,23% (n: 43)
Medium town	17,95% (n: 78)	31,33% (n: 83)	23,61% (n: 72)	24,29% (n: 70)
City	17,14% (n: 70)	40,58% (n: 69)	23,29% (n: 73)	28,57% (n: 70)
Oslo	21,88% (n: 32)	19,23% (n: 26)	17,14% (n: 35)	20,59% (n: 34)
Don't know	0,00% (n: 2)	0,00% (n: 1)	- (n: 0)	0,00% (n: 3)

Education

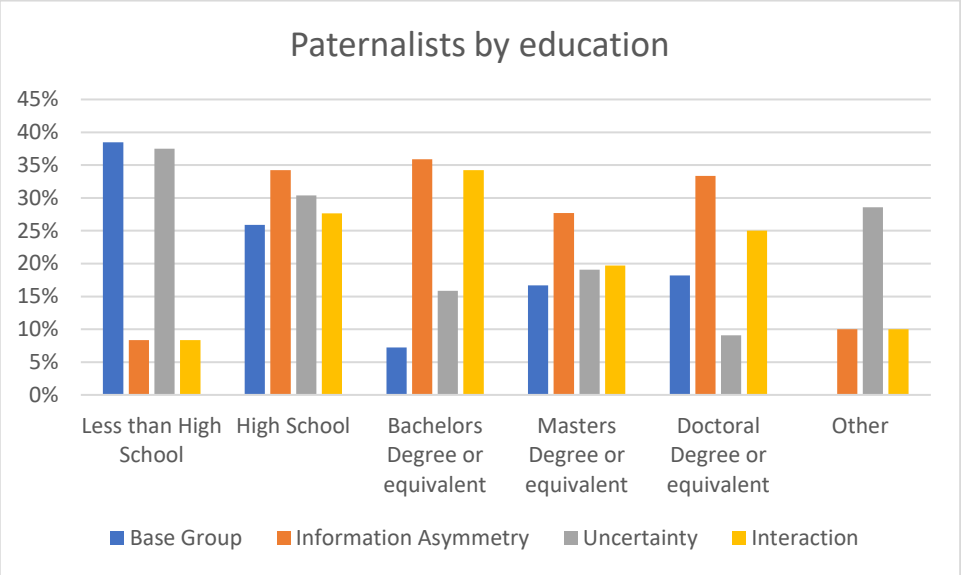


Figure 11: This figure shows the share of paternalists by age group and treatment. The standard errors are indicated by the bars.

Region	Base	Spectator informational advantage	Stakeholder informational advantage	Combined
Less than High-school	38,46% (n: 13)	8,33% (n: 12)	37,50% (n: 8)	8,33% (n: 12)
High-school	25,88% (n: 85)	34,25% (n: 73)	30,38% (n: 79)	27,63% (n: 76)
Bachelor Degree	7,25% (n: 69)	35,90% (n: 78)	15,85% (n: 82)	34,25% (n: 73)
Master Degree	16,67% (n: 66)	27,69% (n: 65)	19,05% (n: 63)	19,72% (n: 71)
Doctoral Degree	18,18% (n: 11)	33,33% (n: 12)	9,09% (n: 11)	25,00% (n: 8)
Other	0,00% (n: 6)	10,00% (n: 10)	28,57% (n: 7)	10,00% (n: 10)

A.7 Tables and Figures

Table 7: Output of Regression (1) – (4). Regression showing the share of paternalists in each treatment. The constant represents the base treatment. No control variables are included. Generated from Stata, 2017.

	(1) Paternalist	(2) Paternalist	(3) Paternalist	(4) Paternalist
Spectator informational advantage	0.0893**			0.128***
	(0.0311)			(0.0381)
Stakeholder informational advantage		-0.0280		0.0400
		(0.0313)		(0.0381)
Combined			0.0200	0.0760*
			(0.0313)	(0.0381)
Constant	0.219***	0.248***	0.236***	0.180***
	(0.0156)	(0.0156)	(0.0156)	(0.0269)
N	1000	1000	1000	1000

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8: Output of Regression (1) – (7). Regression showing the treatment effects. Control variables included as shown. The constant represents the base treatment. Generated from Stata, 2017.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Information in favor of the stakeholder, SP	0.128***	0.124**	0.124**	0.126***	0.126***	0.126***	0.131***
	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)
Information in favor of the stakeholder, ST	0.040	0.040	0.0356	0.038	0.038	0.039	0.035
	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)	(0.038)
Interaction effect, SP*ST	-0.092	-0.090	-0.085	-0.088	-0.089	-0.089	-0.090
	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)
Male		0.069*	0.075**	0.077**	0.078**	0.078**	0.084**
		(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)
Age			-0.002**	-0.002**	-0.002**	-0.002**	-0.002**
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Higher Education				-0.053	-0.053	-0.053	-0.065*
				(0.027)	(0.027)	(0.028)	(0.028)
Conservative					-0.013	-0.006	
					(0.0278)	(0.033)	
Socialist						0.014	
						(0.035)	
Frp							-0.106*
							(0.050)
Høyre							0.028
							(0.044)
Venstre							-0.010
							(0.066)
Krf							0.079
							(0.073)
Mdg							0.096
							(0.087)
Sp							-0.060
							(0.062)
Ap							0.037
							(0.041)
SV							-0.137*
							(0.066)
Rødt							0.062
							(0.109)
Constant	0.180***	0.149***	0.258***	0.288***	0.291***	0.286***	0.290***
	(0.027)	(0.030)	(0.049)	(0.051)	(0.051)	(0.053)	(0.054)
N	1000	1000	1000	1000	1000	1000	1000

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9: Output of Regression (1) – (4). Regression showing the heterogeneity analysis. Control variables included as shown. The constant represents the base treatment. Generated from Stata, 2017.

	(1) Male	(2) High education
SP	0.122*	0.0202
	(0.0524)	(0.0596)
ST	-0.000760	0.0240
	(0.0509)	(0.0600)
SP*ST	-0.0411	-0.0622
	(0.0736)	(0.0854)
SP*δ	0.0201	0.185*
	(0.0757)	(0.0771)
ST*δ	0.0800	0.0229
	(0.0761)	(0.0771)
SP*ST*δ	-0.106	-0.0477
	(0.107)	(0.109)
Male	0.0609	0.0777**
	(0.0538)	(0.0272)
Age	-0.00210**	-0.00211**
	(0.000813)	(0.000812)
Higher education	-0.0617*	-0.155**
	(0.0282)	(0.0543)
All political parties	Yes	Yes
Constant	0.278***	0.322***
	(5.01)	(5.47)
N	1000	1000

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$