



Degree Program in BI-LUISS Joint MSc in Marketing

Course of Behavioral Economics

**– Exploring the Impact of Social
Expectations on Prosocial Behavior: Are
We Moving Towards a Gradual Fade Out
of The Warm Glow Effect? –**

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Abstract

Understanding what motivates individuals to engage in prosocial behaviors is essential, particularly as societies recognize the need for sustainable consumption patterns. This study explores the impact of social expectations on the warm glow (i.e., the positive feeling and sense of satisfaction that individuals experience when contributing to the common good) associated with prosocial behavior, specifically focusing on charitable donations. The research question concerns what happens to the warm glow when a prosocial behavior becomes a social expectation. Two hypotheses are proposed. The first suggests that the warm glow feeling decreases when prosocial behavior becomes a social expectation. The second examines the role of intrinsic motivation through factors of self and social comparison shaping the warm glow feeling. The study uses a 2 x 2 between-subjects design, manipulating social expectations (high vs. low) and comparison (social vs. self) as independent variables. The results partially support the first hypothesis, indicating a decrease in the warm glow feeling when prosocial behavior becomes a social expectation. The second hypothesis is supported, revealing that intrinsic motivation through self-comparison leads to stronger warm glow feelings when social expectations are low. This study sheds light on the complex interplay between societal norms, individual motivations, and the subjective experience of a warm glow, contributing to our understanding of how social expectations and intrinsic motivations impact prosocial behavior. Overall, this study offers valuable insights into the complex dynamics of prosocial behavior and the role of social expectations in shaping individuals' experiences of warm glow.

Keywords: *Prosocial behavior, Social expectations, Warm glow, Motivation, Social norms, Charitable donations, Social and Self Comparison*

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1. Research introduction and scope

1.1 Introduction

Current global consumption trends constitute a large threat to modern societies. The consumption patterns we are seeing in Europe are no exception. Although not as distressing as the patterns identified in the US and Canada, European consumption has increased dramatically in the last few years. In fact, the general European citizen consumes four times more resources than one in Africa and three times more than one in Asia (EEA, 2019). In Norway, numbers from last year show the same tendency. According to figures from SSB, Norwegian consumers spent 22.4 billion NOK on clothing and shoes in the fourth quarter. This represents an increase of 4.4 billion NOK compared to the same quarter in 2019 (Pedersen, 2022).

As consumerism swells worldwide, resources are becoming more and more constrained. We have already seen the unintended effects consumerism, among other human-lead courses, has had on our natural resources; environmental degradation, climate change, pollution, and so forth (EEA, 2023). Continuing in these patterns can and should not be an option. Huge efforts must therefore be made to change the current consumerism patterns and to lower the ecological footprint.

Luckily, in recent years more sustainable practices related to consumerism have become an increasingly important topic. For instance, research backs that one out of four plan to focus more on environmental issues and pay more attention to social aspects when shopping (McKinsey, 2019, 2021). Despite this growing awareness of sustainability, sales of sustainable products, defined as products with positive social and/or environmental attributes, remain a small portion of overall demand (Luchs et al., 2010 as cited in United Nations Environment Programme, 2005). What may be some of the explanations for this discrepancy?

One explanation is that prices are usually higher for sustainable products compared to mainstream counterparts. Additionally, distributional channels are often more limited (Bemporad & Baranowski, 2007). Moreover, it is also widely recognized that even though there exists an issue wherein individuals express a desire to engage in

sustainable behaviors, they fail to do so in practice (Luchs et al., 2010). Drawing upon the last explanation, scholars are now stressing a need and a great potential of looking more into the field of *behavioral theories*, drawing upon themes from psychology (e.g., Kothe et al., 2019), in order to understand the different factors influencing consumers' decisions to engage in more sustainable behaviors.

Many scholars have emphasized the crucial role social scientists can play in managing environmental problems. They suggest that by increasing our understanding of how to motivate and empower people to act pro-environmentally, we can address the root causes of these issues (ISSC/UNESCO, 2013; Hackmann et al., 2014). Social scientists have also developed various behavioral theories that help us understand which factors influence environmental behavior and how they can be targeted in environmental policy (Lindenberg & Steg, 2007). This knowledge can be invaluable in protecting the planet for future generations.

One of the main behavioral theories worth looking into is often referred to as the intention-behavior gap. As outlined earlier, this theory suggests that sustainable behaviors may not align with an individual's immediate self-interest, as they may not offer immediate benefits or gratifications. However, further examination reveals that there are factors challenging this notion and illustrating how sustainability or pro-environmental actions can indeed benefit individuals in the present moment. While it is true that sustainable behaviors often require individuals to prioritize long-term goals over immediate self-interest, there are several ways in which these behaviors can have tangible and immediate benefits.

The *warm glow effect* is one of many factors influencing consumers' decisions to purchase sustainable products. The warm glow effect refers to the positive emotional experience associated with giving or engaging in prosocial behavior (Andreoni, 1990), such as charitable giving. The effect has received a renewed interest among scholars because it addresses two common concerns associated with sustainability - the long-term horizon and the perception of selflessness, sacrificing one's own needs for the common good. The warm glow aspect highlights the potential to be personally advantageous in the here and now, hence contributing to overcoming one of the largest barriers to sustainable consumption.

Studies have shown that the warm glow effect also is a powerful motivator for individuals to continue engaging in environmentally friendly actions (Jia & van der Linden, 2020). This feeling of personal fulfillment and recognition is often associated with the sense of contributing to the common good in situations where not everyone would do the same, making one stand out in a positive way. However, it is worth considering what would happen if the action causing the warm glow feeling were to become the social norm and standard. Would this lead to a fadeout of the warm glow effect, and would that cause the prosocial or pro-environmental action to become less appealing? This is an important question to explore when considering how to promote long-term environmental and social well-being.

Internal motivations, such as the warm glow of acting prosocially, are just one aspect of the complex reasons behind pro-environmental behavior. Individuals may experience a sense of satisfaction and fulfillment from engaging in actions that benefit the environment and society as a whole. However, it is crucial to recognize that pro-environmental behavior is not solely driven by internal motivations, but also influenced by external factors. Social norms and peer group behavior play a significant role in shaping individuals' behavior, including their pro-environmental actions. People often adjust their behavior to meet the normative standards set by their social context. Research has indicated that social factors, such as social influence, social identity, and perceived social norms, are important in explaining the motivation behind pro-environmental behavior (Sachdeva et al., 2015). These social factors help connect pro-environmentalism and prosocial behavior more closely.

As society becomes more aware of the environmental challenges facing our planet, the connection between prosocial and pro-environmental behavior becomes stronger. The recognition of the ongoing environmental issues prompts individuals to engage in actions that benefit others and society as a whole. Pro-environmental behavior can be seen as a form of prosocial behavior because it addresses collective well-being and promotes the long-term sustainability of the planet (Paço, 2019).

This thesis seeks to understand what happens to the warm glow feeling connected to an action when that action becomes socially expected and how a potential change in the

warm glow might affect the motivation for engaging in prosocial actions. By examining the case of charitable donations, this thesis more specifically aims to shed light on the issues discussed above. Charitable giving serves as an excellent case study as it represents prosocial behavior that is widely recognized and encouraged in society. People often experience a warm glow when they contribute to charitable causes, knowing that their actions are making a positive impact on the lives of others. However, as prosocial behaviors become more socially expected and norms around charitable giving are established, it raises the question of whether the warm glow effect may diminish over time.

1.2 Research question(s) and hypotheses

To discover if organizations should emphasize intrinsic or normative motivation when convincing consumers to buy and/or use green products, this thesis aims to answer the question:

“What happens to the warm glow feeling associated with a desired prosocial behavior when that behavior becomes the social expectation?”

The warm glow feeling associated with prosocial behavior is driven by a complex interplay of intrinsic and extrinsic factors, including personal motivations, social norms, and expectations, and social comparison processes. By testing these hypotheses, the research aims to contribute to a deeper understanding of how social expectations and intrinsic motivations impact prosocial behavior and the warm glow feeling associated with it. Does the warm glow fade out, or does it stay the same when the desired prosocial behavior becomes the social expectation? The hypotheses that will be tested in this thesis are;

***H1:** When a desired prosocial behavior becomes the social expectation, the warm glow feeling associated with the behavior will decrease compared to when it is not the social expectation.*

This hypothesis aims to investigate the impact of social expectations on the warm glow feeling related to prosocial behavior. By comparing the mean warm glow values in

conditions where social expectations are high versus low, this hypothesis seeks to determine if transitioning from desired behavior to a social expectation diminishes the perceived warm glow and creates a fade-out. Understanding how social expectations influence the subjective experience of a warm glow is crucial for comprehending the interplay between societal norms and individual motivations, contributing to our understanding of the social psychology of prosocial behavior.

The first hypothesis dives directly into the central theme of this thesis and will thus strongly dictate the answer to the research question. The hypothesis does not consider different motivational factors or types of comparison. However, it is meant to do a general study of how the warm glow is affected by an increase in social expectations.

***H2:** Intrinsic motivation through self-comparison leads to stronger warm glow feelings than factors of social comparison, but only when social expectations are low.*

This hypothesis is based on the idea that individuals may be more likely to engage in prosocial behavior when there is less social pressure to do so and when they are motivated by their own internal values and beliefs rather than by comparisons to others. Furthermore, the hypothesis also implies that when social expectations are high, this effect is mitigated or reversed, making factors of social comparison the better predictor in those scenarios.

This hypothesis examines the role of self-comparison and social comparison in shaping the warm glow feeling associated with prosocial behavior. Specifically, it investigates whether individuals' internal drive and motives contribute more strongly to the experience of a warm glow compared to external factors. Furthermore, this will investigate the differences in perceived warm glow with different motivational factors, both intrinsic and extrinsic. By considering the interaction between intrinsic motivation, as in self-comparison, extrinsic motivation, as in social comparison, and social expectations, this hypothesis sheds light on the conditions under which different psychological factors influence the intensity of warm glow. Exploring these dynamics provides valuable insights into the underlying mechanisms driving prosocial behavior and its associated emotional experiences.

To summarize, the first hypothesis seeks to answer whether the perceived warm glow is affected or fades out when social expectations increase. In contrast, the second hypothesis looks into the perceived warm glow with different motivational factors and to what extent they affect the warm glow.

1.3 Definitions

In this section, definitions and clarifications of key concepts that are central to the understanding of the thesis research topic will be provided. These concepts serve as the building blocks for this study and provide a solid foundation for the analysis. It is crucial to establish clear definitions for these concepts to ensure a common understanding among readers. The definitions are based on established literature in the fields of social psychology, sociology, and behavioral economics.

1.3.1 Warm glow

Warm glow refers to the positive feeling or satisfaction that an individual experiences from engaging in prosocial behavior or altruistic acts, such as donating to charity or volunteering, without any expectation of receiving a direct benefit in return (Andreoni, 1990). It is often associated with a sense of personal fulfillment and well-being that comes from helping others. Warm glow feelings can further be understood as the emotional response when one has a blend of altruistic and egoistic motivation to help others (e.g., an individual might choose to donate money to a charitable organization not only to contribute to a noble cause but also to have their name listed as a donor, thus enhancing their self-perception and feeling of superiority). Behaving prosocially can elicit warm glow as individuals may feel a sense of moral satisfaction and fulfillment from helping others/the planet while potentially deriving personal benefits, such as social recognition or enhanced self-perception.

Green products possess inherent prosocial attributes; therefore, merely purchasing/using a green product indicates doing a good deed, which leads to warm glow feelings (Tezer & Bodur, 2020).

1.3.2 Prosocial behavior

Prosocial behavior refers to actions or behaviors intended to benefit others or society as a whole rather than solely focusing on one's self-interest (Pfattheicher et al., 2022). This

can include acts of kindness, cooperation, sharing, empathy, environmental actions or helping others in need.

1.3.3 Social norms

A classic academic definition of social norms is “shared understandings about actions that are obligatory, permitted, or forbidden within a society” (Ostrom, 2000). Social norms can influence behavior by shaping what is considered acceptable or unacceptable and can vary across different contexts and cultures. As per Bicchieri (2006), social norms is a rule of behavior such that individuals prefer to conform to it on condition that they believe that;

- (1) Most people in their reference network conform to it (empirical expectation).
- (2) Most people in their reference network believe they ought to conform to it (normative expectation).

These expectations always refer to a specific group whose behavior and approval matter to the individual in question, referred to as the reference group. A reference group is a collection of people we use as a standard of comparison for ourselves, regardless of whether we are part of that group (Crossman, 2019). We rely on reference groups to comprehend social norms, which influence our appearance, behavior, ideas, values, and beliefs. As a result, we consider them when determining these items' relative worth, desirableness, or appropriateness.

1.3.4 Intrinsic and normative motivation

Intrinsic motivation is the internal drive or desire that leads individuals to engage in an activity for its inherent enjoyment or satisfaction without external rewards or incentives. In the literature, “intrinsic motivation” is often associated with enjoyment (Ryan & Deci, 2000). Normative motivation, on the other hand, refers to the motivation that stems from social norms or societal expectations, where individuals may feel obligated or compelled to behave in a certain way due to external pressures or influences - aimed at acting by what one thinks one ought to do (Dijkstra et al., 2014).

1.3.5 Social Networks as reference groups

A social network is a set of social ties (Burt et al., 2013). Following Brass (2012), social ties can form from shared interests, relationships, communication, and resource exchange. Similarities create familiarity and belonging. Strong relationships and

communication strengthen social ties. Sharing knowledge and skills also helps maintain social ties. Hence, social networks refer to the relationships or connections that individuals have with others, which can be formal or informal and can be characterized by various types of ties such as friendship, family, work, or online interactions (*What Are Social Groups and Social Networks?*, 2016). Social networks play a crucial role in shaping social behavior, including prosocial behavior, as individuals are influenced by their social connections and the norms and values that prevail within their networks.

2. Literature review

This section will provide an overview of the literature that will serve as a theoretical background for the research question and its underlying hypotheses. It explores the theoretical framework supporting the warm glow feeling accompanying prosocial behavior and how social expectations influence it. The intrinsic and normative motivations driving prosocial behavior are investigated from psychology and behavioral science literature. Additionally, the role of social networks in promoting positive social expectations is examined.

2.1 Warm Glow

Prosocial behavior plays a vital role in maintaining the functionality of society and is widely encouraged in all societies. It refers to voluntary actions aimed at benefiting or helping others (Eisenberg & Fabes, 1998). Individuals engage in prosocial behavior for various reasons, driven by diverse motivations to achieve personal goals (Batson & Powell, 2003; Carlo & Randall, 2002; Eisenberg et al., 2007).

Economists have introduced the concept of "warm glow" as a motivator of prosocial behavior (Andreoni, 1990). Warm glow explains how individuals experience a positive emotional reward that reinforces their prosocial actions (Andreoni, 1990). This phenomenon goes beyond the mere pursuit of self-interest or utility maximization. Andreoni (1989), argued that individuals derive utility not only from the direct benefits they receive but also from the act of giving itself. Warm glow arises from the positive emotions and sense of satisfaction that accompanies helping others (Andreoni, 1989). Research by Andreoni (1989) additionally demonstrated that people are willing to make financial contributions to charitable causes even when the direct benefits they receive in return are minimal or non-existent. This finding suggests that individuals experience warm glow by simply knowing that they have made a positive impact on others' lives, regardless of any tangible rewards or benefits they might receive.

Subsequent studies have supported and expanded upon Andreoni's findings, revealing that warm glow plays a significant role in shaping people's behaviors and decisions related to charitable giving, volunteering, and other prosocial activities (Andreoni et al., 2017; Cain et al., 2014; Damgaard & Gravert, 2018). Recognizing the presence of warm

glow as a motivator for prosocial behavior has important implications for various fields, including economics, psychology, and public policy. It challenges the narrow assumption of pure self-interest and provides a more comprehensive understanding of human behavior.

However, it is important to consider the potential implications on the warm glow when a behavior becomes expected or when it is incentivized through external nudges or rewards. While experiencing warm glow is inherently driven by internal motivations and the emotional satisfaction of doing good, external factors can influence its impact on behavior. When a prosocial behavior becomes something expected or is incentivized by external factors such as nudges, its intrinsic nature may be compromised. The act of giving or engaging in prosocial behavior can transition from a voluntary, genuine expression of kindness to a mere compliance with societal or organizational expectations. This shift may diminish the emotional reward and satisfaction associated with warm glow, as individuals may perceive their actions as driven more by external pressures rather than internal motivations.

As an illustrative example (Figure 1), let us consider Norway's first Tesla buyer. The early adopters of electric vehicles, such as the first Tesla buyer in Norway, may have experienced a sense of self-satisfaction and pride in their choice, resulting in a warm glow effect. Conversely, individuals who purchased gas-powered cars may not have experienced the same positive emotional response, as this decision was considered ordinary and socially acceptable at the time. However, as the market for electric vehicles has grown and become more common (Electric Vehicles: Market Data Analysis & Forecast | Statista, 2022), the likelihood of experiencing a warm glow effect when purchasing a Tesla has diminished.

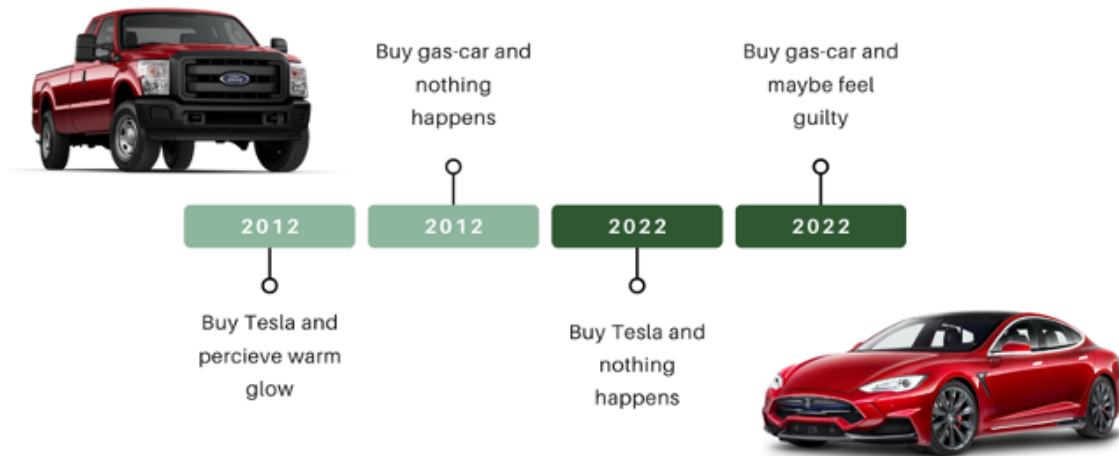


Figure 1- Illustrative example of the potential decline in Warm glow

This raises an interesting question about consumers' alternatives to purchasing sustainable products. For instance, if someone purchases a diesel truck from Ford, they will unlikely experience any positive emotional response. Instead, they may even feel guilty, which is the flip side of the warm glow effect. Thus, understanding how the perceived environmental impact of products and services shapes consumers' values, attitudes, and purchasing behavior is crucial for businesses seeking to promote sustainable consumption and cater to the growing demand for environmentally friendly products. The fade out of the warm glow can lead to decreased motivation for individuals to continue making sustainable choices, as the personal satisfaction of being different or making a positive impact may no longer be present.

Moreover, incentivizing prosocial behavior through external rewards or nudges can potentially crowd out its genuine expression. When individuals feel coerced or manipulated into engaging in such behaviors, the act itself may be perceived as less rewarding in terms of experiencing warm glow. This can lead to unintended negative reactions, such as avoidance behavior or a reluctance to engage in prosocial acts when they are perceived as being nudged or prompted to do so. Research has shown that people sometimes avoid situations where they are being asked to give, even though they are willing to give when the request is not perceived as a nudge (Cain et al., 2014). This suggests an important distinction between "giving" and "giving in," with the latter referring to prosocial behavior in which one reluctantly engages. Nudges may make an altruistic act more likely to be experienced as "giving in" rather than spontaneous "giving."

2.2 Social Norms and Expectations

This thesis investigates the theories behind social norms to understand whether these accompanied by a warm glow, will change behavior over time. The following section examines social norms and their relationship with the warm glow.

A social norm is a perceived informal and usually unwritten rule that defines if an action is acceptable and appropriate within a community or group, thus guiding human behavior (Unicef, 2021). As per Bicchieri (2006), social norms are a rule of behavior such that individuals prefer to conform to it on the condition that they believe that;

- (1) Most people in their reference network conform to it (empirical expectation).
- (2) Most people in their reference network believe they ought to conform to it (normative expectation).

Social norms can be created to eliminate a negative practice and support a new one. This thesis applies the definition of social norms from Bicchieri (2006) to understand what is meant by “practice” and “norm”.

People often conform to social norms because of pressure from outside influences such as family or society, which dictate adherence to customary practices and shape decision-making toward altruistic behaviors (Abbott et al., 2013; Halvorsen, 2008). Moreover, human nature plays a role, as it makes us aware of our actions and how they align with our beliefs, allowing us to express ourselves through our behavior. Several studies have shown that social norms are important in shaping individuals' behavior. Bicchieri (2006) defines a norm as a term used to refer to various behaviors and the accompanying expectations. Social norms, however, are commonly understood as unwritten rules shared by members of the same group or society. Burke & Young (2011) describes social norms as the shared perception of ideal behavior that individuals strive to conform to.

For something to qualify as a social norm, it must fulfill two necessary conditions (Bicchieri, 2006):

- i. A sufficiently large proportion of the population must recognize the particular modes of behavior and identify the situations to which they apply, and

- ii. Individuals must be predisposed to comply with them. The degree of conformity among the population and the level of expectation that individuals conform depends on an individual's beliefs about what other people do (descriptive norms) and what others expect them to do (injunctive norms).

Cialdini & Goldstein (2004) found that descriptive norms, as described in condition ii above, can be a powerful motivator for behavior change. For example, Goldstein et al., (2008) found that hotel guests were more likely to reuse their towels when told that most guests did so.

In the field of economics and sustainability, social norms have been linked to a warm glow. Many sources, for example, Halvorsen (2008), point towards this connection. He suggests that warm glow arises from adherence to social and moral norms, making norms and warm glow inseparable, while Brekke et al. (2003) link warm glow with a positive self-image, which is influenced by an individual's perception of their behavior as socially responsible. The benchmark for socially responsible behavior is either a moral ideal, determined by the individual as the effort that maximizes social welfare if everyone acts like them, or a social norm, determined externally (Abbott et al., 2013).

In addition, a warm glow depends on the gap between an individual's sustainable behavior and the social norm (Abbott et al., 2013). However, when a certain prosocial behavior becomes the social norm or expectation, individuals may no longer experience the same warm glow feeling. According to the normative social influence theory, individuals conform to social norms to be accepted and valued by their peers (R. Cialdini & Goldstein, 2004; Nolan et al., 2008). As demonstrated in the research, social norms may decrease warm glow if the behavior is seen as obligatory or forced. Dunn et al., (2008) mention that individuals may experience less happiness when they are obliged to spend money on others rather than when they choose to do so voluntarily. Similarly, in the article by Weinstein & Ryan (2010), the authors discuss how different types of motivation can influence the impact of prosocial behavior on well-being. They suggest that when individuals engage in prosocial behavior out of a sense of an obligation or pressure from social norms, the positive effect of the behavior on well-being may be reduced. Therefore, while the studies do not explicitly state the

proposed theory, the information presented supports the idea that social norms may diminish the warm glow feeling when prosocial behavior is no longer seen as exceptional or voluntary.

Furthermore, the existence and acknowledgment of a social norm can burden individuals, decreasing the warm glow effect as the perceived responsibility increases. Even as sustainable behavior still generates positive emotions, individuals can feel a decreased warm glow effect due to an increased perceived responsibility. According to Brekke et al., (2010), the recognition and existence of a social norm might place pressure on a person to behave in a certain way. So, increasing the level of sustainable behavior increases warm glow along the lines of Andreoni (1990); Yet, an increase in perceived responsibility causes warm glow to decrease. Due to this, if the perceived responsibility, reflected throughout the social norm, is maintained, then "duty orientation is behaviorally indistinguishable from a warm-glow model" (Brekke et al., 2010). In other words, if someone feels it is their responsibility to do something, then whether they do it because they feel that it is their duty to do it or because it makes them feel good inside is hard to tell by just looking at their behavior.

However, Bicchieri (2006) states that people's willingness to go along with the rules and conform to a social norm depends on two things. First, they need to believe that enough people will conform to the rule in the situation(s), and second, that enough people expect them to conform to the rule in the situation(s). Some people might need the added pressure of potential punishment if they do not follow the rules, while others might just feel a sense of duty to meet others' expectations. Meaning there are individual differences in the motivation of why we behave pro-social, which can affect the level of warm glow experienced. Moreover, their motivation to follow the rules could affect the level of warm glow experienced. Suggesting that the warm glow feeling associated with prosocial behavior may depend on social expectations surrounding the behavior and that the pressure to conform to social norms can sometimes override the positive feelings associated with doing something good or ethical, weakening the warm glow effect.

Social norms can also amplify the warm glow effect. As mentioned, people derive pleasure from social acclaim and aspire to appear, for example, generous in the eyes of others. The desire to maintain a positive social image could contribute to shaping

people's prosocial behavior, as demonstrated by the research of Andreoni & Bernheim (2009). When a behavior is seen as socially normative, individuals may experience a stronger warm glow from engaging in that specific behavior (e.g., if giving blood is seen as socially normative behavior, individuals may experience a stronger warm glow from donating blood than if it is seen as an individual activity). Meaning that the effect of warm glow is not only driven by the intrinsic satisfaction of helping others but also by the social approval that comes along with the behavior.

Another interesting aspect regarding social norms is that of normative pressure. Normative pressure refers to the social influence of norms and expectations on individual behavior (Cialdini et al., 1991). When prosocial behavior becomes the social norm or expectation, individuals may perceive it as a standard of behavior that is required or valued by their social group. This may increase the salience and accessibility of the norm, leading people to engage in the behavior more frequently or automatically (Schultz et al., 2007). However, the effect of normative pressure on the warm glow feeling is unclear. On the one hand, normative pressure may enhance the warm glow effect by providing social validation and reinforcement for prosocial behavior. On the other hand, normative pressure may reduce the warm glow effect by diminishing the autonomy and choice involved in the behavior. Research has shown that the relationship between social norms and pro-social behavior may depend on the type and source of normative influence (Schultz et al., 2007).

Overall, according to the findings in the literature, social norms and warm glow are closely linked, and both play a crucial role in shaping individuals' behavior. People take cues from others to inform their behavior, which is influenced by the social norms that exist in society. When people see others engaging in environmentally friendly behaviors, they are more likely to do the same.

2.3 Social Networks

Social networks and reference groups are yet other aspects that have been found to influence the warm glow effect. Previous research suggests that individuals are more likely to engage in sustainable behavior if their social network also values such behavior (Cialdini et al., 1990). In contrast, if an individual's social network does not perceive or

value sustainable behavior, it could hinder their sense of identity and belonging, thus reducing the motivation to engage in such behavior (Schultz et al., 2007). This will again affect the degree of warm glow appearing or even eliminate the possibility of it appearing when engaging in such behavior. This highlights the importance of considering the social context when investigating the warm glow effect and its impact on sustainable behavior.

The social norms consisting within the social networks could furthermore shape individual differences in the amount of perceived warm glow. A study that highlights this is a study done by (Goldstein et al., 2008). Even though the article doesn't specifically use the term warm glow, it looks into the emotional and social rewards associated with sustainable behavior. This may easily be seen as a type of warm glow, as described earlier. The study found that when participants were primed with descriptive norms, they reported higher levels of pro-environmental behavior and felt more positive emotions related to that behavior than those primed with injunctive norms. This suggests that different types of social norms within social networks can influence the emotional rewards associated with pro-environmental behavior, thus affecting the warm glow effect. The different types of norms mentioned above, and previously touched upon under Chapter 2.2, can be described as follows: Descriptive norms refer to the perception of what most people do or approve of, while injunctive norms refer to the perception of what one should do or what is socially approved (Cialdini et al., 1991). Descriptive norms may be more influential when people are uncertain about the appropriate behavior or perceive it as personally costly or risky (Goldstein et al., 2008).

2.4 Motivation

In exploring the warm glow feeling that comes with prosocial behavior, it is important to consider the factors that initiate, direct, and sustain human behavior. According to Einarsen et al., (2017), motivation is the driving force that initiates and sustains our actions. Essentially, motivation influences how we use our skills and abilities and to what extent we utilize them. Freud also acknowledged the importance of motivation in shaping human behavior, emphasizing its vital role in human psychology (Kotler & Keller, 2016). When it comes to promoting and fostering sustainable consumer

behaviors, the role of motivation, both internal and external, becomes important. Internal motivation stems from people's natural inclination to engage in activities that interest them and help them grow and develop. On the other hand, external motivation comes from the outcome that follows the job activity (Einarsen et al., 2017). The inherent satisfaction of the behavior drives intrinsic motivation, while extrinsic motivation is focused on and dependent on contingent outcomes separate from the action. Understanding and utilizing these motivational factors can encourage prosocial behavior and create positive social expectations.

2.4.1 Intrinsic motivation

In the literature, “intrinsic motivation” is often associated with enjoyment (Ryan & Deci, 2000). However, when it comes to pro-environmental action, intrinsic motivation is more likely to stem from a sense of obligation based on one's principles, values, and norms rather than solely from enjoyment (Lindenberg, 2001; Schultz & Tabanico, 2007). Acting appropriately, specifically acting pro-environmentally, can make people feel good about themselves, which may evoke a warm glow (Taufik et al., 2014). This kind of intrinsic motivation is based on an individual's commitment to principles, values, and norms, and the pleasure it gives is derived from doing the right thing and benefiting the environment (De Groot & Steg, 2010). Hence enjoyment is mostly not the motivation for acting prosocial but rather an intrinsic feeling of obligation (Lindenberg, 2001). According to Van der Werff et al., (2013), individuals are not motivated to engage in prosocial behaviors solely due to the pleasure they derive from them. Instead, they are more likely to do so because of a moral obligation to uphold their principles, norms, and values. These norms, in turn, generate positive feelings when individuals engage pro-socially.

However, it is important to state that people are not only influenced by the behavior of others but also by their own past behavior. One's past behavior can provide information about one's self-identity. An experience of a warm glow can strengthen the normative goal of engaging pro-socially in the future. Therefore, a warm glow can be defined as an important general factor that can promote changes in behavior. When individuals are, for example, reminded of their past pro-environmental behavior, it can lead them to see themselves as someone who values the environment and has strong biospheric values (Steg et al., 2016). This, in turn, strengthens their normative goal and increases the

likelihood of engaging in pro-social behavior in the future, as people tend to act following how they view themselves and strive for consistency. This behavior can also elicit positive feelings, as individuals feel good when they act in accordance with their self-identity.

2.4.2 Extrinsic (normative) motivation

Normative motivation is highly related to extrinsic motivation as it is influenced by external factors such as social norms and expectations. Individuals who are intrinsically motivated to engage in pro-environmental behavior do so because they anticipate finding it enjoyable or satisfying, while extrinsically motivated to engage in pro-environmental behavior only if there is an adequate external incentive or reward (Pugno & Sarracino, 2021). These external incentives vary and do not only need to be of financial character but can also be in the form of social approval, wealth, social recognition, and image.

Arguably one could also look at the aversion of experiencing what is on the flip side of acting according to the norm, such as feeling guilty. Making people aware that they did engage in a socially harmful manner will likely weaken their self-identity related to that behavior (Savary & Goldsmith, 2020; Van der Werff et al., 2013). According to research, extrinsic incentives can sometimes “crowd-out” intrinsic motivation, meaning that offering external rewards for engaging in a pro-social behavior can reduce the enjoyment or satisfaction that an individual may otherwise experience from engaging in that behavior (Bowles & Polania-Reyes, 2012; Deci et al., 1999). Studies have shown that offering a thank-you gift for donations can decrease donation rates as it creates a sort of ambiguity about one's motivations for donating (Newman & Shen, 2012). A similar effect was found in a large-scale field study showing a roughly 15% decrease in donation rates when a thank-you gift was offered (vs. when it was not) (Chao, 2017). Thus, for instance, associating pro-social behavior with personal rewards reduces the tendency to engage in those behaviors by creating ambiguity around one's motivations. However, surprisingly little work has directly examined the possibility that public recognition may also be considered a form of extrinsic personal benefit, which could crowd out intrinsically motivated actions, such as donating to charity (Bénabou & Tirole, 2003)

2.5 Self vs. Social Comparison

The social and self-comparison theory is a framework that describes how individuals use comparisons with others to evaluate themselves and their social standing. The concept of social comparison, which refers to comparing oneself to others, has been widely studied in psychology and has been found to significantly impact individuals' emotions and behaviors (Lockwood & Kunda, 1997). In the current research, people who are asked to think about how other people are less altruistic may feel better about themselves and their behavior because they are comparing themselves to a less altruistic group. Similarly, self-comparison, which refers to comparing oneself to one's past self, can also impact emotions and behaviors (Higgins, 1987).

Despite the importance of these concepts, little is known about how social comparison and self-comparison may impact the "warm glow" feeling and intentions for future prosocial behavior, especially if that behavior becomes the new social norm. The effect of a warm glow may differ across different social groups, and the presence of social influence may either enhance or diminish the effect. It is possible to connect the theories of intrinsic motivation with self-comparison and extrinsic motivation with social comparison. Intrinsic motivation involves internal drive and satisfaction, while self-comparison entails comparing oneself to previous performance or standards. Extrinsic motivation stems from external factors like rewards or social status, and social comparison involves comparing oneself to others regarding abilities or achievements.

2.6 Implications for Practice - Research Model and Statement of Hypotheses

The findings of this literature review further embody the potential for researching the two hypotheses presented earlier (Chapter 1.2). There seems to be little previous research investigating the potential fade-out of the warm glow, and what impacts that potentially might have.

3. Methods

This chapter will explore the methods to gather adequate information to answer the research question and its underlying hypotheses. It will also discuss the strengths and weaknesses of the chosen method. Additionally, general research methods and concepts of validity and reliability will be explained. This chapter aims to provide insight into how information was gathered, serving as a basis for quality assurance of the work conducted.

3.1 Objective

According to (Dalland, 2012), a method is a tool used to generate new knowledge and test claims. Methods should encompass how one acquires, organizes, and interprets the necessary information and are thus used as a tool to address the purpose of the study. The following subsections will explain various methodological approaches and key concepts in the methodology and answer the following questions:

- What is the research objective?
- What does this project intend to accomplish?

The objective of this thesis is to investigate the impact of social expectations on the warm glow feeling associated with prosocial behaviors. Furthermore, the aim is to examine how different types of comparison, as in social comparison and self-comparison, affects the warm glow feeling associated with prosocial behavior. To achieve this objective, a survey-based research methodology will be employed to gather data.

The survey participants will answer questions in different scenarios related to charitable donations. The survey will include questions related to participants' demographics, their likelihood of engaging in prosocial behaviors under different social expectation conditions, and their attitudes and emotions associated with those behaviors. The survey will be tested with a smaller group of participants in advance to ensure its reliability and validity. The collected data will be analyzed using statistical techniques throughout the program SPSS to draw conclusions and insights regarding the research objective and hypotheses.

This research investigates whether the warm glow effect, linked to prosocial behavior, such as making a sustainable choice, will change as the desired prosocial behavior becomes the social norm or expectation. The study dives into social expectations, social norms, and warm glow.

3.2 Research approach

The research approach refers to the broad framework or perspective guiding the entire research process. Common research approaches include quantitative, qualitative, mixed-methods, and action research.

3.2.1 Inductive vs. deductive reasoning

Induction and deduction are two distinct methodological approaches used in research and studies. The deductive method involves drawing conclusions based on general statements, while the inductive method uses facts as a basis for theories or principles (Malhotra, 2010). According to Sander (2022), an inductive approach involves observing a problem to arrive at a theory about a phenomenon. In contrast, a deductive approach aims to test a theory about a phenomenon to assess its validity. Figure 2 illustrates the relationship between the two methods. From the figure, one can understand how distinct yet closely related these two methods are.

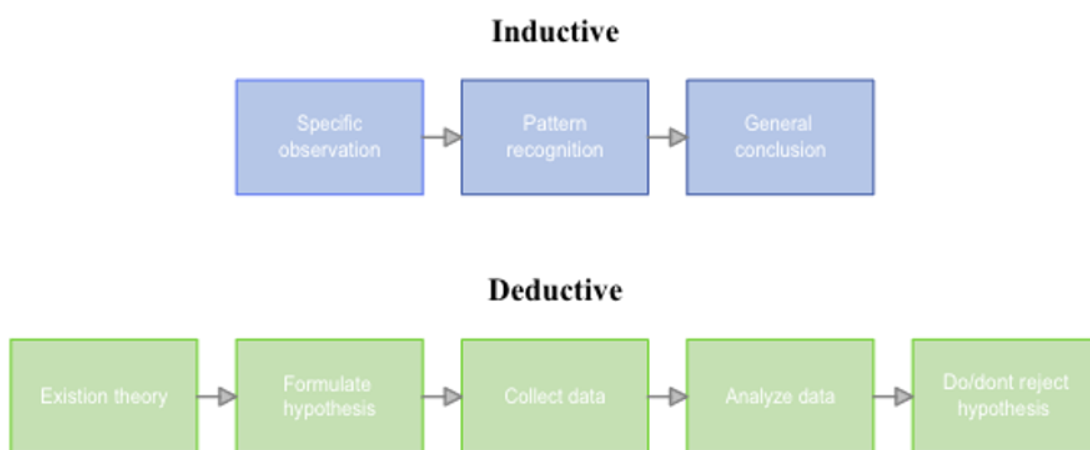


Figure 2 - Inductive and deductive reasoning

The methodology employed in this study aligns with a deductive approach. The research starts with a clear objective and specific hypotheses based on established theories from prior research. The data collection and analysis process is designed to test and either confirm or reject the hypotheses using a survey-based approach and statistical analysis. Moreover, the research does not involve developing new theories or principles based on observations or facts but instead focuses on testing existing theories. Lastly, it can be characterized as deductive, as it follows a systematic and structured approach to testing theories and hypotheses related to the research objective.

3.2.2 Quantitative vs. Qualitative

The choice of research methodology depends on the research question at hand, as different approaches entail different forms of empirical data (Malhotra, 2010). A qualitative methodology implies a desire to understand a dataset or a phenomenon at a deeper level. In contrast, the quantitative methodology works better when it is desirable to quantify an answer or examine statistical relationships (Streefkerk, 2023).

According to (Jansen & Kerryn, 2020), qualitative research focuses on collecting and analyzing words (written or spoken) and textual data, while quantitative research focuses on measurement and testing using numerical data. Qualitative analysis can also involve other "softer" data points, such as body language or visual elements. Qualitative methodology is commonly used when the research aims, and objectives are exploratory in nature, such as understanding people's perceptions about an event or a candidate running for president. In contrast, the quantitative methodology is typically used when the research aims, and objectives are confirmatory, such as measuring the relationship between two variables or testing a set of hypotheses (Jansen & Kerryn, 2020). Based on the scope and intended purpose of this master thesis and its research question, a quantitative approach is the most applicable. The chosen methodology is considered appropriate for effectively answering the research questions. Additionally, this study utilizes a quantitative research approach, employing statistical analysis to examine the relationship between the variables.

3.2.3 Descriptive, causal, and exploratory research

There are three main types of research - descriptive, causal, and exploratory, each serving a unique purpose in academic research. Descriptive research is commonly used

in marketing to gather information before the central analysis or pre-testing, such as through focus groups, which involve in-depth analysis of people, situations, and events (Saunders et al., 2019). Causal research, or explanatory research, aims to establish cause-effect connections between variables by examining their nature, characteristics, direction, and intensity. It seeks to explain relationships (Bajpai, 2011). Exploratory research is intended to clarify the nature of a problem, better understand a situation, and provide guidance for future investigations by gathering general information about the subject matter (Saunders et al., 2019). In the context of this thesis, a causal research approach is applied.

3.3 Research design

The research design refers to the specific strategy for conducting a research study. It involves deciding the research methods, the sample to be studied, the data collection instruments, and the analytical techniques employed.

In order to ensure accurate responses to the research question outlined in Chapter 2 and its underlying hypotheses, it is important to have a suitable research design in place. The research design serves as a thorough plan for addressing the hypotheses (Saunders et al., 2019). In this particular case, a deductive approach was implemented to address the hypotheses, with quantitative data being collected to test the hypotheses, as suggested by (Saunders et al., 2019). According to Saunders et al., (2019), the survey method is closely linked to the deductive approach and enables the efficient collection of structured data from a respondent pool. It was therefore decided to create a survey in order to collect the necessary data to answer the initial research questions. Before creating and conducting the survey, a theoretical framework was built to broaden the understanding of terms and themes touched upon in this thesis, as well as identify previous research in close proximity to this thesis. Therefore, an initial literature review was conducted, as presented in Chapter 2. The methods regarding the literature review are further described in Chapter 3.4.

To reiterate, this study aims to investigate the warm glow feeling associated with a desired prosocial behavior when the behavior becomes a social expectation. To achieve this goal, this study will use deductive reasoning and quantitative research approaches

to test hypotheses through empirical evidence. Furthermore, a randomized quasi-experimental design will be employed. According to Mitchell & Jolley (2007), experimental design is a research methodology that tests hypotheses by determining whether stimuli cause specific effects. The design is considered factorial when the experimental design has one or more independent variables. A factorial design is particularly suitable for this study as it allows for manipulating the independent variables and makes it possible to identify each effect at various levels. It also provides for systematically assessing how the independent variables interact (Malhotra, 2010). A 2 x 2 between-subjects design will be used, with social expectations (high vs. low) and comparison (social vs. self) as the independent variables. This resulted in four treatment groups, as conceptualized in Table 1 below. A between-subject factorial design is beneficial for observing interactions between variables and allows for a clearer visualization of the variables' indirect effects (Malhotra, 2010).

To gather data, Qualtrics, the official survey software tool recommended by the Norwegian Business School BI, was utilized, and an online questionnaire was developed. Qualtrics enabled randomly generating respondents into the different stimuli conditions, which is an essential feature of this experiment. In addition, this software also facilitates data transfer to SPSS for further analysis. Conducting a survey represents a viable option in this research, as it can enhance the reliability of findings by enabling comparisons with established literature. Surveys also enable the maintenance of control over the research process while still gathering a significant volume of data from the target population cost-effectively (Saunders et al., 2019).

Table 1 - 2x2 between subjects design

		Comparison	
		Social	Self
Social expectation	High	warm glow	warm glow
	Low	warm glow	warm glow

This design required participants for four treatment groups. To collect adequate data to either reject or accept the hypotheses, approximately 30 participants per treatment group were needed, requiring a minimum of 120 participants in total. However, having a larger sample size would have further enhanced the study's statistical power and generalizability. Unfortunately, the decision to settle for the minimum threshold sample size was influenced by practical considerations such as available resources, time constraints, and feasibility. It is worth noting that a sample size of 30 or more is often associated with meeting the assumptions of certain statistical tests, such as t-tests and analysis of variance (ANOVA), which assume a normal distribution (Malhotra, 2010). With a larger sample size, the central limit theorem becomes more applicable, enabling more reliable inferences about the population.

3.4 Literature Review

Recent and current literature on related topics at various levels of comprehensiveness and completeness have been reviewed. According to Brocke et al. (2009), the review process entails identifying high-quality papers and evaluating their relevance to the topic. Grant & Booth (2009) suggest that incorporating previous research into identifying information gaps can enhance the efficacy of the formal search process. Conducting a literature review provides a broader understanding of previous research within the field and informs the search for relevant studies. To identify studies on the relationship between warm glow, motivation, and social expectations, these search strings were used; "Warm glow" AND motivation* AND social expect*. Then by adding (prosocial* OR pro-social*) to the search string, studies on prosocial behavior were also identified. Finally, including donation and "social networks" in the search helped find studies on the relationship between warm glow, motivation, social expectations, and donation behavior in social networks.

3.5 Survey-based research

Survey-based research is a common and efficient method used in social science and marketing research to collect data from a large population through the use of questionnaires or surveys. To gather an adequate amount of data to support the hypotheses, different prosocial and pro-environmental activities were weighed to ensure

the best suitability for the research purpose. Initially, three cases were considered: a case with reusable towels, a case with bottle recycling, and a case with charitable giving.

However, considering time constraints and logistical challenges related to sample management, it was decided to include only one case in the survey, focusing on charitable giving. Charitable donations were chosen as they provide a clear example of prosocial behavior that can be influenced by both intrinsic and extrinsic (normative) motivations. By examining how the warm glow feeling is affected when charitable donations transition from being an individual's choice to a societal expectation, insights can be gained and tell something about the interplay between intrinsic motivations, social expectations, and the warm glow feeling.

Furthermore, conducting a survey within the domain of where the warm glow was initially observed serves as a crucial step in understanding the mechanisms that influence prosocial behavior over time, especially as society undergoes changes - the factors that motivated people to engage in prosocial behavior may have evolved or shifted over time.

3.5.1 Participants Sampling

To account for time constraints, a non-probability sampling method, specifically convenience sampling, was employed to select participants for the study (Malhotra, 2010). The recruitment process involved reaching out to potential participants through social networks like LinkedIn and Facebook.

Convenience sampling has proven to be a valuable and cost-effective method (Malhotra, 2010), despite its limitations in accurately representing a specific population. It is important to acknowledge that the sample may not reflect the entire population under study, given that participants are selected based on convenience rather than randomization (Malhotra, 2010). Consequently, potential biases can arise, impacting the generalizability of the findings. Certain demographic groups or individuals with specific characteristics may be more likely to participate, potentially skewing the sample and limiting the ability to draw broader conclusions.

However, it is worth noting that Baltar et al., (2012) discovered that convenience sampling can lead to a snowball effect, validating the results. To mitigate any potential selection bias, the survey was conducted online. The chosen sampling method further worked well with the exploratory nature of the research, as the purpose was to generate insights into the chosen topic (Malhotra, 2010). It is important to acknowledge that online surveys have drawbacks due to the lack of control over the survey environment, which could introduce external factors that may influence the experiment (Malhotra, 2010).

3.5.2 Pretest

Prior to releasing the survey, a pilot test was conducted with nine participants selected from a private network to ensure it was well-received by the target audience. The participants, evenly split between male and female, ranged in age from 20 to 65 years. The pretest was also reviewed by a supervisor to guarantee its quality. To maintain their anonymity, a Qualtrics link was provided to the participants for the pretest. Feedback was given by the respondents, which was utilized to make adjustments to the questionnaire. For instance, revisions were made to the sentence structure and language to make it more user-friendly. Additionally, repetitive questions were logically separated. Overall, the pilot test improved the questionnaire before it was distributed to a larger audience.

3.5.3 Collecting data

The final survey was conducted between May 10th and 20th. A Qualtrics link was shared throughout social media channels such as Facebook and LinkedIn. To fully anonymize the responses and maintain the confidentiality of the respondents, Qualtrics' settings were utilized, and the collection of IP addresses was disabled. The only personal data collected were the respondent's gender, age, marital status, level of education, and place of residency, ensuring the impossibility of identifying any individual respondent. The survey started with an introduction that thanked respondents for their contribution and time while reassuring them that their responses would remain anonymous. They were also asked to consent that their answers would be collected before entering the survey.

3.5.4 Survey design

To test the hypotheses, a quantitative online scenario-based experiment using vignettes, which ensures high internal validity, was conducted. By developing scenarios that simulate reality as accurately as possible, one obtains more precise data that reflect world-like consumer behavior (Kim & Jang, 2014). Considering this study's 2 x 2 between-subject factorial design, respondents were randomly allocated into one of four conditions. Each respondent was only exposed to one of the treatment conditions with either high social expectations or low social expectations with either self-comparison or social comparison.

Condition/scenario 1 - High Social Expectations with Social Comparison

Condition/scenario 2 - High Social Expectations with Self Comparison

Condition/scenario 3 - Low Social Expectations with Social Comparison

Condition/scenario 4 - Low Social Expectations with Self Comparison

A between-participant design was chosen under the assumption that exposure to one of the treatments could influence how participants responded to other treatments resulting in unwanted bias (Charness et al., 2012). The accompanying questions measured the variables on a five-point Likert scale. The final section of the questionnaire included demographics to classify the respondents into different groups for analysis purposes (Malhotra, 2010). Moreover, it included some questions about the respondents' personal donation habits and attitudes toward helping others and charitable organizations. See Appendix 1 for a complete overview of the Questionnaire.

3.5.4.1 Stimuli development using vignettes

The choice of a context for the survey was crucial in answering the research question and hypotheses. To ensure accurate data collection, the context of each scenario was kept consistent throughout all treatments. A grocery context was chosen over a fundraising event as people are more likely to encounter donation jars in grocery stores, making it a relatable and familiar scenario. This decision was based on the need for a realistic context to obtain more accurate and meaningful data from respondents.

The use of vignettes was instrumental in creating the scenarios for the survey. Vignettes are an effective tool that brings educational material to a practical and realistic level (Malhotra, 2010). The scenarios were carefully tailored to reflect different levels of social expectations and self-reflection, and the questions allowed for a detailed exploration of participants' emotional responses to each scenario. Each scenario presented a unique combination of social expectations and self/social comparison that could influence the warm glow feeling associated with prosocial behavior. The participants were asked to imagine themselves in the shoes of John, the character presented in the vignette, and to share their feelings of enjoyment, moral obligation, and pride after donating to a charity in each scenario. The use of vignettes helped control for extraneous variables and isolate the effect of social expectations and self/social comparison while also increasing the ecological validity of the study (Malhotra, 2010).

Scenario 1 stimulates high social expectations with social comparison because it describes a situation where John is in a crowded grocery store, sees many other customers donating significant amounts of money, and hears the cashier praising some of them. This creates a social norm or expectation that donating a large sum of money is the "right" or "good" thing to do, and the comparison to others who are donating more creates a sense of pressure for John to keep up and donate a large amount of money.

Scenario 2 also stimulates high social expectations with self-comparison instead of social comparison. John is in a similar situation as in Scenario 1. Still, instead of comparing himself to others, he reflects on his values and goals and how he feels about contributing to a cause he cares about. The pressure to keep up comes from his internal motivation rather than external social cues.

Scenario 3 stimulates low social expectations with social comparison. John sees a small donation jar and notices that no one else seems to be donating. This creates a social norm or expectation that donating money is unnecessary or expected, and the comparison to others who are not donating establishes a sense of self-consciousness for John.

Scenario 4 stimulates low social expectations but with self-comparison. John sees the same small donation jar but is committed to the cause, so he donates a small amount of

money anyway. The pressure to keep up comes from his internal motivation rather than external social cues.

Overall, these scenarios manipulate social expectations and social/self-comparison levels to study their effect on John's motivation and warm glow after donating to charity.

3.5.5 Measures and scales

Table 2 - Factor overview

Factors	Description	Measurement aspects
Intrinsic motivation	The individual's internal desire to engage in a behavior for its own sake	<ul style="list-style-type: none"> • <i>Self comparison</i> • <i>Enjoyment</i> • <i>Personal satisfaction</i>
Extrinsic motivation	The individual's external drive to engage in a behavior, such as receiving a reward or avoiding a punishment	<ul style="list-style-type: none"> • <i>Social comparison</i> • <i>Social pressure</i> • <i>Praise from others</i>
Social expectations/norms	The pressure an individual feels to conform to the behavior of others in their social group	<ul style="list-style-type: none"> • <i>“John sees many other customers donating significant amounts of money to the local charity near the checkout”</i> • <i>“The cashier praises some of the customers who donate the most”</i> • <i>“John notices that no one else seems to be donating to the small donation jar for a local charity near the checkout”</i> • <i>“John feels committed to the cause and puts a small amount of money in the small donation jar for a local charity near the checkout, but he notices that no one else seems to be donating”</i> • <i>“Feeling pressure to keep up”</i> • <i>“Feeling self-conscious”</i>
Social-comparison	The individual's tendency to compare themselves to others in order to evaluate their own behavior	<ul style="list-style-type: none"> • <i>“Later, John hears someone praising the people who donated the most”</i> • <i>“Later, John sees someone else donating a larger amount than he did, making John contemplate whether he should have donated more”</i>

Self-comparison	The individual's tendency to evaluate their own behavior based on their own standards and goals	<ul style="list-style-type: none"> • <i>“John reflects on his own values and goals and how he felt about contributing to a cause he cares about”</i> • <i>“Feeling proud of oneself for donating”</i>
Warm glow	The positive feeling an individual experiences as a result of engaging in prosocial behavior	<ul style="list-style-type: none"> • <i>Donation enjoyment level (DEL)</i> • <i>Donation Rightness Perception (DRP)</i> • <i>Donation Self-Pride Rating (DSPR)</i>
Attitudes toward helping others (AHO)	The individual's general beliefs and values regarding helping others	<ul style="list-style-type: none"> • <i>People should be willing to help others who are less fortunate</i> • <i>Helping troubled people with their problems is very important to me.</i> • <i>People should be more charitable toward others in society</i>
Attitude toward charitable organizations (ACO)	The individual's general beliefs and values regarding donating to charity	<ul style="list-style-type: none"> • <i>The money given to charities goes for good causes</i> • <i>Charitable organizations have been quite successful in helping the needy</i> • <i>My image of charitable organizations is positive</i>

To measure the warm glow experienced by participants in response to John's charitable donation choices, inspiration from (Hartmann et al., 2017) were drawn. In their research, *warm glow* is defined as an emotional construct derived from the pleasure and satisfaction individuals experience when contributing to the well-being of society, specifically in the context of charitable donations. Following this concept, five-point Likert scale items were incorporated into the questionnaire to assess the respondents/John's enjoyment, perception of doing the right thing, and the sense of pride he experienced after making donations in different scenarios. Based on this, three reconstructed questions have been created to measure the warm glow in this study. These items were adapted from the warm glow typologies of positive affective reward found in previous literature (e.g., Bagozzi et al., 1999; Edell & Burke, 1987; Watson & Tellegen, 1985), which include feelings such as happiness, pleasure, satisfaction, and contentment.

The questionnaire assesses the effect of social expectations by presenting different scenarios in which John encounters a degree (high vs. low) of social expectations

related to charitable donations. By manipulating the social context in each scenario, the questionnaire examines how these expectations influence John's emotional experiences and attitudes toward donating.

The questionnaire evaluates how social expectations impact John's perception of donating to charity. By manipulating the social context in each scenario, the questionnaire examines how these expectations influence John's emotional experiences and attitudes toward donating.

The questionnaire also utilized scenarios that aimed to capture the influence of both social comparison and self-comparison on participants' emotional experiences and attitudes toward charitable donations. The questionnaire examined how these two types of comparisons influence individuals' responses by presenting different situations.

Two pre-existing scales were employed to measure participants' AHO and ACO: the Attitude toward Helping Others (AHO) scale and the Attitude toward Charitable Organizations (ACO) scale. These five-point Likert scales have been developed and validated in previous research (Webb et al., 2000), making them reliable measures for this study. Using these scales, the study aims to collect valuable insights into the participants' beliefs and values, which could contribute to a deeper understanding of their motivations and behaviors regarding prosocial actions.

3.5.6 Validity and Reliability

In order to provide a comprehensive understanding, it is important to define the terms "reliability" and "validity," which are relevant to the existing content. According to (Heale & Twycross, 2015), validity refers to the accuracy and trustworthiness of research results in measuring the intended concept or construct. Reliability refers to the consistency and stability of measurements over time and across different conditions. Both validity and reliability are crucial for ensuring credible and meaningful research findings.

3.5.6.1 Reliability Test

To ensure that all survey items were accurately aligned with the variable of interest, a reliability test was carried out. This enabled assessing the scale's (5-point Likert scale)

ability to generate consistent results when measurements are repeated. When multiple measurements using the same instrument consistently yield similar results, it indicates high reliability and supports the instrument's validity (Malhotra, 2010). To ensure the consistency of respondents' answers, positively and negatively worded items were subjected to reverse coding. This involved assigning opposite values to certain response options in order to balance any potential biases or tendencies in respondents' responses. This study utilized Cronbach's alpha coefficient to evaluate internal consistency and reliability, with a value above 0.6 indicating strong reliability for the measured variable (Malhotra, 2010). All items in the study exceeded the recommended threshold of 0.6, demonstrating high reliability as shown in Table 3. It is important to note that while reliability is crucial, it is not sufficient to establish validity (Malhotra, 2010).

Table 3 - Overview of reliability

Construct	Number of items	Cronbach's alpha
AHO	3	.780
ACO	3	.843
WARM GLOW	3	.635

3.5.6.2 Factor analysis

In order to evaluate the convergent and divergent validity of the measurements and scales used in the present study, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were conducted (Malhotra, 2010). These statistical tests assess the suitability of factor analysis. The KMO statistic indicated satisfactory suitability with a value of .751. Moreover, Bartlett's test revealed a significant correlation among the variables, with $p < .001$. These findings suggest a substantial correlation within the dataset.

Table 4 - KMO and Barlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.751
Barlett's Test of Sphericity	Approx. Chi-Square	368.208
	df	36
	Sig.	<.001

A principal component analysis (PCA) with Varimax rotation was conducted to assess the factor structure and eliminate inadequate items. This technique considers the total variance in the dataset to explore the factor structure of the constructs (Malhotra, 2010). Kaiser's rule was applied to determine the appropriate factor retention, excluding components with eigenvalues less than 1 and a criterion of at least three items per factor. Specific retention criteria were also applied per Malhotra (2010):

- The primary factor loadings must be 0.50 or greater.
- No cross-loading on other factors should exceed 0.32.
- Extracted components should account for at least 60% of the total explained variance

The PCA results supported retaining three factors, each containing three items. All factors exhibited eigenvalues > 1 , collectively explaining 68.86% of the total variance. The results showed no overlap as each concept's items loaded on its own factor with high significance ($> .50$). In total, the current measures can be confidently utilized.

Table 5 - Factor analysis

Variable	Initial eigenvalues	Items	Factor 1	Factor 2	Factor 3
AHO	1.709	<i>People should be willing to help others who are less fortunate</i>		.836	
		<i>Helping troubled people with their problems is very important to me</i>		.756	
		<i>People should be more charitable toward others in society</i>		.800	
ACO	3.338	<i>The money given to charities goes for good causes</i>	.761		
		<i>Charitable organizations have been quite successful in helping the needy</i>	.900		
		<i>My image of charitable organizations is positive</i>	.885		
WARM GLOW	1.150	<i>Donation enjoyment level (DEL)</i>			.858
		<i>Donation Rightness Perception (DRP)</i>			.590
		<i>Donation Self-Pride Rating (DSPR)</i>			.855

3.5.7 Data analysis

The chosen analysis methods for the survey data are general descriptive analysis, correlation analysis, and univariate analysis. The general descriptive analysis will

provide an overview of the key characteristics and patterns within the survey data, while the correlation analysis will explore the relationships between variables of interest. The univariate analysis will focus on examining individual variables in isolation. These methods were chosen to address the research question and hypotheses effectively. The study aims to comprehensively understand the survey data, uncover meaningful relationships between variables, and provide insights into the dynamics of intrinsic motivation, social expectations, and the warm glow feeling associated with prosocial behavior.

3.6 Critical review of the research design

The chosen research design has some limitations that must be addressed. Some aspects could have benefited from improvement to enhance the quality and credibility of the findings. One key area for improvement in the questionnaire used in the survey is that it may not be suitable for mobile devices as the scenarios were lengthy. This could impact the data's reliability and validity. Ensuring the questionnaire is user-friendly and accessible to all participants is crucial for obtaining accurate results.

In addition, the scenarios presented in the survey may only be representative of some contexts where prosocial behavior occurs, which could limit the generalizability of the findings. Incorporating a variety of scenarios that reflect real-world situations and social dynamics can provide a more comprehensive understanding of prosocial behavior. Another crucial consideration is the sample size of respondents in the survey. A smaller sample size can limit the sample's representativeness and increase the risk of type II errors. A larger sample size can improve the statistical power and generalizability of the results. Furthermore, using hypothetical scenarios may not capture the complexity and nuances of real-life situations, potentially affecting the validity of the findings. An experimental design involving real-world situations and behaviors can provide more accurate and reliable results. Finally, the self-made measurement scale for warm glow may be subject to biases and limitations, which could affect the reliability and validity of the data collected. To a greater extent, using established and validated measurement scales could have improved the results' accuracy and enhanced the study's rigor.

Overall, the quality and credibility of the findings can be improved by addressing these limitations and utilizing a combination of methods that incorporate real-world situations, diverse scenarios, and established measurement scales.

3.7 Ethical Considerations

The study's ethical implications were taken seriously, and all relevant regulations and guidelines, in compliance with BI's "checklist for the use of personal information in a student assignment," were followed during the data collection process. Survey respondents were explained the study's purpose and procedures before consenting to participate. Their privacy and anonymity were protected by treating all responses with confidentiality and keeping identifying information separate from the data. The author's contact information was included in the survey introduction to address any questions or concerns participants may have had. These measures were implemented to protect the participants' rights and ensure that the study was conducted ethically and responsibly.

4. Results

4.1 Sample description

The present study involved a sample of 171 individuals, of which 49 participants did not complete the survey and were thus excluded from further analysis. Among the remaining 122 participants, 25 were exposed to Condition 1, 32 were exposed to Condition 2, 33 were exposed to Condition 3, and 32 were exposed to Condition 4.

In terms of gender, 41.8% of the participants identified themselves as male and 55.7% as female. Notably, the age distribution of the sample revealed that the largest proportion (36.9%) of respondents fell into the age group of (25-34). The group (18-24) constituted the second largest and with 18.9% of the participants.

Notably, the age distribution of the sample was characterized by the largest proportion (36.9%) of respondents falling into the age group 3 (25-34), followed by group 2 (18-24), which constituted 18.9% of the participants.

Regarding the participants' educational background, most of the sample reported having attained a high level of education, with 43.4% holding a master's degree and 38.5% having completed a bachelor's degree. In terms of place of residency, the majority, 85.2%, reported living in Norway, followed by 7.4% living in Italy and 2.5% in Denmark. Lastly, based on the provided data on respondents' marital status, 27.0% reported being married. Additionally, 7.4% of the respondents indicated that they were divorced. Furthermore, 37.7% of the participants reported being in a relationship, while 27.9% stated they were single. (Appendix 2)

In order to obtain a comprehensive understanding of the sample, categorical groups were derived to evaluate the respondent's attitudes toward helping others (AHO) and charitable organizations (ACO). Based on the average levels of AHO ($M=4.0328$, $SD=.80336$), and ACD ($M=3.6858$, $SD=.80094$) (Appendix 2), each participant was categorized as demonstrating either a negative or positive view, negative indicated a score below the respective mean and positively indicated a score above the mean (Table 6).

Additionally, based on the average levels of donation frequency ($M=2.78$, $SD: 1.20$) and amount ($M=1.73$, $SD: .973$) (Appendix 2), participants were classified according to

whether their scores fell below or above the respective means. Participants reporting a donation frequency below the mean were categorized as having a low donation frequency. The mean donation frequency indicated that, on average, participants reported donating once every few months or once a year. Conversely, those who reported a donation frequency above the mean were categorized as having a high donation frequency. This group comprised individuals who reported donating once a week or once a month. Furthermore, participants were categorized based on the donation amount. Those who donated an amount higher than \$100 were classified as high donation givers, while those who donated less were classified as low donation givers.

Table 6 - Respondents in each category

Variable	Group	Frequency
AHO	Negative	66
	Positive	56
ACO	Negative	56
	Positive	66
Donation frequency	Low	51
	High	71
Donation amount *	Low	100
	High	20
Total		122

** Non-donors (two pax) were not asked about their average donation amount*

The data reveals that most respondents had a positive attitude towards charitable organizations, while their attitudes towards helping others were negative. Furthermore, participants exhibited a moderate donation frequency and varied donation amounts. The data suggests that there may be a disconnect between respondents' attitudes toward helping others and their actual donation behavior. Despite having negative attitudes towards helping others, participants still reported moderate levels of donation frequency and amounts. This discrepancy raises questions about the underlying factors influencing

their donation behavior and highlights the complex nature of individuals' attitudes and actions in the context of charitable giving. Further exploration is needed to understand the motivations and influences behind these patterns fully.

4.2 Correlation analysis - bivariate correlation

When testing for correlation, the null hypothesis that the population correlation is zero is commonly tested. The Pearson correlation coefficient, which is a value between -1 and +1 that indicates the strength and direction of the linear relationship between two metric variables, is used for this purpose. The purpose of the correlation test is to determine whether there is evidence to support a relationship between the variables under investigation (Malhotra, 2010).

$$H_0: r = 0$$

$$H_1: r \neq 0$$

The null hypothesis assumes that there exists no relationship between the variables, while the alternative hypothesis suggests the presence of a relationship. In order to conduct a statistical significance test for correlation, certain assumptions are made. These include the independence of observations and the normality of the sample distribution (Malhotra, 2010). As the size is $N \geq 25$, assuming normality in the sample distribution is acceptable.

Table 7 - Bivariate correlation (AHO; ACO; WG)

	Correlation coefficient	p-value
AHO-ACO	.434	<.001
AHO-WG	.281	.002
ACO-WG	.129	.157

Based on statistical analysis, a correlation is considered significant if its Sig. (2-tailed) is less than .05. In this study, it was found that there is a notable and positive correlation between attitude toward helping others (AHO) and attitude toward charitable organizations (ACO) ($r = .434, p < .001$). Furthermore, a significant positive correlation was also found between attitude toward helping others (AHO) and warm glow (WG) ($r = .281, p = .002$). However, the correlation between attitude toward charitable

organizations (ACO) and warm glow (WG) was not statistically significant ($r = .129$, $p = .157 > .05$).

These findings suggest that individuals with a positive attitude toward helping others are more likely to have a favorable opinion of charitable organizations and experience positive emotions associated with prosocial behavior. It is essential to note that attitudes are important in shaping individuals' engagement with prosocial behaviors and perceptions of charitable organizations. Positive attitudes toward helping others may promote the experience of a warm glow and potentially encourage continued engagement in prosocial actions.

It is important to note that correlation does not imply causation but only the things mentioned above. The analysis shows the strength and direction of the linear relationship between the variables but does not establish a cause-and-effect relationship (Malhotra, 2010). Other factors not considered in this analysis could also influence the observed correlations.

A new bivariate correlation analysis was carried out between these variables to investigate further the link between attitudes and actual behavioral outcomes, such as donation frequency.

Table 8 - Bivariate correlation (AHO; DF)

	Correlation coefficient	p-value
AHO-DF	.256	.004

The table shows that there is a significant positive correlation between attitude towards helping others (AHO) and Donation frequency (DR) ($r = .256$, $p = .004$). This suggests that individuals with a more positive attitude toward helping others tend to have a higher frequency of donations. It is important to note that the correlation is statistically significant at the 0.01 level, indicating a robust relationship between the variables.

These findings support the notion that individuals who hold a positive attitude toward helping others are more inclined to engage in prosocial behaviors, such as giving money to charity.

4.3 Initial insights about the relationship between conditions

Based on the means in warm glow in all conditions, a visualization of the connections between all of them was made. Based on the visualization and the condition means, a few observations, regardless of statistical significance, can be made. Table 9 summarizes the mean warm glow values obtained through the statistical analysis.

Table 9 - Mean warm glow values

		Comparison	
		Social	Self
Social expectation	High	3.09	3.04
	Low	2.93	3.45

To further visualize the values from Table 9, the relationship between the different values is presented graphically in Figure 3.

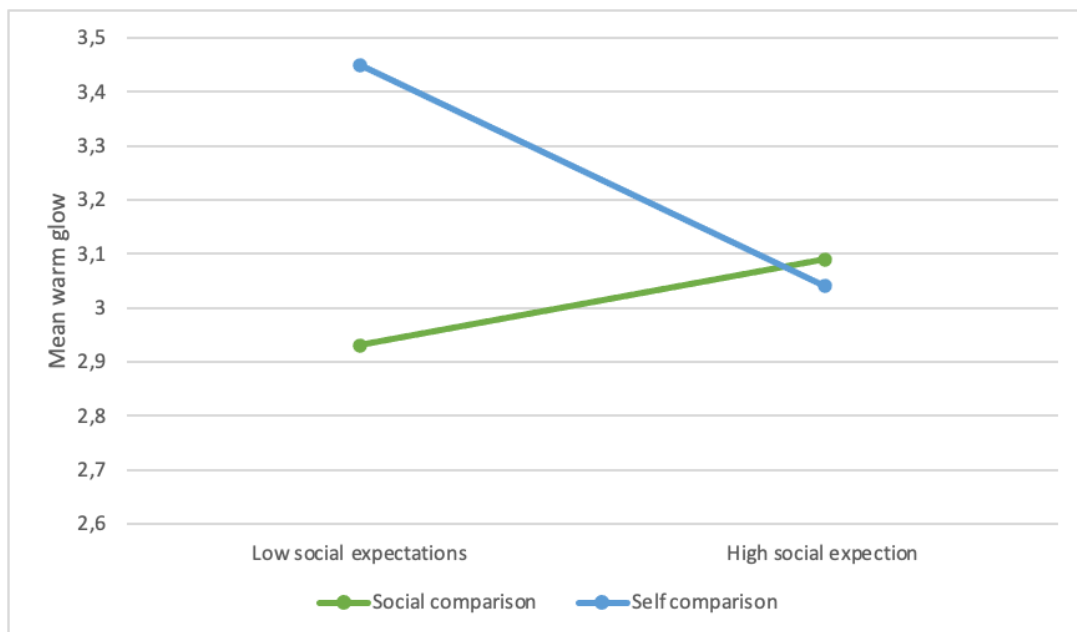


Figure 3 - Condition relationship visualization

In both low and high social expectation conditions, the mean scores for self-comparison are higher compared to social comparison, suggesting that participants through “John” tended to rate themselves more positively when evaluating their performance. In the low social expectations condition, the mean score for self-comparison (3.45) is higher than the mean score for social comparison (2.93), indicating a stronger preference for self-evaluation and potentially indicating a higher level of self-esteem or self-focus in this condition. In the high social expectations condition, the mean scores for social comparison (3.09) and self-comparison (3.04) are relatively close, suggesting that the participants' evaluations of themselves and others are more similar in this condition compared to the low social expectations condition.

These observations provide some initial insights into the participants' perceptions and preferences for social and self-comparison under different levels of social expectations. However, it is important to conduct further statistical analysis to determine the significance and reliability of these observed differences.

4.4 Univariate ANOVA

An analysis of variance (ANOVA) is conducted to determine if there are significant differences in means between two or more groups (Malhotra, 2010). The choice to use an ANOVA, specifically a univariate ANOVA, in this study is driven by the need to investigate the variations in the dependent variable "Warm glow" across the four conditions/scenarios: High Social Expectations with Social Comparison (condition 1), High Social Expectations with Self Comparison (condition 2), Low Social Expectations with Social Comparison (condition 3), and Low Social Expectations with Self Comparison (condition 4).

The formal hypotheses for the univariate ANOVA can be stated as follows:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \mu_4$$

HA: At least one pair of means among μ_1 , μ_2 , μ_3 , and μ_4 is significantly different.

Table 10 - Test of Between-Subjects Effects

Tests of Between-Subjects Effects						
Dependent Variable: Warm Glow						
Source	Type III of sum squares	df	Mean square	F	Sig	Partial Eta squared
Corrected Model	4.930	3	1.643	178.372	.040	.068
Intercept	1182.723	1	1182.723	44.789	<.001	.946
All Conditions	4.930	3	1.643	178.372	.040	.068
Error	67.661	118	.573			
Total	1270.778	122				
Corrected Total	72.591	121				

a. R Squared = .068 (Adjusted R Squared = .044)

Firstly, the test of between-subjects effects (Table 10) revealed a significant effect of the independent variables/conditions on the dependent variable Warm glow ($F = 2.866$, $p = 0.040$). This indicates that there are significant differences in the means of 'warm glow' across the different conditions. However, only approximately 6.8% of the variance in warm glow can be explained by the conditions, as indicated by the partial eta squared value of 0.068. Furthermore, the intercept term in the model was found to be statistically significant ($F = 2062.656$, $p < 0.001$), suggesting a significant overall effect on warm glow that is not accounted for by the conditions alone. These factors may include individual differences, external influences, or unmeasured variables that were not included in the analysis.

In summary, the analysis indicates that the independent variables have a statistically significant effect on the dependent variable, warm glow, as evidenced by the significant F-value and p-value. However, the effect size is relatively small, as indicated by the R-squared value. While the observed results are consistent with the anticipated direction

of the hypotheses, it is essential to conduct further statistical analyses to discover the significance of the mean differences and obtain more conclusive evidence supporting the hypotheses.

Table 11 - Multiple comparisons

Multiple Comparisons

Dependent Variable: Warm glow

Bonferroni

(I) ALL CONDITION	(J)ALL CONDITION	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1 (High exp/Social)	2 (High exp/Self)	.0517	.20213	1.000	-.4907	.5941
	3 (Low exp/Social)	.1539	.20078	1.000	-.3848	.6927
	4 (Low exp/Self)	-.3650	.20213	.441	-.9074	.1774
2 (High exp/Self)	1 (High exp/Social)	-.0517	.20213	1.000	-.5941	.4907
	3 (Low exp/Social)	.1023	.18787	1.000	-.4019	.6064
	4 (Low exp/Self)	-.4167	.18931	.178	-.9247	.0913
3 (Low exp/Social)	1 (High exp/Social)	-.1539	.20078	1.000	-.6927	.3848
	2 (High exp/Self)	-.1023	.18787	1.000	-.6064	.4019
	4 (Low exp/Self)	-.5189*	.18787	.040	-1.0231	-.0148
4 (Low exp/Self)	1 (High exp/Social)	.3650	.20213	.441	-.1774	.9074
	2 (High exp/Self)	.4167	.18931	.178	-.0913	.9247
	3 (Low exp/Social)	.5189*	.18787	.040	.0148	1.0231

Based on observed means.

The error term is Mean Square(Error) = ,573.

*. The mean difference is significant at the 0.05 level.

Table 11 illustrates the results of multiple comparisons using the Bonferroni method for the dependent variable, Warm glow. The mean differences between all conditions are presented, along with their standard error, significance level, and 95% confidence interval.

The Post Hoc analysis of the effect of different conditions/scenarios on the dependent variable, *Warm glow* revealed interesting findings. The results demonstrated that the various conditions/scenarios had a statistically significant influence on the perceived warmth and positive emotions associated with giving.

Examining the different conditions/scenarios individually, participants in Condition 1 (high social expectations with social comparison), Condition 2 (high social expectations with self-comparison), and Condition 3 (low social expectations with social comparison) did not have significantly different mean *warm glow* scores compared to the other conditions. This implies that the presence or absence of social expectations, as well as the mode of comparison (social vs. self), did not lead to substantial variations in the perceived warmth and positive emotions.

However, participants in Condition 4 (low social expectations with self-comparison) reported a lower mean *warm glow* score compared to Condition 3 (low social expectations with social comparison). Importantly, this difference in means was statistically significant at the 0.05 level. This suggests that when individuals face low social expectations in the context of self-comparison, the perceived warmth and positive emotions associated with giving are diminished.

To summarize the post hoc test results:

- Condition 1 (High Social Expectations with Social Comparison) does not differ significantly in warm glow scores compared to any other condition.
- Condition 2 (High Social Expectations with Self Comparison) does not differ significantly in warm glow scores compared to any other condition.
- Condition 3 (Low Social Expectations with Social Comparison) does not differ significantly in warm glow scores compared to any other condition.
- Condition 4 (Low Social Expectations with Self Comparison) shows a significant difference in warm glow scores compared to Condition 3.

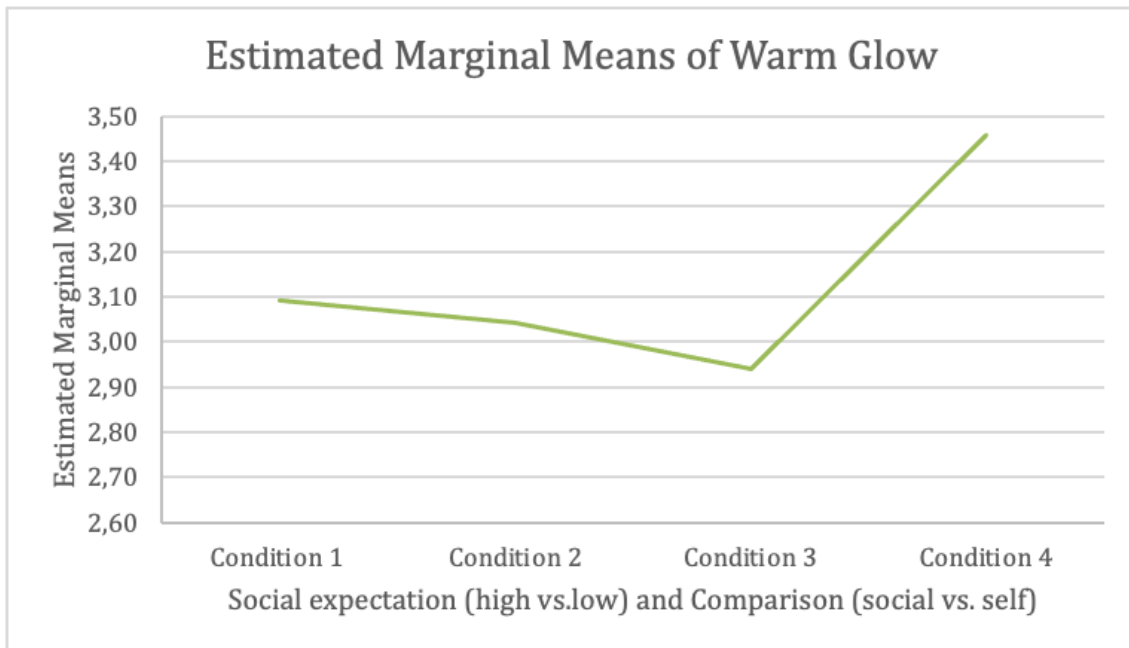


Figure 4 - Marginal means of Warm glow

It is noteworthy that the effect size, as indicated by the R-squared value, is relatively small. This implies that the combination of social expectations and self-comparison in Condition 4 explains only a modest portion of the variability in the *warm glow* scores.

In summary, the analysis highlights that the combination of low social expectations and self-comparison significantly impacts the perceived warmth and positive emotions associated with giving.

4.5 Results - Hypothesis 1

H1: When a desired prosocial behavior becomes the social expectation, the warm glow feeling associated with the behavior will decrease compared to when it is not the social expectation.

This hypothesis refers to potential observations of a change in warm glow based on the estimated mean warm glow and, furthermore, if that change is significant. This observation is done on general terms without considering the type of comparison.

To examine the influence of social expectations on warm glow, the scenarios with high social expectations were grouped together (Condition 1: $n = 25$ and Condition 2: $n = 32$), and the scenarios with low social expectations were grouped together (Condition 3: $n = 33$ and Condition 4: $n = 32$). The mean warm glow values for each group were recalculated and analyzed. The results indicated that the mean warm glow value for the group with high social expectations ($n = 57$, $M = 3.06$, $SD = 0.27$) was slightly lower than the mean warm glow value for the group with low social expectations ($n = 65$, $M = 3.19$, $SD = 0.29$). However, this difference was not statistically significant ($p > 0.05$), suggesting that the impact of social expectations on warm glow may not be substantial in this study, even though they partially support Hypothesis 1.

4.6 Results - Hypothesis 2

H2: Intrinsic motivation through self-comparison leads to stronger warm glow feelings than factors of social comparison, but only when social expectations are low.

The mean warm glow values for each condition were recalculated and analyzed to investigate the influence of different motivational factors on the warm glow. The results showed that the mean warm glow value for the self-comparison conditions (Condition 2: $n = 32$ and Condition 4: $n = 32$) was higher ($M = 3.25$, $SD = 0.24$) than the mean warm glow value for the social comparison conditions (Condition 1: $n = 25$ and Condition 3: $n = 33$) ($M = 3.00$, $SD = 0.14$).

Specifically, the mean warm glow value for Condition 4 ($M = 3.19$, $SD = 0.29$) was higher than the mean warm glow value for Condition 3 ($M = 2.93$, $SD = 0.27$).

Additionally, the mean warm glow value for Condition 2 ($M = 3.04$, $SD = 0.31$) was not significantly different from the mean warm glow value for Condition 1 ($M = 3.09$, $SD = 0.28$). The findings imply that self-comparison might lead to stronger warm glow feelings when social expectations are low. When social expectations are high, there seems to be no significant difference in the experienced warm glow, thus potentially making motivational factors play less of a role when social expectations are high.

This finding partially supports Hypothesis 2, indicating that intrinsic self-motivation contributes to stronger warm glow feelings during prosocial behavior, particularly when social expectations are low. However, the influence of social comparison on warm glow

was not consistently supported by the data, suggesting the presence of additional factors that may moderate this relationship. These results emphasize the importance of intrinsic motivation in fostering warm glow experiences and highlight the need for further investigation into the complex interplay between intrinsic motivation, social comparison, and warm glow.

5. Conclusion

This master thesis explored what happens to the warm glow feeling associated with a desired prosocial behavior when the behavior becomes a social expectation. This was done through two hypotheses as listed below:

H1: When a desired prosocial behavior becomes the social expectation, the warm glow associated with the behavior will decrease compared to when it is not the social expectation.

H2: Intrinsic motivation through self-comparison leads to stronger warm glow feelings than factors of social comparison, but only when social expectations are low.

This chapter seeks to draw conclusions regarding the research question of this thesis. Firstly, the findings and results will be discussed, as well as managerial and scientific implications will be discussed. The chapter also touches upon limitations before the conclusion is presented. Finally, some directions for future research will be presented.

5.1 Discussion

This subchapter seeks to discuss the findings related to the aforementioned hypotheses, as well as other findings impacting these results.

The present study aimed to investigate the impact of social expectations and motivational factors (through social vs. self-comparison) on the perceived warm glow associated with prosocial behavior, specifically charitable donations. Hypothesis 1 predicted that the warm glow would decrease when the behavior became a social expectation. The findings partially supported this hypothesis, as a slightly lower mean warm glow value was observed in the condition with high social expectations compared to the condition with low social expectations. This suggests that when prosocial behavior transitions from being optional to a social expectation/norm, the warm glow experience may be somewhat reduced. However, the difference in warm glow between the two conditions was relatively small, indicating that other factors might also contribute to the warm glow experience beyond the influence of social expectations.

Thus, this is suggesting that further mediator analysis should be implemented in future research.

Hypothesis 2, which proposed that intrinsic self-motivation leads to stronger warm glow feelings than factors of social comparison, but only when social expectations are low, received partial support. Our findings revealed a higher mean warm glow value in the condition involving self-comparison with low social expectations, suggesting that intrinsic self-motivation plays a role in intensifying the warm glow experience under specific conditions. However, the data did not consistently support the role of social comparison in influencing warm glow was not consistently supported by the data. This suggests that other factors, such as individual differences or additional situational factors, may contribute to the complex interplay between social comparison, intrinsic motivation, and the warm glow feeling.

These findings contribute to understanding the emotional experience associated with prosocial behavior. By highlighting the influence of social expectations and motivational factors on warm glow, this study sheds light on the nuanced nature of this emotional experience. The results suggest that while social expectations and intrinsic motivation can impact warm glow, their effects are not necessarily straightforward. Further research is needed to explore additional factors that may moderate the relationship between social expectations, intrinsic motivation, social comparison, and warm glow. Understanding these dynamics can inform interventions and strategies aimed at promoting pro-social behavior and fostering positive emotional experiences in individuals.

It is also important to point out that the results obtained in regard to the hypotheses are not necessarily generalizable. Firstly, this is due to the use of convenience samples, and secondly, because of the missing statistical significance of the findings. These two factors make it hard to draw any reasonable conclusions applicable elsewhere only based on these findings. On the other hand, there are clear indications in regard to both hypotheses, making it an interesting prospect for future research. Understanding this subject might be of great importance in understanding consumers and their behaviors. By doing some alterations to the survey, as in making it more complex, together with an increased number of respondents, one should be able to obtain results that answer the

hypotheses with a clear-cut yes/no. Due to the short time frame when writing a master thesis, research regarding such complex and intertwined themes is hard to conduct satisfactorily.

When considering the existing literature, the results align with it, emphasizing its role as a motivator for prosocial behavior. The observed higher mean scores for self-comparison indicate that participants experience, through “John,” a positive emotional reward and satisfaction when evaluating their performance. This finding supports the notion that a warm glow goes beyond self-interest or utility maximization and is driven by internal motivations and the emotional satisfaction of doing good.

In addition to the specific findings, this research contributes to the broader discussion on current global consumption trends and the need to change consumerism patterns to reduce the ecological footprint. By examining the warm glow effect in the context of prosocial actions, such as charitable giving, the study sheds light on the motivations and emotional experiences underlying sustainable behaviors.

The findings suggest that the warm glow effect can serve as a powerful motivator for individuals to engage in environmentally friendly actions. The positive emotional experience associated with giving or engaging in prosocial behavior provides immediate benefits and gratifications, countering the perception that sustainable behaviors may not align with an individual's immediate self-interest. This understanding challenges the intention-behavior gap theory and highlights the potential for sustainable consumption to offer personal advantages in the present moment.

Moreover, the results raise important questions about the potential fadeout of the warm glow effect when a prosocial action becomes socially expected or the norm. This insight is relevant to the discussion on managing environmental problems and changing consumption patterns. If sustainable behaviors, such as purchasing sustainable products, become social norms, the warm glow associated with these actions may diminish. Understanding this dynamic is crucial for promoting long-term environmental and social well-being while maintaining individuals' intrinsic motivation and positive emotional experiences. By recognizing the potential fading of the warm glow effect when sustainable behaviors transition into social norms, practitioners can develop

strategies beyond relying solely on social pressure and external expectations. Instead, efforts should be directed towards fostering a sense of personal value, autonomy, and intrinsic motivation in individuals, encouraging self-comparison rather than social comparison. This approach acknowledges the importance of preserving the warm glow experience as an internal reward mechanism for sustainable behaviors, ultimately contributing to the long-term sustainability and well-being of both individuals and society as a whole.

5.2 Managerial implications

The study's findings have important implications. Regarding managerial implications, the findings suggest that the warm glow can serve as a powerful motivator for individuals to engage in prosocial behaviors, which also aligns with previous research. This positive emotional experience provides an immediate benefit and gratification, countering the perception that, for instance, sustainable behavior may not align with self-interest. This understanding further challenges some aspects of the intention-behavior gap theory and highlights the potential to emphasize that prosocial behavior can offer personal advantages in the present moment. The findings indicate that emphasizing the immediate personal benefits and gratification associated with these behaviors, rather than solely focusing on long-term or abstract rewards, can effectively motivate individuals to act prosocially.

The study suggests that social expectations may not substantially impact warm glow associated with prosocial behaviors. However, marketing professionals can still consider the influence of social expectations in their campaigns. By emphasizing the social norm of engaging in prosocial behaviors, marketing professionals can tap into the desire for social acceptance and recognition, potentially enhancing warm glow experiences.

Intrinsic self-motivation appears to contribute to stronger warm glow feelings during prosocial behavior, especially when social expectations are low. Marketing professionals can focus on promoting intrinsic motives such as personal fulfillment, self-satisfaction, and a sense of purpose. Highlighting the individual benefits and emotional rewards of engaging in prosocial behaviors can help foster stronger warm glow experiences.

Moreover, the findings indicate that self-comparison leads to stronger warm glow feelings compared to social comparison when social expectations are low. Emphasizing self-improvement and personal growth can evoke a stronger warm glow experience and motivate individuals to engage in prosocial behaviors. Therefore, Marketing professionals should tailor their messaging to encourage individuals to reach their own behavior and progress with personal benchmarks and goals.

Lastly, it is important to note that the research offers valuable insights into motivating individuals to adopt prosocial and sustainable practices due to their close connection. These insights can inform environmental policies, interventions, and awareness campaigns to promote sustainable consumer behavior and address the global challenges posed by current consumption patterns. It is crucial for individuals and organizations alike to take action toward promoting sustainable consumption, and by leveraging these insights, we can make a real difference in creating a better world

Further exploration of moderating factors is necessary to better understand the complex relationship between social comparison, intrinsic motivation, and warm glow. Additional research should be conducted to identify other variables influencing this relationship.

5.3 Scientific implications

These findings contribute to understanding the emotional experience associated with prosocial behavior. By highlighting the influence of social expectations and motivational factors on warm glow, the study sheds light on the nuanced nature of this emotional experience. The results suggest that while social expectations and intrinsic motivation can impact warm glow, their effects are not necessarily straightforward. Further research is needed to explore additional factors that may moderate the relationship between social expectations, intrinsic motivation, social comparison, and warm glow. Understanding these dynamics can inform interventions and strategies to promote prosocial behavior and foster positive emotional experiences in individuals.

The study's findings have important scientific implications in several areas. Firstly, they advance our theoretical understanding of the warm glow effect and prosocial behavior. By investigating the role of social expectations and self-comparison, the study provides valuable insights into the underlying mechanisms that influence individuals' warm glow experiences. This further contributes to our understanding of the complexities of prosocial behavior.

Secondly, the study clarifies the impact of social expectations on warm glow experiences and prosocial behavior. It highlights that social expectations play a significant role in shaping individuals' perceptions, preferences, and emotional responses related to giving. This finding adds nuance to our understanding of the social factors that influence prosocial behavior and opens avenues for further investigation into the dynamics of social expectations in different contexts.

The practical implications of the study's findings might also have some impact, as they provide insights for designing interventions aimed at promoting prosocial behavior. By understanding the impact of social expectations and self-comparison, interventions can be developed to effectively foster warm glow experiences and encourage individuals to engage in prosocial actions. These implications are relevant in various domains, including charitable giving, environmental conservation, and social campaigns.

It is important to understand the limitations and lack of statistical significance related to the results, as they might not create major implications in the scientific field. Anyways, the thesis opens for a variety of potential new areas of research, and the results regarding the research question clearly indicate that the warm glow feeling might be affected to some extent by a change in social expectations. This could be important for businesses to understand further what drives consumer behavior, especially when one is looking to create incentives for greener consumerism.

5.4 Limitations

This thesis acknowledges several limitations, the main one being using a convenience sample. The study relied on convenience sampling, which may limit the generalizability of the findings. Further, the sample predominantly consisted of highly educated

individuals from Norway, which may not represent the broader population. The participants' characteristics might introduce biases and restrict the applicability of the results to a more diverse population. Additionally, including participants from different socio-economic backgrounds and cultural contexts could have enhanced the external validity of the findings and provided a more comprehensive understanding of the research topic.

Another limitation is connected to the limited relevance of the case of John. The chosen scenario included in the questionnaire, involving John and his cash tip may have had limited relevance to the participants, considering the decreasing prevalence of cash usage in Norway. As cash transactions are less common in the country, the scenario might not have resonated strongly with participants, potentially influencing their responses and engagement with the study's context. To address this limitation, selecting a more up-to-date and relatable example, such as John donating to a charitable cause at a grocery store through electronic means, would have been more appropriate. This would have better reflected the current payment methods and social norms in Norway, improving the validity and generalizability of the findings.

The study reported limited significant findings, possibly due to the survey design's insufficient differentiation between the independent variables across conditions. Enhancing the differentiation of scenarios or experimental conditions may yield more significant findings and provide a deeper understanding of the research questions. Furthermore, the study could have benefited from considering alternative scales, or measurement tools, to capture the nuances of the variables under investigation. The chosen scale in the survey design was limited in its range (5-point Likert scale), potentially limiting the variability of responses and the ability to discern subtle differences in participants' perceptions and behaviors. Utilizing a 10-point scale, for example, could have provided a wider range of response options and greater sensitivity to participants' attitudes and actions.

By adopting alternative scales, or measurement tools, the study could have enhanced its ability to capture the complexity of the research topic. This would have allowed for a more nuanced analysis and a deeper understanding of the underlying mechanisms driving prosocial behavior. Future research should incorporate established scales and

multiple-item measures to a larger extent to ensure a comprehensive assessment of the variables under investigation, thereby improving the validity and reliability of the findings.

The study also had some limitations considering the time constraint and how this potentially affected the data. The study's short time frame may have resulted in time pressure and potentially led to rushed decision-making. This could have affected the quality of data gathered, as important elements might have been overlooked or not adequately incorporated into the survey design. A more thorough approach to data collection, allowing for sufficient time to gather comprehensive and representative data, would have enhanced the study's validity and reliability.

Acknowledging these limitations helps understand the potential impact on the data quality and emphasizes the need for caution when interpreting the findings. It underscores the importance of allocating sufficient time for data collection and employing robust survey design practices to ensure the validity and comprehensiveness of future research in this area.

5.5 Conclusions

The combination of the results of the two hypotheses provides valuable insights into the research question: *"What happens to the warm glow feeling associated with a desired pro-social behavior when the behavior becomes the social expectation?"*

H1 shows that when a prosocial behavior becomes a social expectation, the warm glow feeling associated with it decreases, although the decrease is small. This means that when people feel like they're expected to help others, they don't experience the same warm glow feeling as when it's not expected.

H2 suggests that when people compare themselves to their own standards and have low social expectations, they feel a stronger warm glow than when they compare themselves to others. This means that feeling good about helping others comes more from personal, intrinsic motivation rather than comparing oneself to others.

In summary, these results tell us that when helping others becomes an expectation, the warm glow diminishes. However, when people are motivated internally and have low expectations from others, they feel a stronger warm glow. These findings help us understand how social expectations and personal motivations affect the warm glow associated with helping others.

Even though the results regarding both hypotheses seemingly indicate a change to the warm glow, the lack of statistical significance combined with the aforementioned limitations makes it impossible to give a clear-cut answer to the research question. As mentioned, there are indications of a fade-out in the warm glow, but further research is needed to draw conclusions. The theme of the thesis is highly relevant and might be of great significance in order to understand consumer behavior as we approach a change towards greener consumerism.

5.6 Direction for future research

For future research, it would be interesting to explore whether the inherent rewarding nature of prosocial behavior, known as warm glow, has a more substantial impact on individuals' engagement in prosocial actions than the pressure from social expectations.

By testing this potential hypothesis, researchers can determine if social norms and normative prescriptions alone are enough to drive prosocial behavior or if the warm glow plays a crucial role. Suppose the hypothesis is false, indicating that social normative motivation can effectively substitute for the warm glow. In that case, potential changes in the warm glow may have minimal implications for individuals' engagement in prosocial behaviors, such as purchasing green products. In such cases, the strength of social expectations would outweigh any changes in the warm glow, resulting in a limited impact on prosocial actions. Therefore, it is essential to empirically investigate and understand the relative strength of warm glow and social expectations in driving prosocial behaviors.

Additionally, considering the interplay between warm glow, social norms, and social expectations, it is reasonable to assume that changes in social expectations may lead to changes in the warm glow. Thus, if the hypothesis is proven true, indicating that the

warm glow significantly influences individuals' motivation for prosocial actions, it suggests that altering the warm glow can impact individuals' propensity to engage in prosocial behaviors. This understanding would be valuable in developing strategies and interventions that leverage intrinsic motivations to promote and sustain prosocial actions.

Lastly, it would be interesting to investigate the emotional motivations behind consumers' responses to cause-related marketing campaigns, which could provide valuable insights. Understanding the interaction between warm glow and other emotions, such as empathy, guilt, and pride, can deepen our understanding of how these emotions influence consumers' attitudes and behaviors toward cause-related initiatives. It may also be helpful to examine how different emotional appeals affect consumer engagement, donation intentions, and brand perceptions to design effective cause-related marketing campaigns. These potential research findings could not only fill gaps in existing knowledge but also inform the development of effective strategies and interventions that leverage intrinsic motivations and social expectations to promote and sustain prosocial actions in marketing and consumer behavior contexts.

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Appendix

Appendix 1 - Questionnaire (Including all conditions)



I am conducting a research study to understand better the psychological aspects behind pro-social behavior.

The survey will take approximately 5 minutes to complete.

Please note that your responses are anonymous and confidential and will be used for research purposes only. The survey data will only be accessible to the survey administrators, and all data will be permanently deleted by the end of 2023.

Your honest feedback is greatly appreciated, and I thank you for your valuable time and contribution to this study. If you have any questions about the survey, please contact me at: victoria.kielland@studenti.luiss.it

I agree that the collected data from the survey can be used for research purposes.

Yes

No



PLEASE READ THE TEXT CAREFULLY

Say hello to John. He has just finished his bachelor's degree and is currently working in the HR department of a large company. John considers himself a green consumer who recycles and participates in pro-environmental activities. John thinks there is too much inequality in the world.

In the next case, you will follow John in a scenario regarding charitable donations. Please answer the questions following the scenario.

John is shopping at a crowded grocery store when he sees a large donation jar for a local charity near the checkout. Many other customers donate significant amounts of money, and the cashier even praises some. Feeling pressure to keep up, John also donates a large amount of money to the jar. Later, John hears someone praising the people who donated the most.

At dinner, John is thinking about his donation decision.

	Not at all	Slightly	Moderately	Very	Extremely
How much did John enjoy donating in this situation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel that donating was the right thing to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel proud of himself for donating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



John is shopping at a crowded grocery store when he sees a large donation jar for a local charity near the checkout that is important to him. He notices that many people around him are donating large amounts of money, and some are even being praised by the cashier. Feeling the pressure to keep up, he also donates a large amount. Later, he reflects on his own values and goals and how he felt about contributing to a cause he cares about.

At dinner, John is thinking about his donation decision.

	Not at all	Slightly	Moderately	Very	Extremely
How much did John enjoy donating in this situation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel that donating was the right thing to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel proud of himself for donating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

John is shopping at a grocery store when he sees a small donation jar for a local charity near the checkout. He notices that no one else seems to be donating. Feeling self-conscious, he puts a small amount of money in the jar. Later, John sees someone else donating a larger amount than he did, making John contemplate whether he should have donated more.

At dinner, John is thinking about his donation decision.

	Not at all	Slightly	Moderately	Very	Extremely
How much did John enjoy donating in this situation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel that donating was the right thing to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel proud of himself for donating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

John is shopping at a grocery store when he sees a small donation jar for a local charity near the checkout. He notices that no one else seems to be donating. Feeling committed to the cause, he put a small amount of money in the jar. and leaves the store. Later, John reflects on his own values and goals, and how he felt about contributing to a cause he cares about.

At dinner, John is thinking about his donation decision.

	Not at all	Slightly	Moderately	Very	Extremely
How much did John enjoy donating in this situation?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel that donating was the right thing to do?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much did John feel proud of himself for donating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The remaining questions are about you

How old are you?

- Under 18
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65 - 74
- 75 - 84
- 85 or older

What gender are you?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

What is your marital status?

Married

Divorced

In a relationship

Single

What level of education do you have?

Less than high school

High school

Bachelor's degree

Master's degree

Doctorate (e.g, PHD)

What country do you live in?

How often do you donate to charity?

Never

Once a week

Once a month

Every few months

Once a year



On average, how much do you donate to charity?

\$1-49

\$50-99

\$100-199

\$200-499

\$500+



And lastly how much do you agree with these six statements

People should be willing to help others who are less fortunate

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

Helping troubled people with their problems is very important to me

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

People should be more charitable toward others in society

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

The money given to charities goes for good causes

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

Charitable organizations have been quite successful in helping the needy

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

My image of charitable organizations is positive

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

Appendix 2 - Sample descriptives

What level of education do you have?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than high school	3	2.5	2.5	2.5
	High school	14	11.5	11.5	13.9
	Bachelor's degree	47	38.5	38.5	52.5
	Master's degree	53	43.4	43.4	95.9
	Doctorate (e.g, PHD)	5	4.1	4.1	100.0
	Total	122	100.0	100.0	

What country do you live in?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Brazil	1	.8	.8	.8
	Chile	1	.8	.8	1.6
	Denmark	3	2.5	2.5	4.1
	Italia	1	.8	.8	4.9
	Italy	9	7.4	7.4	12.3
	Norway	104	85.2	85.2	97.5
	Sweden	1	.8	.8	98.4
	United Kingdom	1	.8	.8	99.2
	United States	1	.8	.8	100.0
		Total	122	100.0	100.0

How old are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 18	2	1.6	1.6	1.6
	18 - 24	23	18.9	18.9	20.5
	25 - 34	45	36.9	36.9	57.4
	35 - 44	13	10.7	10.7	68.0
	45 - 54	14	11.5	11.5	79.5
	55 - 64	19	15.6	15.6	95.1
	65 - 74	4	3.3	3.3	98.4
	75 - 84	2	1.6	1.6	100.0
	Total	122	100.0	100.0	

What gender are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	51	41.8	41.8	41.8
	Female	68	55.7	55.7	97.5
	Non-binary / third gender	1	.8	.8	98.4
	Prefer not to say	2	1.6	1.6	100.0
	Total	122	100.0	100.0	

What is your marital status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	33	27.0	27.0	27.0
	Divorced	9	7.4	7.4	34.4
	In a relationship	46	37.7	37.7	72.1
	Single	34	27.9	27.9	100.0
		Total	122	100.0	100.0

How often do you donate to charity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	22	18.0	18.0	18.0
	Once a week	8	6.6	6.6	24.6
	Once a month	31	25.4	25.4	50.0
	Every few months	32	26.2	26.2	76.2
	Once a year	29	23.8	23.8	100.0
	Total	122	100.0	100.0	

On average, how much do you donate to charity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	\$1-49	55	45.1	55.0	55.0
	\$50-99	25	20.5	25.0	80.0
	\$100-199	13	10.7	13.0	93.0
	\$200-499	6	4.9	6.0	99.0
	\$500+	1	.8	1.0	100.0
		Total	100	82.0	100.0
Missing	System	22	18.0		
	Total	122	100.0		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MEAN_AHO	122	1.00	5.00	4.0328	.80336
MEAN_ACO	122	1.00	5.00	3.6858	.80094
How often do you donate to charity?	122	1	5	3.31	1.385
On average, how much do you donate to charity?	100	1	5	1.73	.973
Valid N (listwise)	100				

Appendix 3 - Factor analysis

Component	Total Variance Explained								
	Total	Initial Eigenvalues		Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.338	37.093	37.093	3.338	37.093	37.093	2.310	25.666	25.666
2	1.709	18.988	56.081	1.709	18.988	56.081	2.101	23.342	49.008
3	1.150	12.778	68.859	1.150	12.778	68.859	1.787	19.851	68.859
4	.835	9.275	78.135						
5	.501	5.561	83.696						
6	.436	4.843	88.539						
7	.428	4.760	93.299						
8	.383	4.253	97.552						
9	.220	2.448	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component		
	1	2	3
Donation Enjoyment Level (DEL)	.097	.085	.858
Donation Rightness Perception (DRP)	.050	.261	.590
Donation Self-Pride Rating (DSPR)	-.030	.002	.855
People should be willing to help others who are less fortunate	.214	.836	.028
Helping troubled people with their problems is very important to me	.265	.756	.093
People should be more charitable toward others in society	.097	.800	.243
The money given to charities goes for good causes	.761	.246	.104
Charitable organizations have been quite successful in helping the needy	.900	.107	.009
My image of charitable organizations is positive	.885	.207	.021

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. ^a

a. Rotation converged in 4 iterations.

Summary

1. Introduction

Global consumption patterns pose a significant threat to modern societies. The consumption patterns in Europe have increased dramatically in recent years, and the average European consumes four times more resources than someone in Africa and three times more than someone in Asia (EEA, 2019). In Norway, consumers spent 22.4 billion NOK on clothing and shoes in the fourth quarter of last year, an increase of 4.4 billion NOK from the previous year (Pedersen, 2022). This trend must change to avoid environmental degradation, climate change, and pollution.

Sustainable consumer practices have become a more prominent topic in recent years. However, sustainable products still make up only a small portion of overall demand (Luchs et al., 2010 as cited in United Nations Environment Programme, 2005). One major issue related to this is that sustainable behaviors may not align with an individual's immediate self-interest, as they do not offer immediate benefits or gratifications. However, research has shown that the *warm glow effect* can prove this wrong. It provides immediate benefits by giving people a positive and satisfying feeling when they engage in actions that help others (Andreoni, 1990). Studies have also shown that the warm glow effect is a powerful motivator for individuals to continue engaging in environmentally friendly actions (Jia & van der Linden, 2020).

Worth noting is that pro-environmental behavior is not only driven by internal motivations, like the warm glow of acting prosocially, but also external factors, such as social norms and peer group behavior. Research shows that social factors play an important role in explaining why individuals engage in pro-environmental actions. As society becomes more aware of environmental challenges, the connection between prosocial and pro-environmental behavior strengthens. People recognize that pro-environmental actions benefit others and contribute to the overall well-being of society.

This thesis focuses on understanding how and if the warm glow feeling changes when a prosocial action becomes socially expected of the society and how it affects motivation to act, using charitable donations as a case study.

1.2 Hypotheses

Research Question: What happens to the warm glow feeling associated with a desired prosocial behavior when the behavior becomes the social expectation?

Hypothesis 1: When a desired prosocial behavior becomes the social expectation, the warm glow feeling associated with the behavior will decrease compared to when it is not the social expectation.

Hypothesis 2: Intrinsic motivation through self-comparison leads to stronger warm glow feelings than factors of social comparison, but only when social expectations are low.

The first hypothesis seeks to answer whether the perceived warm glow is affected when social expectations increase. In contrast, the second hypothesis looks into the perceived warm glow with different motivational factors and to what extent they affect the warm glow. These findings contribute to understanding the interplay between societal norms, individual motivations, and the social psychology of prosocial behavior.

2. Literature review

2.1 Warm glow

One motivation behind prosocial behavior is the concept of warm glow. Warm glow goes beyond self-interest and utility maximization and arises from the satisfaction of making a positive impact on others' lives.

Warm glow has been found to play a significant role in shaping behaviors related to charitable giving, volunteering, and other prosocial activities.

However, when a behavior becomes expected or incentivized through external factors, it is important to consider the potential implications and how this might affect the warm glow feeling. External pressures like nudges or rewards can compromise the intrinsic nature of prosocial behavior. Giving may shift from a genuine expression of kindness to mere compliance with societal or organizational expectations, which can ultimately diminish the emotional reward associated with warm glow. Studies have also shown that acts of kindness are most meaningful when they come from a place of pure intent rather than external pressure.

The potential decline in warm glow can have consequences for sustainable consumption. As sustainable choices become more common and socially acceptable, individuals may experience less positive emotional responses when making such choices. Moreover, incentivizing prosocial behavior through external rewards or nudges can also crowd out its genuine expression. When individuals feel manipulated into engaging in prosocial acts, the act itself may be perceived as less rewarding in terms of warm glow. This can lead to negative reactions, such as avoidance behavior or reluctance.

Warm glow is a powerful motivator for prosocial behavior, but external factors and expectations can influence its impact. Understanding the implications of warm glow and its potential fade-out is crucial for promoting sustainable consumption and fostering genuine prosocial behavior.

2.2 Social Norms and Expectations

This section explores social norms and their connection to the warm glow effect.

Social norms are unwritten rules that guide decision-making and altruistic behaviors, often influenced by outside pressures and individual beliefs. *Descriptive norms* indicate what others do, while *injunctive norms* represent expectations. Individuals may no longer experience the same warm glow feeling when a behavior becomes a social norm or expectation. Obligation, perceived responsibility, or pressure to conform to social norms can diminish the positive effect of prosocial behavior on well-being.

Social norms can also amplify the warm glow effect. People derive pleasure from social approval and strive to maintain a positive social image. When a behavior is seen as socially normative, individuals may experience a stronger warm glow from engaging in that behavior.

Normative pressure, which refers to the social influence of norms and expectations, can both enhance and diminish the warm glow effect. It may provide social validation and reinforcement for prosocial behavior, but it can also reduce autonomy and choice.

Overall, social norms and warm glow are closely intertwined, playing a crucial role in shaping individuals' behavior. Observing others engaging in environmentally friendly behaviors can motivate similar actions.

2.3 Social Networks

The impact of social networks and reference groups on the warm glow effect cannot be ignored. People tend to engage in sustainable behavior more often when their social network values it. Conversely, if the social network does not perceive or value such sustainable behavior, it can hinder motivation and reduce the warm glow. The norms within social networks also play a significant role in shaping the perceived warm glow. Research has shown that descriptive norms, reflecting what most people do or approve of, can enhance pro-environmental behavior and its positive emotions. In contrast, injunctive norms may have a weaker influence, representing what one should do or what is socially approved. Different types of social norms within social networks can influence emotional rewards and the presence of the warm glow effect. Descriptive norms are particularly influential when uncertainty or personal cost/risk are involved.

2.4 Motivation

Motivation is a crucial factor in initiating and sustaining human behavior.

Intrinsic motivation arises from individuals' natural inclination to engage in activities that interest them and contribute to personal growth. Intrinsic motivation related to prosocial actions often stems from a sense of obligation based on principles, values, and norms rather than pure enjoyment. Acting prosocially can evoke a warm glow derived from the satisfaction of doing the right thing and benefiting the environment. Past behavior also influences motivation, as individuals who have experienced a warm glow from engaging in prosocial behavior are more likely to view themselves as someone who values the environment. This strengthens their normative goal and increases the likelihood of future prosocial behavior as people strive for consistency with their self-identity.

Extrinsic motivation, influenced by external factors such as social norms and expectations, can also drive pro-environmental behavior. Extrinsic incentives, including social approval, recognition, and image, can motivate individuals to engage in pro-environmental actions. However, external rewards can sometimes "crowd out" intrinsic motivation, diminishing the enjoyment or satisfaction derived from the behavior. Offering external rewards, such as thank-you gifts, for prosocial behavior can create ambiguity about one's motivations and reduce the likelihood of engagement. Public recognition, while often considered a form of extrinsic benefit, may also have a similar crowding-out effect on intrinsically motivated actions.

Understanding the interplay between intrinsic and extrinsic motivation is crucial in promoting pro-social behavior and fostering the warm glow effect. Balancing the motivations and incentives can help create positive social expectations and encourage sustainable actions.

2.5 Social and Self-Comparison

The social and self-comparison theory explains how individuals evaluate themselves and their social standing by comparing themselves to others. Social comparison, comparing oneself to others, has been extensively studied and found to influence emotions and behaviors significantly. Similarly, self-comparison, comparing oneself to one's past self, also affects emotions and behaviors. The theories of intrinsic motivation, driven by internal satisfaction, and extrinsic motivation, influenced by external factors like rewards or social status, can be connected to self and social comparison.

3. Methods

To achieve the goals of this study, a survey-based research methodology will be utilized. The survey will involve participants responding to various scenarios related to charitable donations. Questions regarding demographics, the likelihood of engaging in prosocial behaviors under different social expectation conditions, and attitudes and emotions associated with those behaviors will be included. The reliability and validity of the survey will be ensured through testing with a smaller group of participants.

3.1 Research design

Deductive reasoning and quantitative research approaches were employed using a randomized quasi-experimental design. A factorial design was specifically chosen to test hypotheses and examine the effects of different stimuli. The study implemented a 2 x 2 between-subjects design, with social expectations (high vs. low) and comparison (social vs. self) as the two independent variables, resulting in four treatment groups.

Data was collected through an online questionnaire created using the Qualtrics survey software. Qualtrics facilitated the random assignment of respondents to different stimuli conditions, which was crucial for the experiment. The software also ensured a smooth exportation of the data to SPSS for further analysis.

To ensure sufficient data, approximately 30 participants were required per treatment group, resulting in a total of minimum 120 participants. Although a larger sample size would have enhanced the study's statistical power and generalizability, practical considerations such as resource availability and time limitations influenced the decision to opt for the minimum required sample size. However, it is important to note that a sample size of 30 or more is generally adequate to meet the assumptions of statistical tests such as t-tests and ANOVA, which assume a normal distribution.

3.2 Validity and reliability

To ensure the reliability of the survey items, a reliability test was conducted. The 5-point Likert scale used in the study was evaluated for consistency in generating similar results upon repeated measurements. Positively and negatively worded items were reverse-coded to balance potential biases in respondents' responses. Cronbach's alpha coefficient was used to assess internal consistency and reliability, with values above 0.6 indicating strong reliability. All items in the study exceeded the threshold, demonstrating high reliability.

To evaluate the convergent and divergent validity of the measurements and scales, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were conducted. The KMO statistic indicated satisfactory suitability for factor analysis, and Bartlett's test revealed a significant correlation among the variables.

Principal component analysis (PCA) with Varimax rotation was performed to assess the factor structure and eliminate inadequate items. Kaiser's rule and specific retention criteria were applied to determine the appropriate factor retention. Three factors with eigenvalues > 1 were retained, explaining 68.86% of the total variance. Each factor exhibited significant factor loadings (> 0.50) and showed no cross-loading on other factors.

Overall, the reliability test and factor analysis supported the validity and reliability of the measurements and scales used in the study, indicating that they accurately measured the intended constructs.

3.3 A critical review of the research design

The chosen research design has been critically reviewed, highlighting several limitations that could have impacted the quality and credibility of the findings. Firstly,

the questionnaire used in the survey may not be suitable for mobile devices due to lengthy scenarios, potentially affecting the reliability and validity of the data. Ensuring a user-friendly and accessible questionnaire is essential for obtaining accurate results.

Additionally, the scenarios presented in the survey may only partially represent some contexts where prosocial behavior occurs, limiting the generalizability of the findings. Incorporating a diverse range of scenarios reflecting real-world situations and social dynamics would provide a more comprehensive understanding of prosocial behavior.

The sample size of respondents in the survey was relatively small, which can affect the sample's representativeness and increase the risk of type II errors. A larger sample size would have improved the statistical power and generalizability of the results.

Using hypothetical scenarios may not capture the complexity and nuances of real-life situations, potentially impacting the validity of the findings. An experimental design involving real-world situations and behaviors would provide more accurate and reliable results.

Furthermore, the self-made measurement scale for warm glow may be prone to biases and limitations, potentially affecting the reliability and validity of the collected data. Utilizing established and validated measurement scales, to a larger extent, would have enhanced the accuracy of the results.

4. Results

4.1 Sample Description

The study included a sample of 171 individuals, with 49 participants excluded from the analysis due to missing values. Among the remaining 122 participants, the distribution across different conditions was as follows: Condition 1 (25 participants), Condition 2 (32 participants), Condition 3 (33 participants), and Condition 4 (32 participants).

Most participants identified as female (55.7%), and the largest age group was 25-34 years old (36.9%). Most participants had a high level of education, with 43.4% holding a master's degree and 38.5% having completed a bachelor's degree. The majority of participants lived in Norway (85.2%), followed by Italy (7.4%) and Denmark (2.5%).

Attitudes and Donation Behavior:

Participants had a positive attitude toward charitable organizations but a slightly more negative attitude toward helping others based on the mean. The correlation analysis revealed a significant positive correlation between attitude toward helping others and attitude toward charitable organizations. There was also a significant positive correlation between attitude toward helping others and the experience of warm glow.

However, the correlation between attitude toward charitable organizations and warm glow was not statistically significant. A positive attitude toward helping others was associated with a higher donation frequency.

4.2 Initial insights

Observations derived from the mean values, irrespective of statistical significance, gave some initial insights. The mean indicates that in both the low and high social expectation conditions, participants tended to rate themselves - through John - more positively in self-comparison than in social comparison. Specifically, in the low social expectations condition, the mean score for self-comparison is higher than for social comparison, indicating a stronger preference for self-evaluation and potentially reflecting higher self-esteem or self-focus. On the other hand, in the high social expectations condition, the mean scores for social and self-comparison are relatively close, suggesting that participants' evaluations of themselves and others are more similar compared to the low social expectations condition.

4.3 Univariate ANOVA

The analysis of variance (ANOVA) revealed a significant effect of the independent variables/conditions on the dependent variable "Warm glow" ($F = 2.866$, $p = 0.040$).

- Approximately 6.8% of the variance in warm glow can be explained by the conditions (partial eta squared = 0.068).
- The intercept term in the model was also found to be statistically significant ($F = 2062.656$, $p < 0.001$), indicating a significant overall effect on warm glow that is not accounted for by the conditions alone.

Post Hoc Analysis:

- Condition 1 (High Social Expectations with Social Comparison), Condition 2 (High Social Expectations with Self Comparison), and Condition 3 (Low Social

Expectations with Social Comparison) did not have significantly different mean warm glow scores compared to the other conditions.

- Condition 4 (Low Social Expectations with Self Comparison) reported a lower mean warm glow score compared to Condition 3, and this difference was statistically significant at the 0.05 level.
- The effect size (R-squared) was relatively small, suggesting that the combination of social expectations and self-comparison in Condition 4 explains only a modest portion of the variability in the warm glow scores.

The analysis indicates that the independent variables have a statistically significant effect on warm glow, but the effect size is relatively small. Specifically, the combination of low social expectations and self-comparison in Condition 4 has a significant impact on the perceived warmth and positive emotions associated with giving.

4.4 Hypothesis 1 Results:

When a desired prosocial behavior becomes the social expectation, the warm glow feeling associated with the behavior will decrease compared to when it is not the social expectation.

Grouping scenarios with high social expectations (Condition 1 and Condition 2) and scenarios with low social expectations (Condition 3 and Condition 4), the mean warm glow values for each group were analyzed.

The results showed a slightly lower mean warm glow value for the high social expectations group compared to the low social expectations group, but this difference was not statistically significant ($p > 0.05$).

These findings suggest that the impact of social expectations on warm glow may not be substantial in this study, providing only partial support for Hypothesis 1.

4.5 Hypothesis 2 Results:

Intrinsic motivation through self-comparison leads to stronger warm glow feelings than factors of social comparison, but only when social expectations are low.

Analyzing the mean warm glow values for each condition, the results revealed that self-comparison conditions had a higher mean warm glow value than social comparison conditions.

Specifically, Condition 4 (self-comparison with low social expectations) showed a higher mean warm glow value than Condition 3 (social comparison with low social expectations). However, there was no significant difference between the mean warm glow values of Condition 2 (self-comparison with high social expectations) and Condition 1 (social comparison with high social expectations).

These findings suggest that self-comparison contributes to stronger warm glow feelings when social expectations are low. In contrast, when social expectations are high, the role of motivational factors in warm glow appears to be less significant.

These results partially support Hypothesis 2, highlighting the importance of intrinsic self-motivation in fostering warm glow experiences, particularly when social expectations are low. However, the influence of social comparison on warm glow was not consistently supported, indicating the presence of additional moderating factors that require further investigation.

Overall, the results suggest that social expectations and motivational factors play a nuanced role in warm glow experiences during prosocial behavior. Intrinsic motivation and self-comparison seem particularly influential when social expectations are low, but further research is needed to understand the complex interplay between intrinsic motivation, social comparison, and warm glow.

5. Conclusion

Discussion

This thesis investigated the impact of social expectations and motivational factors on the warm glow feeling associated with prosocial behavior, specifically charitable donations. The findings showed that the warm glow feeling decreased when the behavior became a social expectation and that intrinsic self-motivation intensified the warm glow experience under certain conditions. The data did not consistently support the role of social comparison in influencing warm glow. Further research is needed to explore additional factors that may moderate the relationship between social expectations, intrinsic motivation, social comparison, and warm glow, which can inform interventions and strategies to promote prosocial behavior and foster positive emotional experiences in individuals. The study sheds light on the motivations and emotional

experiences underlying sustainable behaviors and highlights the potential for sustainable consumption to offer personal advantages in the present moment. The results raise important questions about the potential fadeout of the warm glow effect when a prosocial action becomes socially expected or the norm. Efforts should be directed towards fostering a sense of personal value, autonomy, and intrinsic motivation in individuals, encouraging self-comparison rather than social comparison.

Managerial implications

The study's findings suggest that the warm glow associated with prosocial behaviors can be a powerful motivator, providing immediate benefits and gratification. Social expectations may not substantially impact warm glow, but marketing professionals can still consider the influence of social norms in their campaigns. Intrinsic self-motivation contributes to stronger warm glow feelings, and marketing professionals can focus on promoting intrinsic motives such as personal fulfillment and a sense of purpose. Self-comparison leads to stronger warm glow feelings than social comparison, and messaging should encourage individuals to reach their own behavior and progress with personal benchmarks and goals. These insights can inform environmental policies and interventions to promote sustainable consumer behavior, and further research is necessary to understand better the complex relationship between social comparison, intrinsic motivation, and warm glow.

Scientific implications

The study's findings advance our theoretical understanding of the warm glow effect and prosocial behavior. By investigating the role of social expectations and self-comparison, the study provides valuable insights into the underlying mechanisms influencing individuals' warm glow experiences. It also sheds light on the impact of social expectations on warm glow experiences and prosocial behavior, highlighting the nuanced nature of this emotional experience. These insights have important scientific and practical implications, as they provide valuable information for designing interventions to promote prosocial behavior. While there are limitations to the study's results, they open up potential new research areas and suggest that a change in social expectations could impact the warm glow feeling to some extent, which could be important for businesses looking to create incentives for greener consumerism.

Limitations

The thesis acknowledges several limitations, including the use of a convenience sample, which may limit the generalizability of the findings. The study also reported limited significant findings, potentially due to the survey design's insufficient differentiation between the independent variables across conditions. Additionally, the chosen 5-point Likert scale in the survey design was limited in its range, potentially limiting the variability of responses and the ability to discover subtle differences in participants' perceptions and behaviors. The study's short time frame may also have affected the quality of data gathered. Future research should consider incorporating established scales and multiple-item measures, to a greater extent, to ensure comprehensive assessment of the variables under investigation. This would allow for a more nuanced analysis and a deeper understanding of the underlying mechanisms driving prosocial behavior. Overall, acknowledging these limitations helps to ensure the validity and comprehensiveness of future research in this area.

Conclusions

The findings from the two hypotheses provide insights into the impact of social expectations on the warm glow feeling associated with prosocial behavior. **H1** suggests that when prosocial behavior becomes an expectation, the warm glow feeling decreases slightly. This implies that people may not experience the same positive emotions when they feel obligated to help compared to when it is not expected. **H2** indicates that individuals feel a stronger warm glow when they compare themselves to personal standards and have low social expectations, emphasizing intrinsic motivation over external comparisons.

In summary, the results suggest that the warm glow feeling diminishes when prosocial behavior becomes an expectation, but strengthens when motivation is intrinsic and social expectations are low. These findings contribute to our understanding of how social expectations and personal motivations influence the warm glow associated with helping others.

However, the lack of statistical significance and study limitations prevent definitive conclusions. Further research is needed, but this thesis holds relevance and could offer valuable insights into consumer behavior as we shift toward greener consumerism.

Direction for future research

In summary, future research on prosocial behavior should explore the impact of the warm glow on individuals' engagement in prosocial actions compared to social expectations. This research can determine if social norms and normative prescriptions alone are enough to drive prosocial behavior or if the warm glow plays a crucial role. It is also essential to investigate the emotional motivations behind consumers' responses to cause-related marketing campaigns and how different emotional appeals affect consumer engagement, donation intentions, and brand perceptions. These findings can inform the development of effective strategies and interventions that leverage intrinsic motivations and social expectations to promote and sustain prosocial actions in marketing and consumer behavior contexts.