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Bachelor's Thesis

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**Using Introspection Bias Hypothesis to Explore People's
Blindness Towards Social Norms**

Bachelor's Thesis

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Abstract

Social norms are some of the most important factors of behavior. However, previous research shows that the effect of social norms of decision making goes unnoticed by lay people. This is closely related to the phenomenon of introspection bias whereby people mistakenly believe that they have introspective access to their own motivation. The aim of the thesis is to examine how descriptive norm affects people's preference for movies and whether they notice this influence. Specifically, I conducted an experimental study ($N = 127$) in which I manipulated movie attributes and descriptive social norm associated with movie preference and I measured people's preference for movies and perceived importance of factors of their preference. I found that social norm had an effect on participants' decision making, however, the effect of social norm was relatively weak compared to the effect of other factors. Individuals were able to recognize the influence of social norm, and also correctly evaluate its relatively lower influence on decision making. This means that social norms do not influence decision-making completely unconsciously, as is often assumed, but that people can become aware of their influence under certain conditions. The method proposed in this paper offers great potential for further research that can focus on exploring the influence of social norms in other social contexts.

Abstrakt

Sociální normy jsou jedním z nejdůležitějších faktorů chování. Předchozí výzkumy však ukazují, že vliv sociálních norem na rozhodování zůstává pro laickou veřejnost bez povšimnutí. To úzce souvisí s fenoménem introspekčního zkreslení, podle kterého se lidé mylně domnívají, že mají introspektivní přístup k vlastní motivaci. Cílem této práce je zjistit, jak deskriptivní normy ovlivňují preference lidí při výběru filmů a zda si lidé tohoto vlivu všímají. Konkrétně jsem provedla experimentální studii ($N = 127$), v níž jsem manipulovala atributy filmů a deskriptivní sociální normu spojenou s filmovými preferencemi a měřila jsem preference lidí při výběru filmu a vnímanou důležitost faktorů pro jejich preferenci. Zjistila jsem, že sociální norma má vliv na rozhodování účastníků, nicméně vliv sociální normy byl ve srovnání s vlivem ostatních faktorů poměrně slabý. Jedinci byli schopni rozpoznat vliv sociální normy a také správně vyhodnotit její relativně nižší vliv na rozhodování. To znamená, že sociální normy neovlivňují rozhodování zcela nevědomě, jak se často předpokládá, ale že si lidé mohou jejich vliv za určitých podmínek uvědomit.

Metoda navržená v tomto článku nabízí velký potenciál pro další výzkum, který se může zaměřit na zkoumání vlivu sociálních norem v jiných sociálních kontextech.

Keywords

conformity, choice experiment, introspection, introspection illusion, social norms

Klíčová slova

konformita, výběrový experiment, introspekce, iluze introspekce, sociální normy

Title

Using introspection bias hypothesis to explore people's blindness towards social norms

Název práce

Využití hypotézy introspekčního zkreslení ke zkoumání slepoty lidí vůči sociálním normám

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Table of Contents

| | |
|---|----|
| INTRODUCTION | 8 |
| 1. THEORETICAL FRAMEWORK..... | 10 |
| 1.1 Social Norms | 10 |
| 1.1.1 Injunctive and descriptive social norms..... | 12 |
| 1.1.2 Perception of social norms..... | 13 |
| 1.1.3 The introspection illusion..... | 15 |
| 1.2 Critique of the Current Approach..... | 15 |
| 1.2.1 Current experimental paradigm | 16 |
| 1.3 Research Questions and Hypotheses | 18 |
| 2. RESEARCH OBJECTIVES | 19 |
| 3. METHOD | 19 |
| 3.1 Participants | 19 |
| 3.1.1 Sample size justification | 20 |
| 3.2 Materials..... | 20 |
| 3.2.1 Manipulation of movie attributes..... | 20 |
| 3.2.2 Manipulation of the direction and intensity of social norms | 21 |
| 3.2.3 Choice of the preferred movie (dependent variable) | 22 |
| 3.2.4 Perceived importance of attributes (dependent variable)..... | 22 |
| 3.3 Design..... | 22 |
| 3.4 Procedure..... | 23 |
| 3.5 Analysis..... | 24 |
| 3.5.1 Editing data and creating variables..... | 24 |
| 3.5.2 Effect of movie attributes on movie preference..... | 24 |
| 3.5.3 Testing subjectively perceived effects..... | 25 |

| | |
|---|----|
| 4. RESULTS | 25 |
| 4.1 Effect of Social Norms and Movie Attributes on Movie Preference | 25 |
| 4.2 Perceived Importance of Factors of Movie Preference | 28 |
| 5. DISCUSSION | 30 |
| 5.1 Perception of Social Norms..... | 31 |
| 5.2 The Introspection Illusion | 32 |
| 5.3 Theoretical and Practical Implications of the Thesis | 34 |
| 5.4 Limitations..... | 34 |
| CONCLUSION | 38 |
| SUMMARY | 38 |
| LIST OF REFERENCES..... | 40 |

INTRODUCTION

Social norms have a pervasive influence on our behavior and decision-making. They often determine what we wear, what food we eat at a restaurant, what items we purchase, or even when and with whom we start a family. They can also, for example, be a very powerful predictor of pro-environmental behavior, which is very crucial today, given that climate change is one of the key issues that humanity is facing today. Although social norms constantly accompany our lives, their influence seems to escape our attention. Thus, social norms are proving to be a very effective, and at the same time very subtle, tool for influencing people's behavior and decision-making (Jaeger & Schultz, 2017; Nolan et al., 2008; Pronin et al., 2002). But how is it possible that social norms escape our attention when they are so crucial? And do they really operate quite unconsciously, as some studies suggest? These are the questions my thesis seeks to answer.

The issue of the unconscious nature of social norms is closely related to the phenomenon of the introspection illusion. This term refers to a cognitive bias in which people mistakenly believe that they have privileged access to their internal processes (Pronin, 2008, 2009). This phenomenon suggests that the way we perceive ourselves is distorted, although we are not aware of it. As humans, we seem to be ignorant of our self-image, our real attitudes, and we are often unaware of the true motives behind our behavior and decision-making, despite being convinced otherwise. The introspection illusion also affects how people perceive social influence and conformity. Indeed, individuals tend to perceive their own behavior as autonomous and justified, whereas they consider other people to be more susceptible to social influence (Pronin et al., 2007; Pronin & Kugler, 2007). This bias then leads individuals to underestimate the influence of social norms and peer pressure on their own behavior.

From a sociological perspective, the introspection illusion and the associated lack of detection of social influence has profound implications for social interactions, group dynamics, or social structures. For example, people often construct their own identity based on their introspection, evaluating their real actions less (Pronin et al., 2007; Pronin & Kugler, 2007), while believing that they understand their motivations and their character better than anyone else. This self-concept then influences how individuals enact social roles and how they expect others to perceive them. The gap between self-concept and other people's

perceptions can subsequently lead to identity conflicts, role strains, misunderstandings and communication errors.

The aim of this thesis is to explore the influence of descriptive social norms on individuals' decision-making and the extent to which people are able to become aware of this influence. The thesis seeks to answer the question of whether the presence of a descriptive normative message will influence participants' decision making and also whether participants will be aware of this influence. A further aim is then to explore what role the strength of the social norm plays in the process. In order to answer the questions, a simple choice experiment focusing on movies was designed, which works with the manipulating strength of the social norm.

The thesis starts with a theoretical foundation that comprehensively explains key concepts such as social norms and their categorization, as well as the introspection illusion and its relation to the perception of social norms. Next, it critically examines existing approaches, particularly highlighting the theoretical and methodological shortcomings prevalent in studies exploring human introspection. Based on this theoretical framework, a methodological section outlines the data collection process from experimental design to analysis. The subsequent section presents the analytical findings, which are then contextualized and interpreted within the broader theoretical framework in the discussion. This final section addresses the thesis' limitations and explores its theoretical and practical implications.

1. THEORETICAL FRAMEWORK

Understanding the factors that influence human behavior and decision-making is complex and multifaceted. Among these factors, social norms play an important role, subtly guiding and shaping individual decisions in different contexts. Through their action, they regulate the behavior of individuals and encourage them to behave prosocially instead of acting merely in their own self-interest (Hechter & Opp, 2001). This provides social stability and enables the distinction between those who do and do not belong in the social environment.

There are several reasons why understanding how social norms work is crucial. Social norms fundamentally influence individual and collective behavior, guiding actions, decisions and interactions in society. This understanding allows us to better predict and influence behavior in a variety of contexts, from public health to environmental protection. For policy makers and organizations, the use of social norms can lead to more effective interventions and policies, for example to promote pro-environmental behavior or healthy lifestyles. Finally, it can be beneficial for individuals to understand how social norms influence their own behavior and decision-making, leading to more informed and autonomous decisions. Overall, understanding social norms is essential for effectively navigating and improving various aspects of individual and social life.

1.1 Social Norms

Social norms are a fundamental interdisciplinary concept in the social sciences and the foundations for understanding them were already laid by classical sociologists. Émile Durkheim, in his works (1984 [1893], 1951 [1897], 1995 [1912]), introduced the concept of *collective conscience* - a set of common beliefs, values and norms, shared by a particular group or society, which is crucial for the cohesion and integration of society. He saw the way society functioned as creating varying degrees of commonality and regulation within groups based on the external, repressive forces of a moral structure that is larger than individuals and constrains them. The threads that make up this moral structure are social norms. It is norms that set expectations, guide behavior, and create a sense of social order by helping individuals understand what is considered acceptable and unacceptable in society (Hechter & Opp, 2001). Among other things, Durkheim also introduced the term *anomie*, by

which he refers to a socially pathological state in which the rules are no longer valid in society (Durkheim, 1984 [1893], 1951 [1897]). Anomie is also referred to as 'normlessness' (Mestrovic, 1993) and according to Durkheim, it arises from a mismatch between personal norms and social norms, which leads to confusion, deviance, social instability and thus to the collapse of the social system.

A similar view of social norms was held by Talcott Parsons, who dealt with them from his structural functionalist perspective. He saw society as a complex system composed of interrelated parts, each of which contributes to the stability and functioning of the whole (Parsons, 1952). Social norms, in his view, are the basic components of this system and provide guidelines for behavior that help maintain social order. In particular, Parsons emphasized the importance of socialization processes, such as family upbringing, interaction with peers, and education, through which individuals learn and internalize social norms. Parsons believed that social norms must be internalized by individuals in order to be effective. This is because the process of internalization ensures that people conform to social expectations not only because of external pressure, but also because they believe and value them (Hechter & Opp, 2001).

Social norms, however, are not mere values, rules or assertions of ideals. An important component of social norms that distinguishes them from other concepts is enforcement. Internalization is considered one of the enforcement mechanisms (Durkheim 1995 [1912]), where people apply sanctions to their own behavior after identifying with the norm. However, much more important are external sanctions in the form of punishment for behavior that is generally considered wrong, or in the form of reward for behavior that is generally considered right (Cialdini, 2007; Dandaneau, 2015; Hechter & Opp, 2001; Lapinski & Rimal, 2005). Another essential component of a norm is the general agreement of a group that a given rule is valid and that members of the group have the right to enforce it. This is because a rule enforced by a single individual is not a norm. Even though there might be no consensus on the definition of social norms across social sciences, they all recognize these several key aspects mentioned. Social norms on this basis can therefore be defined as '*rules, about which there is at least some degree of consensus, that are enforced through social sanctions.*' (Hechter & Opp, 2001, p. 5).

1.1.1 Injunctive and descriptive social norms

Social norms can be classified in various ways. For the purpose of this paper, a distinction between *injunctive* and *descriptive* norms has been chosen (for discussion, see Interis, 2011). The first type called *injunctive social norm* influences human behavior through informal sanctions in the form of interpersonal approval or disapproval (Cialdini, 2007; Dandaneau, 2015). The effect of injunctive social norms consists in that people must constantly take these norms into account and anticipate what behavior is expected of them at any given moment and what is considered relevant by others. Behavior in accordance with social norms brings approval from others, while deviations from expected behavior tend to be followed by informal punishment. For example, when people come into any library, they automatically lower their voices and try to be as quiet as possible. It is because this is the behavior that is expected of them. If people started talking loudly in the library, they would likely face informal punishment in the form of angry looks and contempt from other visitors, or they could even be banned from the library. In the same way, injunctive social norms also play a role in more important issues in people's lives, such as marriage or the conception of a child. Couples often choose to marry or have a child just because it is expected of them. If they did not do so, they would probably face unpleasant questions, pressure, and even some form of rejection from others.

The second main type of social norm is called *descriptive social norm*. This type of norm does not refer to what others approve, but to what others actually do (Cialdini, 2007; Lapinski & Rimal, 2005). Descriptive norms are also referred to as 'normative expectations' (Cialdini et al., 1990) and they work as unwritten rules that people try to follow because they believe that the typical person usually follows them. Thus, they influence human behavior by prescribing what is typical and normal in a given situation or society (Cialdini et al., 1990). Descriptive norms are omnipresent and have a major influence on social behavior. What is more, people appear to conform to norms not only when directly observing the behavior of others, but also when they are simply exposed to a written descriptive social norm - a statement of how most people behave in a particular situation (Dorigoni & Bonini, 2023; Jaeger & Schultz, 2017; Kormos et al., 2014; Nolan et al., 2008; Parks et al., 2001). Compliance with descriptive social norms is not associated with such strong negative external sanctions, and there are usually no punishments for individuals when they violate them (Lapinski & Rimal, 2005). However, following the norms gives the individual the

advantage of fitting in with others and adopting the way of behaving that is probably most effective in a given environment, which could be considered a reward. A good example of a descriptive norm is the final applause at the theater, where the audience starts clapping after the play is over and always does so, regardless of whether they liked the performance or not. If an individual were not to applaud, he would neither be banned from the hall nor punished in any other way, but he would nonetheless be deviating from what is normal and effective in the situation, and therefore most beneficial.

The difference between the two types of norms may not be apparent at first glance because it is usually assumed that typical behavior (descriptive norms) is also behavior that is morally right and therefore approved by others (injunctive norms). Both types of norms tell us what behavior is right in a given social context and there are also examples where both types of norms merge into one. Despite that, they are conceptually and motivationally separate from each other. While injunctive norms influence behavior through social evaluation (what most others approve or disapprove of), descriptive norms influence behavior through social information (what most others do), particularly information about what behavior is adaptive and effective in a given social context (Cialdini, 2007; Cialdini et al., 1990).

1.1.2 Perception of social norms

Although social norms are practically invisible, they have considerable social power and guide human behavior in different social contexts. The tendency to conform can lead individuals to tell untruths and deny their own opinions (Asch, 1956), to fail to respond to imminent danger (Latane & Darley, 1968), to recycle waste (Cialdini, 2007), to change their preference for different types of coffee (Burnkrant & Cousineau, 1975), or to prefer tap water over bottled water (Dorigoni & Bonini, 2023).

Despite the strong and undeniable influence of social norms on human behavior, there is still no consensus among researchers on whether or not people are able to recognize their influence on one's own behavior. However, looking at existing studies that examine people's subjective perceptions of conformity and social influence, it appears that individuals are more likely to be unaware of this influence (Cohen, 2003; Jaeger & Schultz, 2017; Latane & Darley, 1968; Nolan et al., 2008; Pronin et al., 2007; Pronin & Kugler, 2007; Sherif, 1936) and deny that their behavior is socially influenced. For instance, Nolan et al. (2008) showed in their experimental study that the influence of social norms is underdetected by lay people.

This study used descriptive social norms to change behavior and then examined the perceived motivational effect of normative information. Hundreds of households were randomly distributed with door hangers that each displayed one of five different messages designed to motivate households to conserve energy: a descriptive social norm, social responsibility, self-interest, the environment, or information only for control. The dependent variable in this experiment was then the actual electricity meter readings (i.e. the household's actual consumption) taken before, during and after the intervention. This allowed for a comparison of the effectiveness of each message. The results of the experiment showed that the normative message had a direct effect on household saving behavior and made people conserve energy more than any of the other messages (Nolan et al., 2008, p. 920). Although the descriptive norm was the most effective predictor of behavior change, households rated it as the least important motivational factor. Thus, the authors of the study concluded that people's behavior is strongly motivated by the behavior of others, but this effect is unconscious.

A very similar study was conducted by Jaeger & Schultz (2017), who presented a new empirical test of the nature of normative influence, using the *commitment theory* (Cialdini, 2007; Kiesler, 1971) as a model to test whether normative information is interpreted as an internal or external motivator. Hundreds of households were distributed with leaflets that each randomly presented one of five different messages designed to motivate households to conserve water: a strong warning, a social norm, a strong warning with a written commitment, a social norm with a written commitment, and information only as a control condition. The primary dependent variable in this study was data on each household's water consumption collected before the intervention, during the intervention, and then during the four months following the intervention. The results of the study showed that households in the social norm condition, together with making a written commitment, reduced their water consumption the most, both during the intervention and in the four months following the intervention (Jaeger & Schultz, 2017, p. 16). Moreover, this pattern of behavior suggests that the normative message did not support external motivation and the commitment was not externally motivated, leading the authors to the same conclusion drawn by Nolan and colleagues (2008): normative influence is underdetected by lay people.

1.1.3 The introspection illusion

The summarized studies suggest that people often fail to recognize their own susceptibility to social influence. A possible explanation for this has been sought by Pronin and her colleagues in their studies (Pronin, 2008; Pronin et al., 2002, 2007; Pronin & Kugler, 2007, 2010). Pronin has conducted several experiments showing that people are able to reliably detect the effects of social influence on others, but instead consider themselves less susceptible to social influence and are unaware of its effects on themselves (Pronin et al., 2007). She considers the *bias blind spot*, a cognitive bias in which people see their judgments as objective while they see other people's judgments as biased, to be the cause of this asymmetry (Pronin et al., 2002). The author then suggests that the roots of the bias blind spot are in the *introspection illusion*, a phenomenon in which people focus on different sources when evaluating themselves and others (Pronin, 2009; Pronin et al., 2007; Pronin & Kugler, 2007). People have been shown to rely more on introspection and thoughts than on behavior-related evidence when evaluating their own conformity. Conversely, when assessing other people's conformity, they rely only on behavior-related evidence (Pronin et al., 2007). According to the authors, it is the reliance on introspective information that causes people to be blind to the effects of social influence and implies that social norms act unconsciously. Since conformity is generally defined in terms of behavior, heavy reliance on introspection and overlooking one's own behavior leads individuals to fail to detect something in oneself that is easily observable by others.

1.2 Critique of the Current Approach

Looking at the summaries of the studies conducted so far, and the evidence they provide, it is not surprising that there is a general belief among researchers that the influence of social norms is underdetected and that people are unable or unwilling to report their motives. However, if we look at the arguments on which these studies are based, the conclusions drawn may not be as clear-cut as they may seem. For example, with regard to the previously mentioned studies by Nolan et al. (2008) or Jaeger & Schultz (2017), the direction of causality here is not entirely clear - if I have many people in my environment who are trying to conserve energy, and I am also trying to conserve energy myself, this does not necessarily mean that I have been influenced in this behavior by people in my environment, but it may be just the opposite. For example, I may have always conserved energy, and based on this

belief, there are naturally more people around me who have the same opinion and have also decided to conserve energy. If I then claimed that I was not influenced by social norms in my decision to conserve energy, I would be right. Moreover, for these studies, it is not entirely clear whether the reports of the respondents were not affected by their own beliefs and were therefore influenced by the *myside bias*, a cognitive bias in which individuals tend to favor information that reinforces their opinions, beliefs, and attitudes (Simon et al., 2020). Thus, if one chooses to conserve energy, one may falsely come to believe that other people want to conserve energy as well, which would again point to the opposite causality from what Nolan et al. (2008) or Jaeger & Schultz (2017) posit in their study.

1.2.1 Current experimental paradigm

There are also authors (Carlson et al., 2023; Morris et al., 2023) who come up with the claim that people have reliable access to their introspection and are able to make mindful decisions. According to these authors, people are able to reliably reveal the motives underlying their decisions through their introspective approach. These findings suggest that people should thus be able to recognize also the influence of social norms that motivated them to behave in a certain way. The studies conducted by these authors suggest that previous research suffers from several theoretical and methodological flaws, and that if certain rules are followed in research, people are then able to look into their thought processes and report their motives fairly accurately. As they argue, introspection is a process that requires attention to current internal states, and for this reason it should only be able to reveal the motives that are actively guiding a person's thinking and behavior at any given moment, not hours or days in retrospect (Carlson et al., 2023). At the same time, introspective reports should be more accurate than reports obtained by mere observation. This is because they draw on privileged internal sources that cannot be ascertained by mere behavioral observation. Of course, introspection, like all other processes, may suffer from certain biases, most commonly motivational biases, where individuals tend to bias their level of prosocial motivation upward or downward depending on whether motives support or violate their personal standards of justice (Carlson et al., 2023). Despite these biases, however, introspection should still exhibit a high degree of accuracy.

Given the nature of introspection described above, Carlson et al. (2023) proposed a systematic method that relies on certain features that researchers should follow when testing introspection. These are:

Reporting constraints. Previous studies demonstrating a failure of introspection have typically used open-ended questions to investigate behavioral motivations, but this may lead respondents to prefer non-introspective information and generate irrelevant responses. It appears preferable to use a simple, continuous response format ('how much do you want X compared to Y?').

Temporal constraints. In the Nolan et al. (2008), Jaeger & Schultz (2017) and Pronin et al. (2007) experiments described above, we can see that researchers asked respondents about their motivations with some delay, often days, weeks, or months after people had made their decisions. However, because introspection implies attention to one's current internal states, questioning should be limited to only current and temporally proximate motives that are still introspectively accessible.

Choice constraints. No less importantly, previous research has made the mistake of requiring participants to make hypothetical choices and/or to choose between options that differ in a large number of attributes. This can lead to some noise and inaccuracy due to the difficulty of the choice. In contrast, research participants should make simple, preferably binary choices with real incentives, which maximizes the probability that the given answer will be reflective of their true motives.

Using this systematic method, Carlson et al. (2023) were able to find reliable evidence in five experiments showing that introspection exhibits a high degree of accuracy and that people's subjective reports are strongly correlated with the motives reflected in their real decisions. Morris et al. (2023) used the same method and reached the same conclusion, that introspection regarding internal motives and decision-making processes is not always inaccurate. People are instead able to report fairly accurately on their motives and the mental processes underlying their decisions.

More specifically, their experiments consist of participants making simple choices between two options, in the first study a financial contribution to charity (Carlson et al., 2023) and in the second study a choice between two hypothetical homes and then movie trailers (Morris et al., 2023). Each time, participants also reported, using a simple sliding color scale, on which attributes they based their choices and what their internal motives were. These subjectively reported motives were then compared to their actual consumer and prosocial decisions. In both studies, a control experiment was also conducted. During this experiment, third-party observers were presented with the reported processes and choices of

yoked participants, and they were asked to rate the participants' motives as well. In each case, the participants proved to be more accurate than the observers in assessing their motivations. This supports the conclusions that people make conscious choices and can reveal their motives with great accuracy through introspection (Carlson et al., 2023; Morris et al., 2023). Thus, it is likely that normative social influence is not underdetected, but that people can become aware of it and access their introspection accurately under certain conditions.

1.3 Research Questions and Hypotheses

In my thesis I will try to answer the following research questions:

Q1: Does the presence of a descriptive social norm influence people's decision making?

Q2: Are people able to recognize the influence of a descriptive social norm on their decision making?

Q3: Does the strength of a descriptive social norm influence people's decision making and to what extent will people be able to recognize it?

Based on the findings from previous research summarized in the theoretical part of the thesis, I set one or more hypotheses for each of the research questions:

H1: The presence of a descriptive social norm will significantly influence people's decision making, with individuals more likely to be guided by the norm in their decision making compared to other attributes.

H2: Individuals will exhibit different degrees of recognition of the influence of a descriptive social norm on their decision making depending on the strength of the normative message.

H3a: The stronger the normative message, the more influence it will have on people's decision making.

H3b: The stronger the normative message, the more individuals will be able to recognize the influence of the norm on their decision making.

2. RESEARCH OBJECTIVES

The aim of my work was to examine the influence of descriptive normative message on decision making and to what extent people are able to recognize this influence. In this thesis, I attempted to connect findings from previous studies and explore human blindness to social norms using the theoretical framework of introspection bias. To do so, I used a new experimental design based on the suggestions of Carlson and Morris (2023) and designed in accordance with their objections, which I have summarized in the theoretical part of this thesis. Through this experimental design, it was possible to avoid the methodological errors that appear in previous research. It was a choice experiment in which participants made simple choices between two options while being exposed to a descriptive social norm whose strength was manipulated.

The results of the experiment should show the effect of descriptive normative messages on human decision making and how reliable human introspection is when people attempt to retrospectively evaluate their internal motivations. Introspection-based methods in particular are often used in sociological studies to detect the motivations behind people's behavior, even though the introspection is considered unreliable. Thus, my study will contribute to the existing literature that highlights some of the biases and limitations in detecting people's motivations based on introspection. In addition, the study will also propose a new methodology by which the nature of social norms can be investigated, thus contributing to the broadening of knowledge about social norms.

3. METHOD

3.1 Participants

I recruited a convenience sample of participants for my study. I circulated an invitation to the study via my mail list and mail list of my supervisor and through posting on social networks (Instagram, Facebook), and through snowball sampling. A total of 197 participants entered the study online and 127 participants completed it (for the completion rate of 64 %). The sample was younger ($M_{\text{age}} = 30, SD = 12.1$) and had a larger proportion of women (65 %) and people with higher education levels (53 % had secondary and 39 % had tertiary

education) than the general population. Participants did not receive any reward for completing the questionnaire.

3.1.1 Sample size justification

The sample size was based on available resources (recruitment period was set for seven days between the 6th of June and 12th of June). The statistical power of the study was not estimated prior to analysis. Note, however, that due to methodological features of the study (use of the repeated measure of the DV), as many as 2032 decision outcomes of the choice experiment were recorded (127 participants x 16 trials x 2 options in each trial).

3.2 Materials

3.2.1 Manipulation of movie attributes

In the questionnaire, participants were presented with two movies and they had to decide and choose which of the two presented movies they preferred, *Film A* or *Film B*. The movies were always defined by four attributes: *plot* (how good or bad the plot of the movie is), *music* (the quality of the music in the movie), *dialogue* (how well the characters' dialogue is constructed in the movie), and *acting* (how good the performances of the actors and actresses are). Each movie attribute had five levels (*very good, good, moderate, bad, very bad*). The movie profiles were generated randomly (i.e., each level for each of the two movies were generated randomly and independently of other attributes). The pairs of movies were presented to the participants in the form of a simple table (as shown in Figure 1) that clearly displayed the individual attributes and their values for both movies. Randomness in the design ensures that the combinations of attribute levels in the experimental conditions are not biased or systematically arranged. This helps to avoid any unintended patterns or biases that might influence participants' choices. Based on the responses in this section, it should be possible to uncover participants' true motives that led them to make their decisions and to calculate the actual weight individuals gave to each attribute and normative message in their decision making.

Figure 1

Example of One Trial of a Choice Experiment

| Atributy filmu | Film A | Film B |
|-----------------------|---------------|---------------|
| Zápletka | spíše dobré | velmi špatné |
| Hudba | spíše špatné | střední |
| Dialogy | střední | spíše špatné |
| Herecké výkony | spíše dobré | střední |

72% respondentů preferuje film B

Který z těchto filmů preferujete?

Film A

Film B

Note. The table and its labels remained the same in all eight rounds. Only the values of the attributes in the second and third columns changed. For the normative message displayed below the table, the percentages and the letter pointing to one of the two movies changed.

3.2.2 Manipulation of the direction and intensity of social norms

In addition, a descriptive normative message was also displayed below the table. It was a single sentence that provided information about the percentage of other participants who preferred one of the movies over the other (as shown in Figure 1). The normative information was chosen randomly and independently of other attributes and its direction and intensity was manipulated.

The manipulation of the direction of the social norm lay in the fact that the norm always randomly pointed to one of the two movies, either *Film A* or *Film B*. In each round, one of the two letters was displayed at the end of the sentence. The manipulation of social norm intensity consisted of varying how high the percentage of hypothetical participants who preferred one movie over another was. The percentage displayed to the participant depended on which of the two experimental groups they were assigned to. For the experimental group in the weaker social norm condition, the value varied around the midpoint, between 50 % and 65 %. For the experimental group in the stronger social norm condition, the value then varied between more extreme values, namely between 65 % and 80 %. The random percentage from the interval for a given experimental group always appeared at the beginning of the sentence below the table. The stated hypothesis was that participants in the stronger social norm condition would be more influenced by the normative message, but also more aware of its effects.

3.2.3 Choice of the preferred movie (dependent variable)

The dependent variable in this study was the choice of movie, i.e. whether the participant chose *Film A* or *Film B* in a given round. Participants were asked to choose which of two films they preferred based on attributes and social norms. This choice then worked as a binary dependent variable.

3.2.4 Perceived importance of attributes (dependent variable)

Perceived importance of attributes was measured on a seven-point scale with labeled endpoints (0 = *not important in decision making*, 7 = *important in decision making*). Participants were asked to indicate how important each attribute was in their choice of movie. Participants made this rating only once in a single round, when they were shown the scales for all attributes at once on one page. The order of the scales was fixed.

3.3 Design

This study had a randomized experimental design with a between-subjects manipulation of the strength of social norm and the within-subjects manipulation of the direction of social norm and attributes of movies.

3.4 Procedure

After participants entered the study online and provided their informed consent, they were randomly assigned to one of two experimental groups. The study was presented as a questionnaire that explores what attributes are important to an individual when deciding between two movies.

In the first part of the questionnaire, participants were asked to choose between two hypothetical movies. Participants read in the instructions that they would be presented with eight pairs of movies that would be described by the following attributes: *plot* (how good or bad the plot of the movie is), *music* (the quality of the music in the movie), *dialogue* (how well the characters' dialogue is constructed in the movie), and *acting* (how good the performances of the actors and actresses are). They also read that they would be shown simultaneously for each movie how other participants made their choices. In the next step, the participants were presented with the table of movies and their attributes, below which was a normative message and also two buttons with which the participants chose whether to select *Film A* or *Film B*. Like this, they went through eight rounds where only the attribute values and the normative message were changed each time.

After completing the first part of the questionnaire, participants were asked to rate how important role the individual attributes of the movies played in their decision making. They made this assessment on a seven-point scale. All the scales were displayed together on one page in the following order: plot, music, dialogue, acting, and other participants' preferences.

At the end of the questionnaire, participants were asked several socio-demographic questions in which they indicated their gender, age and highest completed education. They were also asked two questions to assess their attention and motivation (Ebersole et al., 2016). The first question measured how much the participant tried to answer as accurately as possible and the second measured how much the participant focused on the instructions in the questionnaire. They had a choice of four possible answers: not at all, a little, quite or very much. The last question was also a control question and asked whether the participant had ever answered this questionnaire before.

After answering all the questions and completing the questionnaire, a thank you message was displayed as well as a disclaimer. Here, participants learned that the questionnaire primarily explored the influence that the presence of a descriptive social norm has on

individuals' decision making, and the extent to which people are able to detect this influence. This was in fact information that could not be revealed prior to the completion of the questionnaire in order not to bias the responses and the results of the entire study. Participants were provided with a contact where they could send their inquiries about the study.

3.5 Analysis

3.5.1 Editing data and creating variables

The first step was to exclude participants who entered the study (confirmed informed consent) but did not complete the study. No other participants were excluded from the study and it was therefore possible to work with the data from 127 participants in the analysis. In terms of variables, all individual attributes (plot, dialogue, actors, music) entered the analysis as independent variables and the dependent variable was a social norm. The social norm variable took the values 0 (if the participant selected an option that the norm did not indicate) and 1 (if the participant selected the same option that the norm indicated). In fact, of all the pairs that participants chose between, both options (the option that the participant chose and then the option that the participant did not choose) entered the analysis separately.

In addition, two new interaction variables were created. The first variable was an interaction of social norm with its percentage share (the percentage that was displayed with the norm) to measure the effect of social norm strength. If the participant did not vote in accordance with the norm, this variable only took the value 0. The second newly created variable was then the interaction of social norm and the version (the experimental group the participant was in). This variable allows us to measure the additional effect of norm strength and answer the question of whether an increase in norm strength affects the participant's choice. All variables were also standardized so that all resulting values could be easily compared with each other.

3.5.2 Effect of movie attributes on movie preference

Next step was to test the effects of attributes on movie preference and thus internal validity of the experiment. It was necessary to determine whether participants really thought about their answers when completing the questionnaire, read all descriptions and instructions carefully, and did not just make random choices without considering attribute values and normative message. Because the experiment consisted of repeated measurements, with each participant going through eight rounds, and because the data obtained are thus internally

correlated to some extent, a mixed regression model was used for testing to allow for data analysis with multiple levels of variability. The model was then extended with the first interaction variable considering percentage share and then with the second interaction variable considering version to examine whether and how the strength of the social norm (size of the percentages) influences participants' decision making. For an additional comparison of the models used, a likelihood ratio test was conducted. This helps to determine whether the inclusion of additional variables improves the model fit and also allows an assessment of the contribution of each variable in explaining the response.

3.5.3 Testing subjectively perceived effects

Finally, it was necessary to find out what weight the participants themselves gave to attributes and social norm in their decision making. Participants rated this only once in the questionnaire and on the same seven-point scale, so only the average values that participants assigned to attributes and social norm were compared in this case. To conclude the analysis, these means were further correlated using Pearson's correlation coefficient with variable capturing version to clarify whether participants in the stronger social norm condition were more aware of the effect of the social norm and gave it more subjective importance.

4. RESULTS

4.1 Effect of Social Norms and Movie Attributes on Movie Preference

First, the weight of movie attributes (including social norm) in movie selection, expressed as standardized effects, was compared in a mixed regression model (Model 1 reported in Table 1). This analysis that the quality of movie plot had the highest effect on people's movie preference, $\beta = 0.63$, $SE = 0.05$, $p < .001$, followed by quality of acting, $\beta = 0.48$, $SE = 0.05$, $p < .001$, quality of dialogue, $\beta = 0.41$, $SE = 0.05$, $p < .001$, and of the attributes, least effect had the quality of music, $\beta = 0.28$, $SE = 0.05$, $p < .001$. The effect of social norm (still expressed in standardized metrics), $\beta = 0.19$, $SE = 0.05$, $p < .001$, was smaller than effects of other attributes.

Table 1

Effect of Social Norm and Movie Attributes on Movie Preference (Model 1, Mixed Logistic Regression Model, DV = Choice of a Movie)

| | β | <i>SE</i> | <i>p</i> |
|-------------------------|---------|-----------|----------|
| Fixed effects | | | |
| (Intercept) | 0.00 | 0.05 | .954 |
| Plot | 0.63 | 0.05 | < .001 |
| Music | 0.28 | 0.05 | < .001 |
| Dialogue | 0.41 | 0.05 | < .001 |
| Acting | 0.48 | 0.05 | < .001 |
| Social norm | 0.19 | 0.05 | < .001 |
| Marginal R ² | .225 | | |

Note. *Plot* is the quality of the movie plot, *music* is the quality of the music, *dialogue* is the quality of the dialogue, *acting* is the quality of the acting and *social norm* is a dummy indicator of whether the social norm supported the preference of the movie. The four movie attributes (*plot*, *dialog*, *music*, and *acting*) were expressed on a five-point scale (1 = *very good*, 5 = *very bad*). Independent variables were standardized before analysis. Random effects were omitted.

In the next step, an indicator of the strength of social norm (i.e., an interaction of the percentage preference of others and a dummy indicator of the movie that was selected) was added to the model. This analysis (Model 2 reported in Table 2) revealed the interaction term had no significant effect on movie preference, $\beta = 0.43$, $SE = 0.26$, $p = .101$. This is probably due to a correlation between the interaction term and the two constituent variables also included in the model that resulted in a collinearity and inflated *SEs* of parameter estimates of social norm.

Table 2

Effect of the Intensity of Social Norm (Model 2, Mixed Logistic Regression Model, DV = Choice of a Movie)

| | β | <i>SE</i> | <i>p</i> |
|----------------------------------|---------|-----------|----------|
| Fixed effects | | | |
| (Intercept) | 0.00 | 0.05 | .943 |
| Plot | 0.63 | 0.05 | < .001 |
| Music | 0.28 | 0.05 | < .001 |
| Dialogue | 0.41 | 0.05 | < .001 |
| Acting | 0.48 | 0.05 | < .001 |
| Social norm | - 0.23 | 0.26 | .373 |
| Social norm \times perc. share | 0.43 | 0.26 | .101 |
| Marginal R ² | .226 | | |

Note. *Plot* is the quality of the movie plot, *music* is the quality of the music, *dialogue* is the quality of the dialogue, *acting* is the quality of the acting and *social norm* is a dummy indicator of whether the social norm supported the preference of the movie. The four movie attributes (*plot*, *dialog*, *music*, and *acting*) were expressed on a five-point scale (1 = very good, 5 = very bad). The interactive term *Social norm \times perc. share* captures the additional effect that information about the intensity of social norm has on decision making. Independent variables were standardized before analysis. Random effects were omitted.

We could also see that when the version (i.e., the experimental group the participant was in) was entered (Model 3 reported in Table 3), together with the indicator of social norm in the mixed regression model, social norm still had a positive effect on movie preference, $\beta = 0.13$, $SE = 0.06$, $p = .031$, whereas the interaction term had a marginally positive effect on decision making, $\beta = 0.11$, $SE = 0.06$, $p = .077$. This result provides some evidence that beside the presence of the social norm, also its intensity had the effect on decision making, albeit smaller and only marginally significant in this case. Such a conclusion was also supported by a likelihood ratio test that revealed that including the intensity of social norm in the model improved the fit of the model, albeit only marginally statistically in this case, $\chi^2(1, N = 127) = 3.14$, $p = .077$.

Table 3

Effect of the Experimental Condition (Model 3, Mixed Logistic Regression Model, DV = Choice of a Movie)

| | β | <i>SE</i> | <i>p</i> |
|------------------------------|---------|-----------|----------|
| Fixed effects | | | |
| (Intercept) | - 2.37 | 0.15 | < .001 |
| Plot | 0.56 | 0.04 | < .001 |
| Music | 0.25 | 0.04 | < .001 |
| Dialogue | 0.36 | 0.04 | < .001 |
| Acting | 0.42 | 0.04 | < .001 |
| Social norm | 0.13 | 0.06 | .031 |
| Social norm \times version | 0.11 | 0.06 | .077 |
| Marginal R ² | .227 | | |

Note. *Plot* is the quality of the movie plot, *music* is the quality of the music, *dialogue* is the quality of the dialogue, *acting* is the quality of the acting and *social norm* is a dummy indicator of whether the social norm supported the preference of the movie. The four movie attributes (*plot*, *dialog*, *music*, and *acting*) were expressed on a five-point scale (1 = *very good*, 5 = *very bad*). The interactive term *Social norm* \times *version* captures the additional effect that experimental manipulation of social norm intensity has on decision making. Independent variables were standardized before analysis. Random effects were omitted.

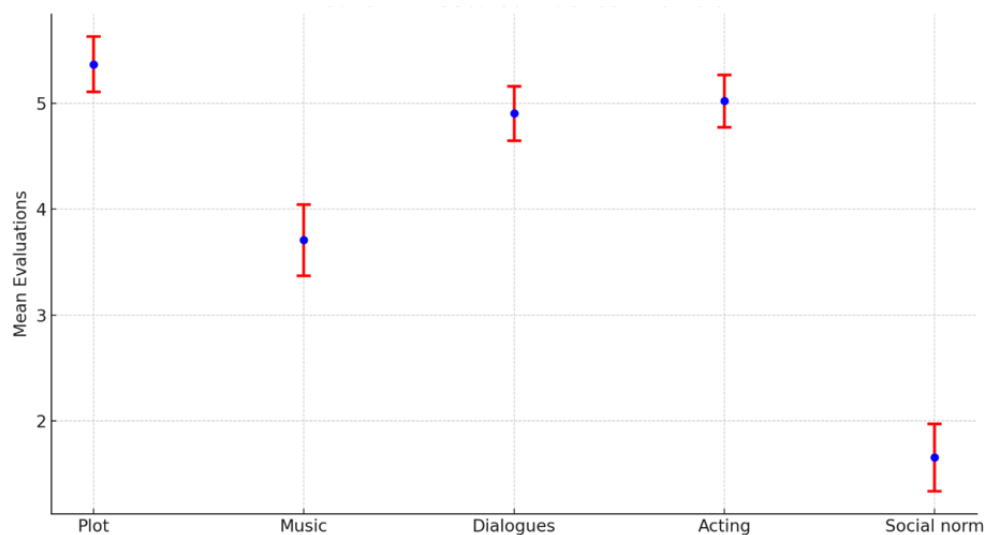
4.2 Perceived Importance of Factors of Movie Preference

Now we are getting to how participants perceived the importance of the factors in their movie preference. Participants perceived as the most important the movie plot, $M = 5.37$, 95% CI [5.11, 5.63], followed by quality of the acting, $M = 5.02$, 95% CI [4.78, 5.27], quality of dialogue, $M = 4.91$, 95% CI [4.65, 5.16], quality of music, $M = 3.71$, 95% CI [3.37, 4.05], and finally, the influence that reported preference of others, $M = 1.65$, 95% CI [1.34, 1.97] (see Figure 3 and Table 4). Of note is that this ordering of the perceived importance of movie

attributes (including the low importance attached to social norm) matches the ordering implicit in actual decision making and revealed through analysis of the choices presented in the previous section. In other words, participants were able to report the importance of factors that affected their decision making rather accurately, at least in relative terms. However, there was no association between social norm intensity manipulation and importance of social norm, $r_{pb}(125) = 0.04$, $p = .686$. This means that norm intensity manipulation had no effect on people's perception of the importance of social norm in decision. This can be either because the manipulation was too weak or because people tend to ignore the information about intensity of social norm and, instead, focus only on the direction of social norm. This issue is addressed in the General Discussion.

Figure 3

Perceived Importance of Factors of Movie Preference



Note. This figure shows the means of each factor with their 95% confidence intervals. Participants indicated perceived importance of each factor on a seven-point scale (0 = *unimportant*, 7 = *very important*).

Table 4*Perceived Importance of Factors of Movie Preference*

| | <i>M</i> | <i>SE</i> | 95% CI | |
|----------------------|----------|-----------|---------------|-----------|
| | | | <i>LL</i> | <i>UL</i> |
| Plot | 5.37 | 0.13 | 5.11 | 5.63 |
| Music | 3.71 | 0.17 | 3.37 | 4.05 |
| Dialogue | 4.91 | 0.13 | 4.65 | 5.16 |
| Acting | 5.02 | 0.13 | 4.78 | 5.27 |
| Preference of others | 1.65 | 0.16 | 1.34 | 1.97 |

Note. Labels *Plot*, *Music*, *Dialogue* and *Acting* are the subjectively perceived effects of the attributes on participants' decision making. *Preference of others* is the subjectively perceived effect of the normative message about what percentage of hypothetical participants preferred one movie over another. All five variables were expressed on a seven-point scale (0 = *not important in decision making*, 7 = *important in decision making*).

5. DISCUSSION

This study examined whether and to what extent the presence of a normative message would influence participants' decision making in a simple choice between two movies, and also to what extent participants would be able to recognize this influence. To this end, the current study manipulated experimentally the descriptive social norm and its strength, and other movie attributes, and observed their effect on movie preference and whether this influence is perceived by participants.

The results of this study corroborated the theoretically expected effect of social norm (and its intensity) on decision making. The study found that the effect of social norm on preference for a movie was relatively weaker than the effect of other movie attributes. These results also attest to the internal validity of the present study and specifically the validity of manipulation of movie attributes as it shows that participants took into account all movie attributes when making their choice.

Second, this study showed that individuals are able to detect and report fairly accurately what motivated their decision. Indeed, the participants' subjective ratings of the importance of movie attributes for the decision making reflected rather well the actual weight of these attributes in decision making related to movie preference. Remarkably, participants were able to correctly rate social norm as relatively less important (compared to other factors) in accordance with rather low implicit importance of social norm in their decision making. In other words, people were not only aware of the effect of social norm on their decision making but they were also aware of the fact that the effect of social norm was smaller than the effects of other factors.

5.1 Perception of Social Norms

There have been countless studies that have examined social norms, most of which have concluded that their influence is underdetected (Cohen, 2003; Jaeger & Schultz, 2017; Nolan et al., 2008; Pronin et al., 2007). The current study tells a slightly different story. Although the influence of social norms may indeed be underdetected in some social contexts, once ideal conditions are set, individuals are able to recognize their influence. The experiment used in this study was designed to reflect the suggestions of the authors Carlson et al. (2023) and Morris et al. (2023) to maximize the likelihood that an individual can become aware of his internal processes and can report them reliably. Put simply, the experiment provided the ideal conditions to ensure that nothing would prevent participants from accessing their introspection if they had it. When conditions were set up in this way, individuals were indeed able to accurately report the motives that led them to a specific decision, which are the same conclusions reached by the authors of Carlson et al. (2023) and Morris et al. (2023). In contrast, in the more complicated field studies (Jaeger & Schultz, 2017; Nolan et al., 2008), the conditions for accessing introspection were not ideal, and while the questionnaire designed for this study took participants a total of 5-10 minutes to complete, the more complicated field studies often took over a month. At the same time, a difference in the importance of the decision can be observed. Deciding between two hypothetical movies is a much less weighty decision than when it comes to major issues affecting individuals' daily lives, such as recycling waste, saving water or conserving energy. It is the time and importance of the decision that play a key role here, important for the interpretation of the results. The results of the current study indicate that the social norm had the least influence

on the participants of all the attributes, and participants also correctly reflected that in their evaluation. However, they were not so sensitive to the strength of the social norm that was manipulated in the experiment and it can be said that in some cases they underestimated the influence of the norm. The current study suggests that individuals are able – under ideal conditions – to recognize when and how social norms influence their decision making.

5.2 The Introspection Illusion

By demonstrating that people can estimate the effect of social norm and other factors on their decision making, the current study supports the notion that people have some introspective access to their own motivation (for similar evidence, see Carlson et al., 2023; Morris et al., 2023). As such, the current study disputes the notion that introspection is not generally reliable (e.g., Pronin, 2009; Pronin et al., 2007; Pronin & Kugler, 2007).

Introspection is a mental process that relates to one's current internal states. Several conditions must therefore be met when trying to examine whether and how introspection works. First, the questions asked should be simple, closed-ended questions with a continuous response format, as open-ended questions may lead individuals to prefer non-introspective information and thus generate irrelevant responses. Second, questioning should be limited to current and temporally proximate motives that are still introspectively accessible. If individuals are questioned with some delay, the motives may no longer be introspectively accessible and individuals will then again be forced to prefer non-introspective information. Third, participants should make simple, preferably binary choices with realistic incentives, as hypothetical choices or choices between options that differ in a large number of attributes may lead to inaccuracies due to choice difficulty.

In this study, introspection proved to be reliable and functional because all these essential conditions described above were met. When creating the current experimental study, suggestions of the authors of some previous research, particularly Carlson et al. (2023) and Morris et al. (2023), were considered. Their recommendations were followed, so the specific features proposed by these authors are included in the choice experiment. First, participants in the questionnaire made only simple binary choices between two options and answered only whether they preferred *Film A* or *Film B*. Next, once they had gone through the eight choice rounds, they immediately thereafter reported, on a simple scale, on which basis they made their choices and what attributes were important to them. Thus, they

reported their motives immediately after making their choices, at a time when they should still be introspectively accessible. Finally, movies were picked as the object of choice because it is likely that most participants watch movies at least occasionally and already have real experience of selecting and evaluating them on the basis of their attributes. At the same time, the movies were defined by only four attributes so that the selection would not be too complicated. Following these rules maximized the likelihood that individuals can reliably access their introspection, recognize whether and to what extent they have been influenced by the normative message and thus report their internal motives correctly.

Moreover, thanks to the simplicity of the design, the appearance of additional cognitive biases was avoided. Experiments that examine introspection often include questions about other people's evaluations, not just the respondents themselves (e.g., Nolan et al., 2008; Pronin et al., 2007; Pronin & Kugler, 2007). In these cases, however, individuals tend to succumb to additional cognitive biases that may affect the study results and their interpretation. One of these biases is the *myside bias* (Simon et al., 2020), according to which people tend to take a self-defensive view of competition and rate themselves favorably while rating their competitors unfavorably, or the *egocentric bias* (Brawley, 1984; Kruger, 1999), according to which individuals tend to rate their own abilities and skills as above average. These phenomena are also related to the *bias blind spot* (Pronin et al., 2002; Pronin & Kugler, 2007), according to which people tend to consider their judgments as objective while they consider other individuals' judgments as biased. Due to the simplicity of the design of the current experiment, the occurrence of these biases was avoided and only the introspection access itself was examined.

Nevertheless, it is important to pay attention to the results of the second part of the research, which shows that participants were unable to detect the strength of the normative message and some of them had a tendency to slightly underestimate the influence of the social norm. This effect may therefore point precisely to the *introspection illusion*, whereby people overestimate their self-awareness and underestimate the external factors that influence their behavior.

5.3 Theoretical and Practical Implications of the Thesis

The results of this study showed that people are able to perceive the influence of social norms on their decision making. The influence of social norms may be relatively weak, as in the current study. Indeed, it is important to set up the research conditions so that the social norm effect, if any, is introspectively accessible to respondents. These conditions consist of asking simple binary questions that come from an area that is familiar to the research participants and asking participants to report their motives as soon as possible after the decision is made, while their motives are still introspectively accessible to them. Thus, future research should take these suggestions into account and try to apply this methodology for examining the influence of social norms in other social contexts so that the results of the study can be more easily generalized.

The finding that people are able to perceive the influence of social norms may also suggest that people are probably not as easily manipulated by social norms as previously thought because they are aware of their influence. This should be taken into account, for example, by various organizations or public policies that seek to promote certain ways of behavior and thinking in society through the influence of social norms. Awareness of social norms can also be further incorporated into education and the development of critical thinking, thereby increasing personal autonomy, enabling individuals to make more authentic and informed decisions in situations where they are exposed to social pressure. For example, social norms are very closely linked to consumer behavior and consumerism. Ethical marketing can take advantage of this and, through education on the influence of social norms, can promote conscious consumption and more thoughtful consumer habits.

5.4 Limitations

This study has several limitations. One of them is the relatively lower statistical power of the study in detecting the effect of the intensity of a subjective norm on the evaluation of its perceived importance in decision making due to the limited sample size. It was the lower statistical power that may have caused the manipulation not to work entirely as was originally expected. The manipulation of the direction of the social norm proved to be effective, meaning that individuals were aware of which movie the norm was pointing to and they tended to choose a response consistent with the norm rather than the opposite response, even though this effect was relatively weaker compared to the effect of other attributes. What

did not work, however, was manipulating the intensity of the social norm, as the results of the study showed that the intensity of the social norm had no effect on its perception. In short, participants were not sensitive to the intensity of the social norm and did not perceive it. However, the question is whether the effect was truly not there, or whether the study was simply not strong enough to capture the effect. For some phenomena, people seem to have a binary approach to them, i.e. they can only perceive whether or not the phenomenon is occurring. The aim of the study was to determine whether individuals are able to perceive beyond this binary approach and also to recognize how strong the phenomenon is. Thus, specifically, this study was not only about determining whether people can recognize the influence of a social norm (its direction), but additionally whether the norm is stronger or weaker (its strength). However, this effect was not confirmed in the study as individuals were only aware of the direction of the social norm, not its strength.

However, the problem with the manipulation of intensity could also lie in the too low variability of the social norm within each group. The difference between the minimum and maximum in both groups was only 15 percentage points, and the maximum in the experimental group with the weaker social norm condition was the same as the minimum in the experimental group with the stronger social norm condition. Thus, it is possible that the manipulation was too weak for the respondents to be able to detect it. However, the intervals from which norm strength was randomly generated for each experimental group were defined in this way to make the social norm appear realistic. The movie profiles were always randomly generated, as were the direction and strength of the social norm. For this reason, there were several cases when the social norm strongly pointed to a movie whose quality was generally poorer. In order to avoid these cases attracting too much attention and undermining participant trust, the intensity of the norm could not take on too extreme values. This problem might be solved by setting up fixed rounds in which there would always be the same pairs of movies with predefined values for each attribute, so that there would be no discrepancy between the quality of the movie and the direction of the norm. However, in this study, random generation of movie profiles was preferred to ensure that the individual attributes were independent and could thus enter the regression analysis. Future research should therefore focus on how to increase the statistical power of the study. A possible solution would be to increase the number of participants, or add more rounds in which participants would report subjectively perceived attribute and social norm effects.

Another limitation of this study is that it uses a convenience sample of younger and highly educated participants. Such limitations do not invalidate the main results of the study, namely that people are, under some conditions, able to detect the influence of social norm on their decision making. However, it may limit the generalizability of results to other segments of population.

Another potential limitation is that the study was conducted online. Studies conducted online may have lower external validity because the conditions of the online environment may be different from the real world and thus the results may not be directly applicable to a real-life situation. Although this study did not directly measure the participants' behavior, the situation simulated in the experiment (choosing a movie) corresponds to real-life situations that people experience (choosing a movie online). Thus, despite this, the study has a certain level of external validity because the situation in the experiment simulates a real-life situation that people commonly experience.

Another limitation of this study that should be mentioned is the way in which the effects of each attribute and social norm on participants' decision making were measured and compared to each other. When examining perception, participants rated the subjective effect of each attribute and social norm on the same scale. However, when deriving the effects of attributes and social norm using mixed regression, the scale was not uniform. This is because the attributes were defined by five levels, while the social norm was reported as a percentage. Thus it was possible to compare the effect sizes only in standardized metrics. This means that the results are defined by how the dependent variable changes relative to one standard error of that dependent variable when the independent variable changes by one standard error. In other words, even though social norm was measured on a different scale than the other attributes and entered the analysis as a binary variable, its influence can be compared to the other attributes within the standardized effect metrics because all variables were standardized. However, this should be taken into account when interpreting the results.

Last but not least, another limitation of this study is that it focused on only one particular type of decision making, namely, deciding between two movies. For this type of decision, the effect of social norm was found to be weak and was also correctly perceived by participants as weak. However, it cannot be said whether the same effect would have occurred when examining other social contexts. For example, it is possible that in other contexts the social norm effect could be stronger, but participants would still perceive it as

weak. In the contexts examined in this study, participants were correctly aware of the social norm effect. However, it cannot be ruled out that this correspondence was simply a coincidence. Future research should therefore attempt to investigate whether this effect can be found in other social contexts and whether the result can thus be generalized to other decision making situations.

CONCLUSION

The main aim of this study was to investigate the influence of descriptive social norms on individuals' decision making, namely deciding between two movies, and the extent to which people are able to recognize this influence. The results showed that the effect of social norm on decision making was relatively weaker compared to other factors of decision making but also that people were able to report this influence and correctly assess its importance compared to other factors of their decision making.

Current study shows that people are able, at least under certain conditions, to detect the influence of social norms on their decision making. Thus, normative influence on decision making does not operate entirely unconsciously, as is often assumed. The paper is also important in terms of its practical implications because it defines these conditions and describes a new way in which the influence of social norms can be studied. In this study, social norms were tested in the context of decision making between two movies, but in the future it would be desirable to test the influence of social norms in a similar way in other social contexts. Thus, the new method offers great potential for further research that can be inspired by the recommendations mentioned above and again contribute a little more to uncovering how these invisible threads that make up our society and guide our behavior work.

SUMMARY

Hlavním cílem této studie bylo zjistit, jaký vliv mají popisné sociální normy na rozhodování jednotlivců, konkrétně na rozhodování mezi dvěma filmy, a do jaké míry jsou lidé schopni tento vliv rozpoznat. Výsledky ukázaly, že vliv sociálních norem na rozhodování je ve srovnání s ostatními faktory rozhodování relativně slabší, ale také že lidé jsou schopni tento vliv zaznamenat a správně posoudit jeho význam ve srovnání s ostatními faktory svého rozhodování.

Současná studie ukazuje, že lidé jsou schopni, alespoň za určitých podmínek, odhalit vliv sociálních norem na své rozhodování. Normativní vliv na rozhodování tedy nepůsobí zcela nevědomě, jak se často předpokládá. Práce je důležitá i z hlediska svých praktických implikací, protože definuje tyto podmínky a popisuje nový způsob, jakým lze vliv sociálních

norem studovat. V této studii byly sociální normy testovány v kontextu rozhodování mezi dvěma filmy, ale v budoucnu by bylo užitečné testovat vliv sociálních norem podobným způsobem i v jiných sociálních kontextech. Nová metoda tak nabízí velký potenciál pro další výzkum, který se může inspirovat výše uvedenými doporučeními a opět přispět o něco více k odhalení toho, jak fungují tyto neviditelné nitky, které tvoří naši společnost a řídí naše chování.

LIST OF REFERENCES

- Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs: General and Applied*, 70(9), 1–70. <https://doi.org/10.1037/h0093718>
- Brawley, L. R. (1984). Unintentional egocentric biases in attributions. *Journal of Sport Psychology*, 6(3), 264–278.
- Burnkrant, R. E., & Cousineau, A. (1975). Informational and normative social influence in buyer behavior. *Journal of Consumer Research*, 2(3), 206–215. <https://doi.org/10.1086/208633>
- Carlson, R. W., Zoh, Y., Morris, A., & Crockett, M. (2023). *Quantifying accuracy and bias in motive introspection*. PsyArXiv. <https://doi.org/10.31234/osf.io/xkz6m>
- Cialdini, R. B. (2007). Descriptive Social Norms as Underappreciated Sources of Social Control. *Psychometrika*, 72(2), 263–268. <https://doi.org/10.1007/s11336-006-1560-6>
- Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58(6), 1015–1026. <https://doi.org/10.1037/0022-3514.58.6.1015>
- Cohen, G. L. (2003). Party Over Policy: The Dominating Impact of Group Influence on Political Beliefs. *Journal of Personality and Social Psychology*, 85, 808–822. <https://doi.org/10.1037/0022-3514.85.5.808>
- Dandaneau, S. P. (2015). Norms. In *The Blackwell Encyclopedia of Sociology*. John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781405165518.wbeosn029.pub2>
- Dorigoni, A., & Bonini, N. (2023). Water bottles or tap water? A descriptive-social-norm based intervention to increase a pro-environmental behavior in a restaurant. *Journal of Environmental Psychology*, 86, 101971. <https://doi.org/10.1016/j.jenvp.2023.101971>
- Durkheim, É. (1951 [1897]). *Suicide*, Free Press, New York .
- Durkheim, É. (1984 [1893]). *The Division of Labor in Society*, Free Press, New York.
- Durkheim, É. (1995 [1912]). *The Elementary Forms of Religious Life*, Free Press, New York.
- Ebersole, C. R., Atherton, O. E., Belanger, A. L., Skulborstad, H. M., Allen, J. M., Banks, J. B., Baranski, E., Bernstein, M. J., Bonfiglio, D. B. V., Boucher, L., Brown, E. R.,

- Budiman, N. I., Cairo, A. H., Capaldi, C. A., Chartier, C. R., Chung, J. M., Cicero, D. C., Coleman, J. A., Conway, J. G., ... Nosek, B. A. (2016). Many Labs 3: Evaluating participant pool quality across the academic semester via replication. *Journal of Experimental Social Psychology*, *67*, 68–82. <https://doi.org/10.1016/j.jesp.2015.10.012>
- Hechter, M., & Opp, K.-D. (2001). *Social Norms*. Russell Sage Foundation.
- Interis, M. (2011). On Norms: A Typology with Discussion. *The American Journal of Economics and Sociology*, *70*(2), 424–438. <https://doi.org/10.1111/j.1536-7150.2011.00778.x>
- Jaeger, C. M., & Schultz, P. W. (2017). Coupling social norms and commitments: Testing the underdetected nature of social influence. *Journal of Environmental Psychology*, *51*, 199–208. <https://doi.org/10.1016/j.jenvp.2017.03.015>
- Kiesler, C. A. (1971). *The Psychology of Commitment*. Academic Press.
- Kormos, C., Gifford, R., & Brown, E. (2014). The Influence of Descriptive Social Norm Information on Sustainable Transportation Behavior: A Field Experiment. *Environment and Behavior*, *47*. <https://doi.org/10.1177/0013916513520416>
- Kruger, J. (1999). Lake Wobegon be gone! The “below-average effect” and the egocentric nature of comparative ability judgments. *Journal of Personality and Social Psychology*, *77*(2), 221–232. <https://doi.org/10.1037/0022-3514.77.2.221>
- Lapinski, M., & Rimal, R. (2005). An Explication of Social Norms. *Communication Theory*, *15*, 127–147. <https://doi.org/10.1111/j.1468-2885.2005.tb00329.x>
- Latane, B., & Darley, J. M. (1968). Group inhibition of bystander intervention in emergencies. *Journal of Personality and Social Psychology*, *10*(3), 215–221. <https://doi.org/10.1037/h0026570>
- Mestrovic, S. G. (1993). *Emile Durkheim and the Reformation of Sociology*. Rowman & Littlefield.
- Morris, A., Carlson, R. W., Kober, H., & Crockett, M. (2023). *Introspective access to value-based choice processes*. PsyArXiv. <https://doi.org/10.31234/osf.io/2zrfa>
- Nolan, J., Schultz, P., Cialdini, R., Goldstein, N., & Griskevicius, V. (2008). Normative Social Influence Is Underdetected. *Personality & Social Psychology Bulletin*, *34*, 913–923. <https://doi.org/10.1177/0146167208316691>

- Parks, C. D., Sanna, L. J., & Berel, S. R. (2001). Actions of similar others as inducements to cooperate in social dilemmas. *Personality and Social Psychology Bulletin*, 27(3), 345–354. <https://doi.org/10.1177/0146167201273008>
- Parsons, T. (1952). *The Social System*, Free Press, New York.
- Pronin, E. (2008). How We See Ourselves and How We See Others. *Science*, 320(5880), 1177–1180. <https://doi.org/10.1126/science.1154199>
- Pronin, E. (2009). The introspection illusion. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol 41. (2012-15135-001; pp. 1–68). Elsevier Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)00401-2](https://doi.org/10.1016/S0065-2601(08)00401-2)
- Pronin, E., & Kugler, M. B. (2007). Valuing thoughts, ignoring behavior: The introspection illusion as a source of the bias blind spot. *Journal of Experimental Social Psychology*, 43(4), 565–578. <https://doi.org/10.1016/j.jesp.2006.05.011>
- Pronin, E., & Kugler, M. B. (2010). People believe they have more free will than others. *PNAS Proceedings of the National Academy of Sciences of the United States of America*, 107(52), 22469–22474. <https://doi.org/10.1073/pnas.1012046108>
- Pronin, E., Lin, D. Y., & Ross, L. (2002). The bias blind spot: Perceptions of bias in self versus others. *Personality and Social Psychology Bulletin*, 28(3), 369–381. <https://doi.org/10.1177/0146167202286008>
- Pronin, E., Molouki, S., & Berger, J. (2007). Alone in a Crowd of Sheep: Asymmetric Perceptions of Conformity and Their Roots in an Introspection Illusion. *Journal of Personality & Social Psychology*, 92(4), 585–595. <https://doi.org/10.1037/0022-3514.92.4.585>
- Sherif, M. (1936). *The psychology of social norms* (pp. xii, 210). Harper.
- Simon, D., Ahn, M., Stenstrom, D. M., & Read, S. J. (2020). The adversarial mindset. *Psychology, Public Policy, and Law*, 26(3), 353–377. <https://doi.org/10.1037/law0000226>

List of Appendices

Appendix no. 1: Text version of the online experiment (text)

Appendix no. 2: SZZ Sociologie (text)

Appendix no. 3: SZZ Metodologie (text)

Appendix no. 4: SZZ Studia současných společností (text)

Appendix no. 5: Teze bakalářské práce (text)

APPENDICES

Appendix no. 1: Text version of the online experiment

{Dotazník - výběrový experiment na filmy}

Vítáme Vás v naší studii, která se zabývá výběrem filmů. Konkrétně nás zajímá, jaké atributy jsou pro jedince důležité při rozhodování se mezi dvěma filmy.

Tento výzkum je prováděn výzkumným týmem, který působí na Katedře sociologie Fakulty sociálních věd Univerzity Karlovy a Centra pro otázky životního prostředí. Účast v tomto výzkumu Vám zabere maximálně 10 minut. Celý dotazník je třeba vyplnit najednou. Vyhradte si na to prosím dostatek času.

Tento výzkum je anonymní a neshromažďujeme v něm žádné osobní údaje. Data z tohoto výzkumu budou publikována společně s jeho výsledky.

Vaše účast v tomto výzkumu je dobrovolná a kdykoliv se můžete rozhodnout vyplňování dotazníku ukončit. V takovém případě pouze zavřete okno prohlížeče.

Za účast ve výzkumu nezískáte žádnou odměnu. Účast v tomto výzkumu má zanedbatelná rizika srovnatelná s riziky spojenými s běžnou kancelářskou prací nebo prohlížením internetových stránek.

Děkujeme Vám za Vaši ochotu zúčastnit se našeho výzkumu. Pokud máte k výzkumu další dotazy, zašlete nám je na:

jan.urban@czp.cuni.cz (Jan Urban, Katedra sociologie, FSV UK)

95384080@fsv.cuni.cz (Barbora Otrubová, Katedra sociologie, FSV UK)

POKRAČOVÁNÍM NA DALŠÍ STRÁNKU DÁVÁTE NA VĚDOMÍ, ŽE JSTE SI TYTO INFORMACE PŘEČETL(A) A SOUHLASÍTE S PODMÍNKAMI VÝZKUMU.

V následující části dotazníku Vám ukážeme několik dvojic filmů. Každý film bude popsán pomocí následujících atributů: zápletka (jak dobrý nebo špatný je děj filmu), hudba

(kvalita hudby ve filmu), dialogy (jak kvalitně jsou ve filmu vystavěny dialogy postav) a herecké výkony (jak kvalitní jsou výkony herců a hereček).

Současně Vám u každého filmu ukážeme, jak se rozhodovali jiní respondenti.

Vaším úkolem bude vybrat, který film z dané dvojice preferujete. Celkem provedete osm takových voleb.

| | Film A | Film B |
|----------------|--------|--------|
| Zápletka | | |
| Hudba | | |
| Dialogy | | |
| Herecké výkony | | |

Který z těchto dvou filmů preferujete?

Film A Film B

Úrovně všech atributů:

velmi špatné

špatné

střední

dobré

velmi dobré

X % respondentů vybralo film Y {X > 50% a Y variuje}

{Hodnota X bude variovat mezi 50 % - 65 % u skupiny 1 a mezi 65 %-80 % u skupiny 2.}

Dokončili jste první část dotazníku. Nyní vás požádáme, abyste zhodnotili, jak důležitou roli hrály jednotlivé atributy filmů ve vašem rozhodování.

Váhu atributů budete hodnotit na sedmibodové škále, kde 0 znamená "nedůležitý v rozhodování" a 7 znamená "důležitý v rozhodování".

Uveďte prosím, jaký význam měly jednotlivé atributy ve vašem výběru filmů.

0 = Nedůležitý -1-2-3-4-5-6-7 = Důležitý

Zápletka

Hudba

Dialogy

Herecké výkony

Preference ostatních respondentů

{gender}

Na závěr dotazníku Vám položíme několik sociodemografických otázek. Která z následujících genderových kategorií Vás nejlépe popisuje:

Muž

Žena

Nebinární nebo genderově různorodá

Spíše nechci sdělovat

{age}

Kolik je Vám přesně let?

{fill-in field}

{education}

Jaké je Vaše nejvyšší dokončené vzdělání?

Základní

Středoškolské bez maturity

Středoškolské s maturitou

Vysokoškolské

Jak moc jste se snažil(a) odpovídat co nejpřesněji?

Vůbec jsem se nesnažil(a)

Trochu jsem se snažil(a)

Celkem jsem se snažil(a)

Velmi jsem se snažil(a)

Jak moc jste se soustředil(a) na instrukce v dotazníku?

Vůbec jsem se nesoustředil(a)

Trochu jsem se soustředil(a)

Celkem jsem se soustředil(a)

Velmi jsem se soustředil(a)

Právě jste dokončil(a) celou studii. Děkujeme Vám!

V rámci této studie jsme měřili, jaké atributy jsou pro jedince důležité při rozhodování se mezi dvěma filmy. Zajímalo nás především ale také to, jaký vliv má na jedince při rozhodování přítomnost deskriptivní sociální normy, a do jaké míry jsou lidé schopni tento vliv odhalit. Tuto informaci jsme Vám však před dokončením dotazníku nemohli sdělit, aby nedošlo ke zkreslení Vašich odpovědí a tedy i výsledku celého experimentu.

Sociální norma byla v dotazníku přítomna v podobě informace o tom, jaký film preferovali ostatní respondenti (uvedené v procentech). Tento údaj byl vždy vygenerován náhodně. Náhodně byly generovány i atributy jednotlivých filmů.

Na základě Vašich odpovědí budeme nyní schopni odhadnout, jak velký vliv má přítomnost normativního sdělení při rozhodování a zda působí vědomě či nevědomě.

Ještě jednou Vám děkujeme za ochotu zúčastnit se našeho výzkumu. Pokud máte k výzkumu jakékoliv dotazy či připomínky, zašlete nám je na:

jan.urban@czp.cuni.cz (Jan Urban, Katedra sociologie, FSV UK)

a 95384080@fsv.cuni.cz (Barbora Otrubová, Katedra sociologie, FSV UK)

Nyní můžete zavřít okno svého prohlížeče.

Appendix no. 2: SZZ Sociologie

Vybraná témata k okruhům SZZ ze Sociologie

Okruh 1: TEORIE

Klíčové slovo: Funkcionalismus

Okruh 3: INSTITUCE

Klíčové slovo: Sociální normy

Okruh 4: PROCESY

Klíčové slovo: Socializace

Seznam literatury ke SZZ ze Sociologie

1. Dandaneau, S. P. (2015). Norms. In *The Blackwell Encyclopedia of Sociology*. John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781405165518.wbeosn029.pub2>
2. Fine, G. A. (2005). Enacting norms: Mushrooming and the culture of expectations and explanations. In *Social Norms* (pp. 139-164). Russell Sage Foundation.
3. Horne, C. (2001). Sociological perspectives on the emergence of norms. In *Social Norms*. (pp. 3-34).
4. Jaeger, C. M., & Schultz, P. W. (2017). Coupling social norms and commitments: Testing the underdetected nature of social influence. *Journal of Environmental Psychology*, 51, 199–208. <https://doi.org/10.1016/j.jenvp.2017.03.015>
5. Nolan, J., Schultz, P., Cialdini, R., Goldstein, N., & Griskevicius, V. (2008). Normative Social Influence Is Underdetected. *Personality & Social Psychology Bulletin*, 34, 913–923. <https://doi.org/10.1177/0146167208316691>

Appendix no. 3: SZZ Metodologie

Vybraná témata k okruhům SZZ z Metodologie

Okruh 1: Teoretická východiska výzkumu

Téma: Kvantitativní výzkum - Formulace výzkumných otázek, teoretické konstrukty a hypotézy

Okruh 2: Příprava a organizace výzkumu

Téma: Kvantitativní výzkum - Typy a příprava experimentů, metodologické a etické aspekty experimentálních studií

Okruh 3: Vytváření a sběr dat

Téma: Kvantitativní výzkum - Metody sběru dat (CAWI, CATI, PAPI). Online dotazování. Online panely a jejich kritika.

Okruh 4: Analýza dat

Téma: Kvantitativní výzkum - Příprava dat pro analýzu (transformace a čištění)

Okruh 5: Reflexivita, etika a prezentace výzkumu

Téma: Kvantitativní výzkum - Interpretace statistické a věcné významnosti výsledku

Seznam literatury ke SZZ z Metodologie

1. Bronner, F., & Kuijlen, T. (2007). The Live or Digital Interviewer—A Comparison between CASI, CAPI and CATI with Respect to Differences in Response Behaviour. *International Journal of Market Research*, 49(2), 167–190. <https://doi.org/10.1177/147078530704900204>
2. Carlson, R. W., Zoh, Y., Morris, A., & Crockett, M. (2023). *Quantifying accuracy and bias in motive introspection*. PsyArXiv. <https://doi.org/10.31234/osf.io/xkz6m>
3. Jeřábek, H. (1992). Problémy a hypotézy. In *Úvod do sociologického výzkumu: Skripta pro posl. Fak. Sociálních věd Univ. Karlovy* (1. vyd, pp. 15-24.). Karolinum.

4. Morris, A., Carlson, R. W., Kober, H., & Crockett, M. (2023). *Introspective access to value-based choice processes*. PsyArXiv. <https://doi.org/10.31234/osf.io/2zrfa>
5. Soukup, P., Rabušic, L., & Mareš, P. (2023). Kapitola 6: Úpravy proměnných a příbuzné procedury. In *Statistická analýza sociálněvědních dat v R* (1. vydání, pp. 187-210.). Masarykova univerzita.

Appendix no. 4: SZZ Studia současných společností

Téma SZZ ze specializace Studia současných společností

Téma: Vliv sociálních norem na chování spotřebitelů

Navazuje na předmět/y: Společnost a spotřeba

Seznam literatury ke SZZ ze specializace Studia současných společností

1. Bellezza, S., Gino, F., & Keinan, A. (2014). The Red Sneakers Effect: Inferring Status and Competence from Signals of Nonconformity. *Journal of Consumer Research*, *41*(1), 35–54. <https://doi.org/10.1086/674870>
2. Dorigoni, A., & Bonini, N. (2023). Water bottles or tap water? A descriptive-social-norm based intervention to increase a pro-environmental behavior in a restaurant. *Journal of Environmental Psychology*, *86*, 101971. <https://doi.org/10.1016/j.jenvp.2023.101971>
3. Huang, L., Yuan, H., Dong, X., Chen, Z., & Zhou, L. (2023). Social norms and socially responsible consumption behavior in the sharing economy: The mediation role of reciprocity motivation. *Journal of Cleaner Production*, *414*, 137750. <https://doi.org/10.1016/j.jclepro.2023.137750>
4. Melnyk, V., Carrillat, F. A., & Melnyk, V. (2022). The Influence of Social Norms on Consumer Behavior: A Meta-Analysis. *Journal of Marketing*, *86*(3), 98–120. <https://doi.org/10.1177/00222429211029199>
5. Sassateliová, R. (2014). Sociologie spotřeby: Jednání, distinkce a identita. In P. Zahrádka (Ed.), *Spotřební kultura: Historie, teorie a výzkum* (Vyd. 1). Academia.

Appendix no. 5: Teze bakalářské práce

Projekt bakalářské práce

Jméno a příjmení studujícího: Barbora Otrubová

Studijní program: Sociologie - specializace Studia současných společností - bakalářský, prezenční (B0314A250005)

Předpokládaný název práce: Využití hypotézy introspekčního zkreslení ke zkoumání lidské slepoty vůči sociálním normám

Předpokládaný název práce v angličtině: Using introspection bias hypothesis to explore people's blindness towards social norms

Klíčová slova: iluze introspekce, experiment, sociální normy, zkreslení, pro-environmentální chování

Klíčová slova v angličtině: illusion of introspection, introspective illusion, experiment, bias, social norms, pro-environmental behavior

Vedoucí práce: Mgr. Jan Urban, Ph.D.

Námět práce

Social norms play an important role in pro-environmental behavior (Culiberg & Elgaaied-Gambier, 2016; D'Arco et al., 2023; Dorigoni & Bonini, 2023; Smith et al., 2021). The strong influence of social norms is demonstrated by several studies. Social norms of significant others, family and friends, appear to be the strongest predictor of pro-environmental behavior. If individuals feel that others will conform, and at the same time conforming is expected of them, they are more likely to behave pro-environmentally as well (Culiberg & Elgaaied-Gambier, 2016). This influence is confirmed by a recent study

focusing on Generation Z, which found that young people's pro-environmental behavior is predicted primarily through their personal norms, which are directly or indirectly influenced by social norms (D'Arco et al., 2023). Another interesting finding from a recent study is that the presence of a descriptive social norm, such as a displayed message, can have a significant impact on the behavior of individuals. The study found that the mere presence of a poster with a descriptive social norm in a restaurant increased demand for tap water instead of bottled water four times (Dorigoni & Bonini, 2023).

However, lay people have only limited ability to recognize how strong influence social norms have on them. Several studies have been conducted (Cohen, 2003; Darley & Latane, 1968; Sherif, 1936) which dealt with this topic, and which showed, among other things, that people are not aware of their own susceptibility to social influence and deny that their behavior is socially influenced. The hypothesis that people tend to perceive themselves as less susceptible to social influence was attempted to be tested by a collective of authors (Pronin et al., 2007) in five studies. They all found that people were generally able to quickly recognize the effects of social influence in others, but failed to recognize when they themselves were influenced. This is in part due to so called introspection bias.

Introspection bias is a phenomenon whereby people fail to correctly identify their own reasons and motivation available through introspection (Pronin, 2009). Several studies have demonstrated introspection bias (Nisbett & Wilson, 1977; Pronin et al., 2007) and one of them was a study conducted back in 1977 by a pair of authors who took an introspective approach to cognitive processes and concluded that people have little or no access to these processes and are unaware of the existence of cues that influence their actions. When individuals then attempt to report on their cognitive processes, their response is based not on genuine introspection, but only on apriorist judgments about the most relevant and likely cause of their actions (Nisbett & Wilson, 1977). This and some other studies show that individuals have a strong tendency to conform to social influence in both trivial and more serious matters. This social influence can come from a variety of sources. People conform to their peers, to people they do not know personally, to people they look up to, and to social norms (Pronin et al., 2007).

However, some other studies showed that introspection bias may not be as strong as originally thought and that people generally can identify their motivation (Johansson et al., 2006; White, 1988). Some studies have pointed out theoretical and methodological

shortcomings associated with the measurement of introspection and reported that introspective confusion has not been adequately falsified or supported (White, 1988). This proposal was supported by a 2006 study in which a collective of authors tested the inability of individuals to detect inconsistencies between intention and outcome in a simple decision task. The result of this experiment was that only very small differences were found between the trials of the manipulated and non-manipulated groups (Johansson et al., 2006).

In this work, I will study people's blindness to social norms using the conceptual framework of the introspection bias. Specifically, I will study whether blindness to social norm effects can be explained as a case of introspection bias, and I will study moderating factors that increase or attenuate people's blindness to social normative effects.

Předpokládané metody zpracování

In my thesis I will conceptually replicate and extend an experimental study by Pronin et al. (2007, Study 4) focusing on introspection bias in social norm perception. In my study, I will manipulate experimentally social norms related to polarizing topics (e.g., euthanasia legalization, acceptance and integration of migrants etc.). These topics will be identified based on a small pilot in the target population and/or literature search (opinion polls). I will manipulate social norms by presenting information about what fraction of the reference group supports (or is opposed) to specific issue as is commonly done in studies that manipulate social norms (Cohen, 2003; Darley & Latane, 1968; Pronin et al., 2007; Sherif, 1936). After each topic, participants will indicate their own support (or opposition to given topic). Finally, participants will indicate the degree to which their responses were affected by normative information as opposed by pre-existing attitude of the participants.

I am planning to run the experimental study on a sample of students of Charles University. Besides easy access to this population, such a choice will allow me to set the Charles University student population as a relevant reference group in the experimental manipulation of social norms. I expect that I will be able to recruit 200-300 participants for the study through snowball sampling. Given that my study will be experimental and looking at the causal effect of experimental factors, non-representativity of the sample is less of an issue in this case.

Using regression models, I will be able to estimate the effect of social norms on participants' decision-making and I will be able to compare it with (introspection-based) perceived normative influence.

This study is potentially important in sociology because introspection-based methods are often used in sociological studies to reveal people's motivation for behavior. My study will contribute to the existing literature which highlights some of the biases and limitations in introspection-based elicitation of people's motivation.

Etické souvislosti zvažovaného projektu

The study has a negligible risk for participants comparable to Internet browsing. No personal or sensitive data will be collected. All data will be anonymous. The study will be reviewed by the Institutional review board of the Charles University Environment Center.

Orientační seznam literatury

1. Cohen, G. L. (2003). Party Over Policy: The Dominating Impact of Group Influence on Political Beliefs. *Journal of Personality and Social Psychology*, 85, 808–822. <https://doi.org/10.1037/0022-3514.85.5.808>
2. Culiberg, B., & Elgaaied-Gambier, L. (2016). Going green to fit in – understanding the impact of social norms on pro-environmental behaviour, a cross-cultural approach. *International Journal of Consumer Studies*, 40(2), 179–185. <https://doi.org/10.1111/ijcs.12241>
3. D'Arco, M., Marino, V., & Resciniti, R. (2023). Exploring the pro-environmental behavioral intention of Generation Z in the tourism context: The role of injunctive social norms and personal norms. *Journal of Sustainable Tourism*, 0(0), 1–22. <https://doi.org/10.1080/09669582.2023.2171049>
4. Darley, J. M., & Latane, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology*, 8, 377–383. <https://doi.org/10.1037/h0025589>

5. Dorigoni, A., & Bonini, N. (2023). Water bottles or tap water? A descriptive-social-norm based intervention to increase a pro-environmental behavior in a restaurant. *Journal of Environmental Psychology*, 86, 101971. <https://doi.org/10.1016/j.jenvp.2023.101971>
6. Johansson, P., Hall, L., Sikström, S., Tärning, B., & Lind, A. (2006). How something can be said about telling more than we can know: On choice blindness and introspection. *Consciousness and Cognition*, 15(4), 673–692. <https://doi.org/10.1016/j.concog.2006.09.004>
7. Nisbett, R., & Wilson, T. (1977). Telling More Than We Can Know: Verbal Reports on Mental Processes. *Psychological Review*, 84, 231–259. <https://doi.org/10.1037/0033-295X.84.3.231>
8. Pronin, E. (2009). The introspection illusion. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol 41. (2012-15135-001; pp. 1–68). Elsevier Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)00401-2](https://doi.org/10.1016/S0065-2601(08)00401-2)
9. Pronin, E., Molouki, S., & Berger, J. (2007). Alone in a Crowd of Sheep: Asymmetric Perceptions of Conformity and Their Roots in an Introspection Illusion. *Journal of Personality & Social Psychology*, 92(4), 585–595. <https://doi.org/10.1037/0022-3514.92.4.585>
10. Sherif, M. (1936). *The psychology of social norms* (pp. xii, 210). Harper.
11. Smith, C. J., Dupré, K. E., McEvoy, A., & Kenny, S. (2021). Community perceptions and pro-environmental behavior: The mediating roles of social norms and climate change risk. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 53, 200–210. <https://doi.org/10.1037/cbs0000229>
12. White, P. A. (1988). Knowing more about what we can tell: ‘Introspective access’ and causal report accuracy 10 years later. *British Journal of Psychology*, 79(1), 13–45. <https://doi.org/10.1111/j.2044-8295.1988.tb02271.x>