# Marketing Equality 

## Counteracting structural gender discrimination using nonobjectifying portrayals of women.


#### Abstract

Previous studies have shown that objectification of women, a recurring phenomenon in marketing communication, causes people to perceive women as less competent in matters of the public world. This competence inadequacy perception forms the basis of a form of structural gender discrimination, which excludes women from the collective production of social beliefs and institutions. By conducting an experiment, using a modified version of the Saying-Is-Believingparadigm, the aim of this study was to examine whether exposure to nonobjectifying portrayals of women can change the competence perception and counteract the structural gender discrimination. In addition to validating the existence of the structural gender discrimination, our findings indicate that shortterm exposure to non-objectifying portrayals of women can counteract the structural gender discrimination amongst female participants.


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## 1. INTRODUCTION

### 1.1 The role of advertising in sensemaking

Let us begin by arguing for some intuitive and self-evident notions about marketing communication. First, it is inevitably so that, when marketers set out to create communication, regardless of intention, they sometimes - if not always - draw on existing norms and culturally contingent perceptions of things. In an effort to fulfil its many purposes, marketing communication tries to understand, emphasize and reflect many of our concerns, habits, needs, and beliefs. Second, when drawing upon existing beliefs there is not always room for accurate and versatile representation of the world. Especially not in the realm of low attention spans where advertisers struggle on noisy and cluttered fields of editorial and commercial messages for their clients' right to be heard. To get the message through efficiently, complex matters are stripped down to fewdimensional and digestible portrayals of reality. Third, in its omnipresence and through its selectiveness and consistency, market communication can affect, influence and form our perception of things. Sometimes when people consciously or subconsciously tune into a consistently repeated message over a long period of time, they are not only prone to let it shape their thoughts, but more interestingly, the basis of their judgment and actions (Gordon, 1995). What we mean to say should not come as a surprise; advertising, intentionally and unintentionally, plays a significant role in the process of sensemaking in our societies. What happens when slim portions of our reality is consistently communicated and selective perceptions of certain groups of people succeed in establishing themselves as facts? In a broader context, when advertisement, in an attempt to create a product image, draws upon simplified representations of groups of people, the general perception of the individuals related to those groups stand the risk of becoming limited to emerging stereotypes (Stern, 1993; Cortese, 1999; Schroeder \& Borgerson, 1998).

### 1.2 The perception of women

To this day, many advertisements portray women in accordance with cultural stereotypes built on the perception of women being products, sexual objects and inferior to men (e.g. Stern, 1993; Cortese, 1999). As a result, advertising influences the perception of women in several ways (Schroeder \& Borgerson, 1998). First, it often links women to passing and transient concerns of the moment. Second, advertising portrays women in a way that emphasizes the body as the core of female identity. Third, it reinforces the status of women as subordinate, non-intellectual and infantilized. This current and historically common way of portraying women affects the perception
of women in such a way that significantly reduces their advancement opportunities in the society (Hedberg \& Higgins, 2013). In fact, as we will explain in the coming sections, people tend to perceive women, on a structural level, as less competent than men in the matters of the public world (e.g. Broverman et al., 1972; Eagly \& Karau, 2002; Glick et al., 2005). This general perception, rooted in today's portrayals of women, is the basis of a form of structural discrimination that we will describe and study further in this thesis.

In 2013, despite many corporate and governmental efforts to reach higher gender equality in both the private and public sector, women are very much still underrepresented in senior management roles. At current improvement rates, women are predicted to account for less than 20 percent of seats on Europe's executive committees 10 years from now (Devillard et al., 2012). However, the responsibility for this underrepresentation and for changing the status quo does not lie solely on companies and governments. Cultural and social factors are powerful influencers of women's role in the workplace, and shaping and reshaping the perception of women lies at the heart of this change. This study aims to better understand whether and how marketers, with their unique position of contributing to this change, can reform the general perception of women.

### 1.3 Purpose and research question

In 2012, Hedberg performed a study where he, in an experiment where each participant was asked to send a written message to a male or female recipient, showed that whereas male recipients affect the recall attitude in the sender's memory, female recipients have no such effect on their senders. He points out that this occurs because women are subconsciously perceived as less competent (lacking epistemic reliability) in matters of, at least, the public world than men. This, together with the fact that women are perceived as less competent when they are objectified (e.g. Heflick \& Goldenberg, 2009; Loughnan et al., 2010; Heflick et al., 2011), leads us to believe that the structural discrimination based on competence perception is to some extent caused by objectifying portrayal of women that, via advertising and marketing communication, surrounds and affects us in our daily lives. It is therefore natural to ask whether the opposite, i.e. exposure to nonobjectifying portrayals of women could help counteract this competence inadequacy perception, and thus the discrimination which women are subject to. Thus, the research question that will guide our analysis and form the basis for our hypotheses (see chapter 2) is:

Can exposure to non-objectified portrayals of women counteract the competence inadequacy perception of women that leads to gender-based, structural discrimination?

### 1.4 Delimitations

In order to conduct this study, certain limitations are necessary. First, in order to allow for certain comparability with Hedberg's (2012) study, we will be studying a sample of high-school students in the Stockholm area. Second, we are to examine the consequences of women being perceived as less competent than men in the public world, as it is the basis of the discrimination we are discussing. Third, although men, not seldom, are objectified in advertising, we will not address it here, as it is not relevant to the discussion of the existing structural discrimination toward women. Fourth, although objectification affects women on an individual level as well, we will focus on the structural implications of objectification.

### 1.5 Expected contributions

The aim of this study is to investigate whether the direct opposite to exposure of objectification of women - exposure of non-objectification of women - can prevent discrimination by counteracting the competence inadequacy perception women are subject to. We do not intend to discuss by what means advertising might offend a group or its members, nor discuss the efficiency or justification of specific marketing conducts, but rather to study ways of preventing women's future opportunities to be damaged by today's objectification in advertising.

### 1.6 Terminology and definitions

Marketing communication
"Marketing communication refers to the use of advertising, public relations, sales material, short-term promotions, media, and other informational means, to communicate the firm's offerings and image to existing and potential buyers." (Czinkota et al., 2005)

Objectification

Non-objectification
Refers to seeing and/or treating someone as an object (see section 2.2).

The opposite of objectification.

Refers to the world that people have away from home, at work and in the public (Tönnies, 1887).

Structural discrimination

Valence

Refers to laws, regulations and praxis in a social system that intentionally or unintentionally causes discriminating consequences; the discriminating actions are a part of the formal or informal routines that takes place in the institutions (Bergman, n.d.).

Refers to the positive or negative emotional charge something has.

### 1.7 Disposition

This thesis will be structured as follows: In the next chapter we will take a more detailed look at the theory applied, as well as reviewing the previous literature. In chapter 3 we will describe the used method, and in chapter 4 present our gathered results. Chapter 5 reveals our analysis and discussion with our conclusions and implications together with suggestions for further research.

## 2. THEORETICAL FRAMEWORK

This chapter describes the theories, concepts and previous research that together form the theoretical framework of this thesis. Drawing on this framework we have formed the hypotheses that will help us answer our research question.

### 2.1 A culture shaped by ads

Much of the research conducted within the field of marketing communication focuses on the persuasive effects of communication from a consumption standpoint and on the internal content of advertisement in terms of linking products to consumer benefits. Advertising, however, has also a tendency of creating meaning outside the scope of the advertised product (e.g. Ritson \& Elliot, 1999; Yahklef, 1999). As such, it reflects and creates social values that echo far beyond the realm of consumption. Consciously and subconsciously, it shapes the standards by which we judge ourselves (Lippke, 1995) and, intensified by today's information technology, helps shape our perception of life and the social world. Goldman \& Papson (1996) even took it as far as claiming that advertising has the power of redefining individuality, freedom and democracy through its ability to frame and redefine our experiences and turning them into meanings that resonate with corporate interests.

In a large social context where representation of objects and ideas, through imagery, lies in the heart of producing meaning, and where advertisement in an attempt to create a product image on occasion draws upon simplified, even subordinating, representations of cultural differences and group identity, represented groups and individuals stand the risk of being de-humanized (e.g. Stern, 1993; Schroeder \& Borgerson, 1998; Cortese, 1999). This is of great concern, especially when representation acts as a source of information and serves as a foundation for future knowledge and when people's perception, may they be misinformed, sometimes establish themselves as facts in our society (Gordon, 1995). One way of representing people, common in advertising, is through objectification.

### 2.2 Objectification

Some of the most prominent definitions of objectification are those of Immanuel Kant, Catherine MacKinnon, Andrea Dworkin, and Martha Nussbaum. Kant argues that objectification involves degrading a human's status to an object's status (Papadaki, 2012). MacKinnon (1988) and

Dworkin (1989) approach objectification by problematizing porn consumption in the society, arguing that women, because of porn, become objects to be sexually used by men. MacKinnon and Dworkin have a Kantian view on objectification, in the sense that objectification has to do with treating someone as an object, but propagate in their ideas for women as the main subjects to objectification. Although Nussbaum's (1995) definition takes ground in the work by these previously discussed scholars, in that it fundamentally sees objectification as seeing and/or treating someone as an object, she offers a more practical and operational view of objectification. More specifically, Nassbaum establishes seven ways of treating a person as an object. These involves the objectifier treating the object (the person) as:

- A tool (instrumentality)
- Lacking in autonomy and self-determination (denial of autonomy)
- Lacking agency and activity (inertness)
- Standardized in accordance to other objects of the same kind and of other kinds (fungibility)
- Lacking integrity and ability to set boundaries (violability)
- Something that can be sold and bought as a good (ownership)
- Something that has no feelings that needs to be concerned about (denial of subjectivity)

Objectification is harmful on two different levels: On the individual level, individually objectified women are harmed (e.g., Fredrickson et al., 1998; Gapinski et al., 2003; McKinley \& Hyde, 1996; Noll \& Fredrickson, 1998; Calogero, 2004). On a societal level, consequences of objectification cause harm to the entire society (e.g. Broverman et al., 1972; Eagly \& Karau, 2002; Glick et al., 2005). The following section describes these two levels in depth.

### 2.3 The individual and societal level negative consequences of objectification

In their groundbreaking work, Fredrickson and Roberts (1997: p.179) conclude that in today's society, women are victims of self-objectification: in constantly "being viewed by others in sexually objectifying ways", they adopt the observers perspective of themselves. The experiential and psychological consequences of self-objectification include shame and anxiety, peak motivational states, and the awareness of internal bodily states. Over time, the accumulation of these consequences can lead to depression, sexual dysfunction, and eating disorders (e.g., Fredrickson et al., 1998; Gapinski et al., 2003; McKinley \& Hyde, 1996; Noll \& Fredrickson, 1998; Calogero, 2004).

Furthermore, studies have shown that when individual women are objectified by others, or selfobjectify, they are perceived as less competent (e.g., Fredrickson et al. 1998; Gapinski et al. 2003; Quinn et al. 2006; Heflick \& Goldenberg 2009; Loughnan et al., 2010; Heflick et al., 2011). The mechanisms that relentlessly repeat this form of female portrayal on the individual level take part in the creation of a stereotypical female persona that, on a societal level, leads people to perceive women as less competent than men in specific areas. Studies have confirmed that women are, in fact, being perceived as less competent than men in some areas (e.g. Broverman et al., 1972; Eagly \& Karau, 2002; Glick et al., 2005). For instance, Broverman et al. (1972: p.75), found that "women are perceived as relatively less competent, less independent, less objective, and less logical than men", and that this is a view persistently held by large fractions of the society. Seeing this actuality in the view of the definition of discrimination, i.e. the special treatment (of individuals or groups of people) which involves departure from the principle that like matters should be treated alike (Bergman, n.d.), the fact that women are perceived as less competent than men in some areas is the basis for discrimination towards women in our society.

### 2.4 Women are discriminated in the "public world" of the society

This form of discrimination - based on the generic and persistent competence inadequacy perception of women - does not prevail in all parts of the society, but in matters of the public world (e.g. Broverman et al. 1972; Garcia-Retamero \& López-Zafra, 2006; Glick et al., 2005). The public world, in accordance with Tönnies (1887) definition Gesellschaft, refers to the world that people have away from home, at work and in the public. In fact, this perception of competence inadequacy of women in the public world is more specifically a form of structural discrimination. Structural discrimination refers to laws, regulations and praxis in a social system that intentionally or unintentionally causes discriminating consequences; the discriminating actions are a part of the formal or informal routines that takes place in the institutions (Bergman, n.d.). This structural discrimination towards women in matters of the public world takes various expressions. For instance, Gruber \& Gaebelein (1979: p. 307) found that "when a male and female say the same thing, more attention will be paid to what the male says than to what the female says". Another symptom of this form of discrimination is that men generally have more influence on people's opinions than women (Carli, 2001), which implicates that women have weaker opportunities to affect the people around them. This is in line with the study by Hedberg (2012), stating that women are discriminated in the sense that they have untraceable or no impact on people's attitudes,
whereas men do have a significant impact. For the purpose of this study, this is the type of discrimination that we will be focusing on, and henceforth the form of discrimination we will be referring to.

### 2.5 Identifying structural discrimination with the Saying-Is-Believing paradigm

 Hedberg's (2012) study was conducted using the saying-is-believing paradigm, sometimes referred to as the communication game (Higgins \& Rholes, 1978). The saying-is-believing paradigm consists of a participant (sender) and a receiver (recipient). In short, the sender communicates with the recipient about an ambiguous topic by sending a written message to the recipient. The sender will, before receiving information about the topic he/she later is supposed to communicate, receive some basic information about the recipient's attitude towards the topic, i.e. whether the recipient likes or dislikes the topic. The purpose is to manipulate the sender's mind to adapt to the recipient's attitude towards the topic. This is referred to as audience-tuning (Higgins, 1992), and implies that the sender tunes his/her attitude towards the attitude of the recipient, i.e. the communicator adapts the message content and tonality to match the recipient's attitude towards the topic $(\mathrm{H} 1)$. Thus, a more positive attitude toward the topic from the recipient will make the sender write a more positive message, and vice versa (Higgins \& Rholes, 1978). We wish to examine this and our first hypothesis is therefore:H1: The message valence is positive when the recipient has a positive attitude towards the public world topic.

The sender will read a text about the specific topic. When finished reading, the text will be removed and the sender will be asked to describe the topic in a written message - without mentioning the name of the topic - so that the recipient can be able to identify the topic. The topic will be ambiguous (with equal amounts of positive and negative traits) in order to study the extent to which the participant will tune to the recipient's attitude. Next, some time (a couple of minutes) after the message is sent, the sender will be asked to recall the original text and write it down as close to the original as possible. In this recall stage, Higgins \& Rholes (1978) found that the sender's memory is affected by the audience-tuning taking place when the sender is writing the message, a so-called audience-tuning effect on memory. This effect makes the sender remember the original text in the way that he first wrote the message and in accordance with the recipient's attitude toward the topic. That is, in a tone influenced by the recipient's attitude towards the topic. Higgins
\& Rholes named this effect as saying-is-believing (SIB): The sender, having tuned to the recipient's attitude, remembers (believes) what he wrote in the message (says), rather than what he actually read in the original text.

The SIB-effect has been found in several studies (e.g., Higgins \& McCann, 1984; Todorov, 2002; Echterhoff et al., 2005, Echterhoff et al., 2008; Hausmann et al., 2008; Kpietz et al., 2010). Echterhoff et al. (2005) argue that the main force behind the SIB-effect is the creation of a shared reality towards the topic between the sender and the recipient. Shared reality is a term that refers to an experience becoming objective once "recognized by others and shared in an ongoing, dynamic process of social verification" (Hardin \& Higgins, 1996: p.28). Echterhoff et al.'s (2005) finding has been supported by recent studies (e.g., Kpietz et al., 2010, Echterhoff et al., 2008; Echterhoff et al. 2009). More specifically, Echterhoff et al. (2005) added two manipulations to the original SIB paradigm to study how the SIB-effect would be affected by the creation of shared reality. First, a feedback part was added: Some time after the sender has written the message, the sender will get feedback on whether the recipient was able to identify the topic or not. In the study, it was found that the tone of the recall would be in accordance with the recipient's attitude towards the topic communicated about if, and only if, the sender had been subject to positive verification from the recipient. Thus, in the case of a positive verification, the sender will adopt the recipient's attitude towards the topic due to the shared reality that the positive verification creates. However, when the audience fails to identify the topic, based on the sender's message, the recipient and hence the correspondent representation embraced in the message will lack in reliability and fail to impose the shared reality effect (Echterhoff et al., 2005).

Furthermore, thanks to the second addition in the study by Echterhoff et al. (2005) to the original SIB paradigm - the manipulation of in- versus out-group audience - it was also found that the sender's memory bias would only be significant if the communication takes place between the sender and an in-group audience. That is, if the recipient is someone that the sender sees as an ingroup member - someone that the sender can relate to and share reality with - the sender's memory will be biased in the recall stage due to the audience-tuning effect on memory taking place after shared reality. In the case of an out-group member serving as the recipient, there was no significant memory bias found due to the lack of shared reality between the recipient and the sender. Echterhoff et al. explain this lack of shared reality as pertaining to the fact that out-group
member recipients are less trusted than in-group members when it comes to valid judgments regarding the communicated topic, and that they therefore are "unlikely to possess the characteristics required to assist in the construction of a valid representation" (2005: p. 272). Hence, Echterhoff et al.'s study is in line with previous research suggesting that people will, to a greater extent, rely on in-group member's information as it is seen as more valid and epistemic certain than out-group's (e.g. Shah et al., 1998; Kruglanski et al., 2002). The out-group members are therefore less trusted to serve as reliable sources, and they therefore get epistemically excluded. Echterhoff et al. (2005: p.273) concludes this by stating "when communicators eschew a socially shared reality with their audience, they may display overt signs of taking the audience into account through their audience tuning but covertly reject the significance of their interaction with the audience by treating their tuned message as irrelevant". In fact, Echterhoff et al. (2008: p.17) found that epistemic trust, in particular, "appears to be a central mechanism underlying the observed audience-tuning effects on memory". Consequently, there is a form of structural discrimination towards out-group members in the sense that they will not be able to affect other's attitudes towards a topic communicated about, and that they therefore will get excluded from taking part of forming institutional constructions and norms in a society due to their lack of trustworthiness regarding certain topics. The SIB paradigm, with the additions of Echterhoff et al.'s (2005) contributions to the paradigm (feedback and out- versus in-group recipients), is thus an effective way of localising structural discrimination.

In the case of structural discrimination towards women, Hedberg (2012) was able to identify, using the SIB-paradigm with Echterhoff et al.'s (2005) additions, the specific form of structural discrimination that will be investigated further in this thesis. That is, the fact that women, due to the general competence inadequacy perception towards women in certain areas, are being structurally discriminated in the sense that they are treated as non-valid epistemic sources in matters of the public world. Hedberg (2012) found this by studying the recipient's gender's impact on the memory bias in the recall stage, and found that male recipients did in fact cause memory bias in this stage, whereas female recipients were not able to cause an effect. This prevents women from creating shared reality with people in the public world and subsequently from affecting people around them (H2). This, in turn, leads to discrimination in the sense that women are being excluded from the process of constructing institutional norms in our society (Hedberg \& Higgins, 2013). Our aim to confirm this leads to our second hypotheses:

H2: When the recipient has a positive attitude toward the topic and the topic is public world related, the recall valence is affected by the message valence for male recipients but not for female recipients.

### 2.6 Previous research regarding exposure to non-objectification and nondiscrimination

Our research question in this thesis (see section 1.3) is built on research suggesting that the structural discrimination towards women is strongly connected to the objectifying portrayals of women that the society is constantly being exposed to (Heflick \& Goldenberg 2009; Loughnan et al. 2010, Heflick et al., 2011). However, by creating an experiment, we set out to investigate whether this form of discrimination can be reduced when people, instead of being exposed to objectified women, get exposed to non-objectified images of women (H3). Our third hypothesis is therefore:

H3: Exposing senders to non-objectifying portrayals of women causes their message valence to affect their recall valence (a SIB-effect will occur) even when the recipient is a woman, i.e. recall valence is affected by the interaction effect of exposure and message valence.

We have not been able to find any research that is supporting this hypothesis, but - as mentioned above - studies have found the direct opposite to be true, i.e. that there is a correlation between the objectification and the discrimination of women. These studies will be examined and described in depth in the next section.

### 2.6.1 Previous research on how objectification leads to discrimination

In Heflick \& Goldenberg's (2009) work participants were asked to focus on either the appearance of a person, or simply the person, of US politician Sarah Palin or actress Angelina Jolie when evaluating the targets on different traits, including three different competence perception traits competence, intelligence, and capability. The study showed that people perceive women as less competent when they are asked to focus on their appearance - hence objectifying the woman rather than their person.

Built on the work of Heflick \& Goldenberg (2009), Heflick et al. (2011) conducted a study where they investigated whether objectification causing negative competence perceptions was specific to
women only, or if objectification of men would have the same effects on their competence perception. Participants were asked to, on the basis of the appearance of the target person, evaluate the target's competence. The targets in the study were U.S. President Barack Obama and his wife Michelle Obama. The results shows that when First Lady Michelle Obama was objectified, she was perceived as less competent than when not objectified, whereas there was no significant difference in the perception of President Obama's competence regardless of being objectified or not.

In a study by Loughnan et al. (2010), the participants were asked to rate the perceived competence of individuals based on images of them. The participants looked at objectified images - where the women were dressed in bikinis and non-objectified images - where targets were fully clothed. The result gives further strength to the findings of Heflick \& Goldenberg (2009) and Heflick et al. (2011): The objectified women were perceived as less competent than the non-objectified ones.

### 2.7 Model of analysis and operationalization of concepts

While previous studies have focused on confirming that objectification of women leads to discrimination based on perception of competence inadequacy, we want to study whether it is possible to reduce this form of discrimination by exposing people to non-objectified images of women. Built on the theories discussed in this section we will operationalize these theoretical concepts by designing an experiment where we will create a link between exposure to nonobjectified women and (non-) discrimination. We will do this by designing an experiment consisting of two parts - one exposure-to-non-objectification part and one SIB-paradigm part. The exposure-to-non-objectification part will be built on Nussbaum's (1995) work (see section 2.2), and the SIBparadigm, similar to Hedberg's (2012) study (see section 2.5), will enable us to study the gender discrimination towards women. Simply put, we will use the SIB-paradigm to test whether we can change the fact that women are discriminated in the sense that they are not (in opposite to men) able to influence people regarding public world topics, by initially exposing the senders to nonobjectified images, thus linking together (non-) objectification and (non-) discrimination. This will enable us to study the impact message valence and exposure have on recall valence. That is, to study the econometric model - an Ordinary Least Squares (OLS) regression (Wooldridge, 2009):

$$
\text { Recall }=\beta_{0}+\beta_{1} \text { Message }+\beta_{2} \text { Exposure }+\beta_{3}(\text { Exposure } * \text { Message })+u
$$

Performing our data gathering with this experiment will enable us to collect all the variables required to conduct our regression model and to study the Message and Exposure effect on Recall. Additionally, in order to avoid omitted variable bias problems, we will add several debriefing questions in the last part of the experiment in order to have the opportunity to add variables to the regression.

### 2.8 Summary

Marketing communication that uses objectifying portrayals of women have negative implications on an individual and a societal level. On the societal level it causes structural discrimination towards women in situations related to the public world, as a product of the general competence inadequacy perception of women which positions women as less valid and reliable epistemic sources for public world topics. Research suggests that this discrimination is strongly connected to the objectification portrayals of women the society is being exposed to (Heflick \& Goldenberg 2009; Loughnan et al. 2010, Heflick et al., 2011). However, instead of studying the link between objectification and discrimination, we will create an experiment where we will investigate whether exposure to non-objectification can lead to non-discrimination.

Summary of hypotheses

H1: $\quad$ The message valence is positive when the recipient has a positive attitude towards the public world topic.

H 2 : When the recipient has a positive attitude toward the topic and the topic is public world related, the recall valence is affected by the message valence for male recipients but not for female recipients.

H3: Exposing senders to non-objectifying portrayals of women causes their message valence to affect their recall valence (a SIB-effect will occur) even when the recipient is a woman, i.e. recall valence is affected by the interaction effect of exposure and message valence.

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## 3. METHOD

This chapter entails the methods used in this study and the details regarding the conducted experiment.

### 3.1 Scientific approach and data gathering

Having started out from existing theories on the impacts of objectification on discrimination of women and formulated hypotheses built on these theories, this study follows a hypothesisdeductive approach (Olsson \& Sörensen, 2011). Therefore, an explanatory quantitative data gathering approach was used to study the causal relationship between the non-objectification and non-discrimination of women (Olsson \& Sörensen, 2011).

### 3.2 Experiment design

To test our hypotheses (see section 1.3) the SIB-paradigm will be used (see section 2.5) in the same way it was in Hedberg's (2012) study (in order to compare the results), with the addition of a part that exposes the participants to non-objectified women, thus connecting (non-) objectification with (non-) discrimination. In the experiment, we will manipulate the exposure and the recipient gender, having a control group exposed to neutral images and an experiment group exposed to non-objectified images of women in the exposure stage of the experiment, and with either a male or a female receiver in the second stage. Therefore, we will have a $2 \times 2$ design (exposure to nonobjectified woman/neutral image, receiver gender). This will result in four groups of data to be analysed:

1. Experiment group 1: Non-objectified women exposure, female receiver.
2. Experiment group 2: Non-objectified women exposure, male receiver.
3. Control group 1: Neutral exposure, female receiver.
4. Control group 2: Neutral exposure, male receiver.

### 3.3 Pre-study

Before having our chosen sample of participants (see section 3.4) take part in the experiment, we asked a convenience sample of five people to participate in the experiment, in order to test whether they would perceive anything, in regards to the experiment, as strange or difficult to understand at any point. To create a good representation of the main participant sample, the
convenience sample consisted of high school students. The pre-study showed that the participants in the convenience sample perceived the experiment to be clear in its design and that they didn't have any problem understanding the instructions. Some minor changes to formulations were made before we proceeded with the experiment.

### 3.3 Participants and facilities

In order to gain results comparable to those found in Hedberg 2012, the experiment participants consisted of Swedish high school students in the ages 17-19 years. The aim was to have a total of 120 participants (30 participants in each experiment/ control group) (Wooldridge, 2009). Because of a large participant absence, one participant not speaking Swedish and another arriving too late to the experiment session, the total number of participants became 67. The participants came from three different high school classes at a Stockholm based high school. The experiments took place in a classroom at the Stockholm School of Economics (SSE) at three different occasions during Mars and April of 2013 (Mars 25th, April 11th, April 16th). The reason for having the experiments at SSE was that, as a part of the experiment, we wanted to make the participants believe that we had invited another high school class to participate in the study (see section 3.4.3). Our assessment was that this would be more believable if the experiment took place somewhere like SSE, rather than at their high school.

### 3.4 Experiment procedure

The experiments consisted of four parts: First, an Introduction to the experiment introduced the experiment to the participants and mislead the participants to believe they would take part in two independent experiments (see section 3.6.3). Second, the participants were exposed to either objectified or non-objectified images. This experiment was referred to as the Images in Advertisingexperiment. Next, the participants took part in the SIB-paradigm experiment. We referred to this experiment as the How people communicate with and understand each other-experiment. Last, the participants answered demographics and debriefing questions regarding both experiments. Next sections will explain the different parts of the experiments in depth.

### 3.4.1 Introduction to the experiment

The purpose of the introduction to the experiments was to introduce us (the experimenters) and to explain the (false) purpose behind the experiments - that is, to inform the participants that they will take part in two separate studies. In order to make the participants believe that we are writing two
different theses, we explained how we were to be examined by different SSE institutions Marketing (Experimenter A) and Management (Experimenter B) (see Appendix I for script).

### 3.4.2 Experiment part one - Exposure to (non-) objectifying images of women

The purpose of the first part of the experiment was to expose the experiment group to nonobjectified portrayals of women and to expose the control group to neutral images, in order ascertain whether the difference in exposure would affect the participants' behaviour in the second part of the experiment. The two groups performed the experiment at the same time, however they were handed different images booklets depending on which group they belonged to. The participants were assigned seats randomized from their class lists. The experiment began when all participants were seated.

The intention of the first experiment, the participants were told, was to see which images the participants found most appealing. This was explained by experimenter A (see Appendix J for script).

The images containing non-objectified portrayals of women in this study (see Appendix A) were selected in accordance to Nussbaum's definition of objectification. In fact, they were consciously selected so as to exclude from the representation any of the seven determinants of objectification (see section 2.2). The photographs represented two types of situations, both focusing entirely on one specific individual. In one, the subject is captured in a context where she autonomously drives the situation and actively engages with the situation. The situation represented in the photograph let the audience to believe that the subject is holding a speech or is engaged in a debate or discussion of some sort. As such, the portrayed situation implies that the subject is active and has attributes like integrity, independence, is capable of emotions and is not commoditized, i.e. the opposite of being objectified. The second type of photo, a simple headshot, was non-objectifying in the sense that Nussbaum's determinants for objectification were absent. Furthermore, as opposed to the first type of photos, they portrayed the subject as without doing a specific activity.

In addition to this, in order to avoid one of the determinants, namely instrumentality, it not only needed to be extradited on the level of representation, concerning the nature of the representation within the context of the portrayal, but also on a meta-level, concerning the use of a model in the context creation process itself. As it is our belief that using a person in this process implies
instrumentality, the challenge of avoiding instrumentality thus becomes portraying an individually in a way that not only avoids the notion of instrumentality within the represented context or the created illusion captured in the photograph, but also to portray in a way that does not imply instrumental use of the individual in the process of portrayal itself. To accomplish this we used the works of contemporary photojournalists that aim to naturalistically capture isolated moments of women interacting, in an otherwise non-objectified manner, with a non-simulated context.

After the booklets and the formularies were handed out, the participants were asked to begin the experiment. When the experiment was over, the booklets and formularies were collected. This was the end of the first part of the experiment, and the participants continued to part two of the experiment.

### 3.4.3 Experiment part two - The SIB-paradigm

The purpose of the second part of the experiment was to explore what impact the recipient's positive feedback would have on the participant's attitude towards the public subject, given the different exposures in the first part of the experiment and whether the size of the impact varied depending on the receiver's gender. To accomplish this we used the SIB-paradigm (see section 2.5).

The participants were already seated when the second part of the experiment began. The head experimenter for experiment part two, experimenter B, reminded the participants of the purpose of the second experiment. The participants were told that the purpose was to study How People Communicate With and Understand Each Other by examining how people, through written messages, can make other people understand what they mean. Furthermore they were told that another high school class from another high school in Stockholm, as part of this experiment, had been invited to SSE to learn about some of the companies within the industrial sector, and that experimenter B therefore knew what these students thought about these companies. Experimenter B also told the participants that these other high school students were currently occupying a different classroom at SSE. The participants were told to send a written message, to a certain student in this other class, where they would describe a specific company within the industrial sector. Experimenter B further explained that the experimenters (A and B) would hand out information entailing which specific student the participants would write the message to, and more specifically what company the participant had to describe in that message. Experimenter B made it
clear to the participants that the messages were to be taken away from them before they started composing their messages, and that they therefore would not be able to copy the text into their messages. Experimenter B explained that the participants would get about 4 minutes to read the text after which they would receive a blank sheet to start writing their message on. Experimenter B once again reminded the participants that the purpose of the experiment was to look at how people communicate with and understand each other, and that it therefore is important that the participants do not write the name of the company that they are describing:

The point is for the receiving student to try to identify what company that you are describing in the message, so again, please to not write the name of the company in the message.

The experimenters then handed out a written note to each participant with information regarding their company and recipient (see Appendix C). The note will provide the participant with the following [handwritten] information:

In your case, you will be sending a message about [the industrial company MNN].
Your fellow student is a [male/female] who we can call [Peter/Emma]. (It might be interesting for you to know that [Peter/Emma] seems to have a [positive] attitude towards the company).

The reasoning behind telling the participant's that the recipients have a positive attitude towards the company was to make the participants adopt this positive attitude into their messages and recalls, in accordance with the audience-tuning theory (see section 2.5). Previous studies (e.g. Higgins \& Rholes, 1978; Echterhoff et al., 2005; Hedberg, 2012) have used a manipulation of both negative and positive recipient attitude conditions, but in order to decrease the sample size needed to conduct the experiment we chose to use only one of these conditions. We chose to use the positive attitude condition as Hedberg's (2012) study showed that that participants tuned more to female recipients in a positive attitude condition than in a negative one.

The participants received, in the same sequence, a hand-out with their public topic text. The public topic text was in all cases about the fictive industrial company MNN (see Appendix D). The reasoning behind choosing an industrial company was to have the participants communicating about a public subject (see section 2.4). Furthermore, the same text was used in the previous study by Hedberg (2012). Using the same text allows for comparing the results from his study to the present one.

When the participants were finished reading about the topic, the experimenters collected the handouts, and handed out at a blank sheet of paper where the participants would describe the topic to their recipient, without mentioning the name of the topic. When all participants had finished writing (around 5 minutes), experimenter B collected the messages. Experimenter B then informed the participants that she would take the messages to the receivers in the other classroom, and that they would try to identify what company that the participants had described, after which all participants would get a note from "their" receiver with a Yes or a No. A Yes if the receiver was able to identify the company, and a No if the receiver was not able to identify the company.

Experimenter B then left the room, and experimenter A handed out a filler task (see Appendix E) to be worked on while waiting for experimenter B to return with the replies from the recipients. The filler task was the same task used in Hedberg's (2012) experiment, and was both a way of simply preventing the participants from interacting with each other, as well as preventing the recalls from getting affected by disturbing circumstances, by occupying their memories while waiting to write the recall.

Experimenter B returned after 5 minutes with the written responses from the recipients. In all cases the participants received a Yes note, indicating that the recipient were able to identify what company the participant was describing in the message, creating a positive verification in all cases (see section 2.5). To keep the classroom calm, experimenter B asked the participants to not talk to each other nor compare their notes. After all participants had received their notes, they were handed a new blank sheet of paper, and experimenter B asked them to try to recall - as verbatim as they could - the original text about the public topic (the industrial company MNN). When finished with the writing, the participants were asked to answer demographics and debriefing questions about the two experiments (see Appendix F).

### 3.4.4 Figure describing the experiment in short

Figure 1 describes the design of the entire experiment in short.

1. Introduction
2. Experiment part 1 - Exposure to (non-) objectifying images of women:

3. Experiment part 2 - The SIB-paradigm:

| Participant recieves |
| :--- | :--- | :--- |
| written information |
| regarding the |
| recipient and the |
| public topic |

4. Participants answer debriefing and demographic questions

Figure 1 - overview of the experiment

### 3.5 Coding of measures

To increase the reliability of our measurement in studying to what extent the participants tuned to the recipients' attitudes, we asked two individual coders, independent of the study, at separate times to use a template (see Appendix G) to set the valence of the messages and recalls sent by the participants. The reason behind using the template is that this gives a more subjective rating of the valence in the messages and recalls, which minimizes the standard deviation between the two coders rating. In fact, using this template, we could decrease the standard deviation between the coders to close to 0 , saying that they rated the valence of the message and recall in the same direction through the coding. The template is based on the ambiguous topic text (see Appendix C), and created in a way that accords different "points" to different sentences and statements in the text. The template gives the same amount of positive points $(+)$ as negative points $(-)$. There is a total amount of 10 plus points and 10 minus points, adding up to a total of $+/-0$. Hence, the text is ambiguous, but all in all neutral in its formation, in accordance with previous studies (Higgins \& Rholes, 1978; Echterhoff et al., 2005; Hedberg, 2012).

### 3.6 Reliability and Validity of measures

### 3.6.1 Internal validity

Several measures have been taken to sustain validity, which refers to how well the measures capture what they are supposed to capture (Ghauri \& Gronhaug, 2010). First, to secure internal validity, which implicates a causal relationship between the dependent and independent variable (Brewer, 2000), we made efforts to minimize the environmental factors that could cause biases in our measurements. To begin with, participants were randomly assigned to different groups without themselves or the experimenters knowing of what group they belonged to. Also, every experiment occasion contained the four experiments groups to ensure that participants received the same treatment from the experimenters, no matter which experiment group they belonged to. Both the control groups and the experiment groups took part in the experiment at the same time, with the same design, the same instructions and the same experiment length. The only differences between the groups were the exposure (non-objectified images vs. neutral images) and recipient (male vs. females). In addition to this, by including the filler task (see appendix E), we made sure that the participants were constantly occupied with various tasks to ensure that environmental factors such as the participants talking to each other, would not affect our result. By including these preclusions in the experiment, we have aimed for a high validity by ensuring that the differences we see in recall is affected by our dependent variables, rather than external factors affecting the changes in the result. However, our study could lack somewhat in internal validity due to the fact that our experiments took part at three occasions. This means that external factors that are hard to control for, such as participants at one session asking questions that were not asked in the other sections, could give various results at the different occasions. To reach the highest possible internal validity, minding this fact, we used an experiment script to ensure that the participants got the exact same instructions at each experiment session.

Furthermore, the simplicity of our model suggests that we, due to omitted variables, might see a high residual value. In order to study and control for potential omitted variables that may influence our model, we collected demographics and attitude related information from our participants (see Appendix F).

### 3.6.2 External validity

In order to insure external validity, i.e. to what extent findings can be generalized beyond the case study (Ghauri \& Gronhaug, 2010), we aimed at having a sample of $\mathrm{N} \geq 30$ participants for each
studied group, to reach a satisfactory sample size for gaining statistical validity (Wooldridge, 2009). Due to participant absence and the exclusion of two participants, however, we failed to reach the sample size aimed for which reduces the external validity of our results. Furthermore, our study can lack external validity in the sense that we hade a sample of high school students. It can thus be questioned how well the sample of participants can replicate the society in general, or if the findings will only be accurate for the selected sample. Our reasoning is however that young people are less affected by structural normative ways of seeing things, and that if we were to see a structural discrimination towards women in this sample, the structural discrimination would only be higher among other groups of the society.

### 3.6.3 Construct validity

Construct validity refers to "the extent to which an operationalization measures the concept which it purports to measure" (Zaltman et al., 1973: 44). To gain construct validity, this study uses existing studies and theories to operationalize structural discrimination toward women based on epistemic reliability of individuals. Epistemic reliability, in turn, is measured using recall valence, according to existing theories (see section 2.5). Furthermore, as our goal is to study structural discrimination, we reach high construct validity by using the SIB-paradigm. The reason behind the high validity is that the paradigm is constructed in such a way that the participants should not be able to understand that the purpose of the experiment is to study discrimination. Thus, the participants cannot chose to act in a discriminative way or not (as could have been done in a more purpose-obvious study), since they don't understand that this is what the experiment is actually testing. This was confirmed by the debriefing questions, where there were no indications of the participants neither understanding the true purpose of the study nor the link between the first and the second part of the experiment. In addition to this, even if the participants would understand the purpose of the experiment, they will have a hard time to choose to act in a certain way (discriminative or not) since looking at the participants' memories tests the structural discrimination. This adds to even higher construct validity.

### 3.6.4 Reliability

Reliability refers to the stability of the measure, i.e. the extent to which the results can be achieved if the study was to be repeated (Ghauri \& Gronhaug, 2010). To insure this the experiment procedures are standardized as far as possible, as we had a script to enable the possibility of repeating the experiment (Merriam, 1994). Insuring the replicability of the process was of particular
importance since we, for practical reasons, will be forced to conduct the experiment spread out on three different occasions. Despite our efforts to conduct the experiment exactly the same on the different occasions because of subtle differences in uncontrollable circumstances (time of the day/week, weather etc.), the reliability can be somewhat lacking.

### 3.7 Ethics towards participants

We have taken several steps to maintain ethical correctness in our treatment of the experiment participants. First, we clearly explained to the participants that the study is anonymous and that we would not in any way store any personal information to be used outside of the experiment. Second, we explained to them that even though they were a part of this experiment as a part of a class in social sciences, the experiment participation was highly voluntary, and that they by no means have to participate if they did not want to. Thus, all participated freely and by their own will. Third, as we in this study used an experiment where we mislead the participants to believe that the purpose of the study was something that it, in fact, was not, we will have a feedback session with each class where we will explain the true purpose and findings of the study.

## 4. RESULTS

This chapter reveals the results from the conducted experiment and describes the regressions run on the collected data.

### 4.1 Audience-tuning in messages

Our results show that the majority of the participants have tuned to their recipient's positive attitude (64 percent of the participants wrote positive messages, see Figure 1) in accordance with audience-tuning (Higgins, 1992), i.e. that what the sender is writing in their messages will be in accordance with the recipient's attitude towards the communicated topic. This suggests that we fail to reject H 1 and that the message valence is positive when the recipient has a positive attitude toward the public world topic.

Figure 1 - Number of participants that wrote positive, neutral and negative messages valances


Mean: 1.12, St. dev.: 2.03

### 4.2 The SIB-effect

Examining our OLS regression model,

$$
\text { Recall }=\beta_{0}+\beta_{1} \text { Message }+\beta_{2} \text { Exposure }+\beta_{3}(\text { Exposure } * \text { Message })+u
$$

we found that Message did have a positive impact on Recall, with a p<0.01 significance (table 1). That is, having Recall as a dependent variable for the entire sample, recall valence is affected by message valence, indicating that the attitude in the message has a positive effect on the attitude found in recall. This, along with finding that the majority of the participants have tuned to their recipient's positive attitude (see section 4.1), indicates the existence of the Saying-is-believing (SIB) effect (Higgins \& Rholes, 1978), i.e. that what the senders are writing (saying) in their messages will be in accordance with the recipients' attitudes towards the communicated topic, and that this is what the senders will write (believe) when asked to recall the original text.

Table 1 - Message's, Exposure's and the interaction variable Expo_message's effect on Recall

|  | Model |
| :--- | :--- |
| VARIABLES | Recall |
|  |  |
| Message | $0.392^{* * *}$ |
|  | $(0.122)$ |
| Exposure | 0.597 |
|  | $(0.411)$ |
| Expo_message | 0.0597 |
|  | $(0.181)$ |
| Constant | $0.570^{*}$ |
|  | $(0.309)$ |
|  |  |
| Observations | 68 |
| R-squared | 0.262 |
| Standard errors in parentheses |  |
| $p<0.01,{ }^{* *} \mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$ |  |

The model in Table 1 has a R-square ${ }^{2}$ of 0.26 . This means that our model explains 26 percent of the variation in Recall. By taking variables out of the residual, using them as independent variables in the regression model we can increase the size of the R -square, and make our model more

[^1]reliable ${ }^{3}$. Adding a set of variables to our original regression (see explanations to the variables in appendix H) increases R-square to 29 \% (see Table 2). Furthermore the R-square also increases for the recipient gender separated regressions (see Regression 2 and 3, Table 2); for male recipients from $55 \%$ to $62 \%$ and for female recipients, from $12 \%$ to $21 \%$.

In the first regression of Table 2, we found proof for the SIB-effect, in the sense that recall valence is affected by message valence on a $(\mathrm{p}<0.05$ ) statistically significant level. However, when studying the statistically significant effect of message valence on recall valence separately for male and female recipients (Regression 2 \& 3), we found that this positive effect is statistically significant only in the second regression, that is, when participants communicate with male recipients (Message=0.65, $p<0.01$ ). The 3rd regression reveals that message valence has no statistically significant effect on recall valence when participants communicate with female recipients. This indicates that the effect that Message has on Recall in regression 1, is only due to the strong significance that Message has on Recall in regression 2. Furthermore, the R-square increases from 0.29 in regression 1 to 0.62 in regression 2, adding to the finding that the significance in message valence found in regression 1 is due to the very strong significance found in regression 2 . We can therefore conclude that it is the strong significance in regression 2 that accounts for the significance in regression 1 , in terms of the effects of message valence on recall valence. This finding indicates that male recipients have the ability to impose the audience-tuning effect on the memories of their audience, and that we cannot find any proof for this being true for women. We therefore fail to reject H 2 , meaning that when the recipient has a positive attitude toward the topic and the topic is public world related, the recall valence is affected by the message valence for male recipients but not for female recipients.

[^2]
## Table 2 - Effects of message valence on recall valence

|  | Regression 1 <br> Entire Population | Regression 2 <br> Male Recipients | Regression 3 <br> Female Recipients |
| :--- | :---: | :---: | :---: |
| VARIABLES | Recall | Recall | Recall |
| Message | $0.350^{* *}$ | $0.648^{* * *}$ | 0.171 |
| Liking_topic | $(0.135)$ | $(0.156)$ | $(0.222)$ |
| Liking_pic | 0.995 | 0.106 | 1.646 |
| Liking_recip | $(0.853)$ | $(1.234)$ | $(1.295)$ |
| Liking_topic_recip | 0.0704 | 0.102 | 0.00318 |
|  | $(0.194)$ | $(0.222)$ | $(0.348)$ |
| Exposure | 0.722 | -0.141 | 1.158 |
|  | $(0.815)$ | $(1.296)$ | $(1.228)$ |
| Gender | -0.156 | 0.00261 | -0.258 |
|  | $(0.173)$ | $(0.255)$ | $(0.260)$ |
| Expo_message | 0.611 | 0.620 | 0.617 |
| Recip_gender | $(0.478)$ | $(0.507)$ | $(0.942)$ |
|  | -0.127 | -0.683 | 0.284 |
| Constant | $(0.431)$ | $(0.411)$ | $(0.944)$ |
|  | 0.0602 | -0.0769 | 0.0974 |
| Observations | $(0.196)$ | $(0.202)$ | $(0.417)$ |
| R-squared | -0.125 |  |  |
|  | $(0.377)$ | 0.326 | -6.776 |
|  | -4.149 | $(4.172)$ | $(6.666)$ |

### 4.3 Exposure's effect on Recall valence

Table 2 further shows that Exposure has no statistically significant impact on Recall, neither in itself nor through Message (i.e. Expo_message). We therefore reject H3, meaning that exposing senders to non-objectifying portrayals of women do not cause their message valence to affect their recall valence, when the recipient is a woman.

However, Table 3 suggests that the interaction effect of exposure and message valance (Expo_message) on Recall, when communicating with female recipients, has a relatively strong significance ( $\mathrm{p}<0.05$ ) for female but not male senders. This finding indicates that Message has no effect on Recall in itself, hence confirming the missing SIB-effect when participants communicate with female recipients, but when the sender has been exposed to non-objectified images of women, we see a significant effect of Message on Recall. The high R-square value (0.804) shows
that the independent variables give large explanation to the recall valence, suggesting that our observations are well replicated by the model. Due to the sample size ( $\mathrm{N}=15$ ), the Beta-value of the statistically significant independent variable, Expo_message, found in the Female to Female regression should be regarded as an indication of a positive correlation rather than a predictor of the actual effect of Expo_message on Recall (Wooldridge. 2009). Therefore, the positive Beta-value of Expo_message indicates that when female senders have been exposed to non-objectified portrayals of women, a SIB-effect occurs in the sense that these senders perceive women as more competent in matters of the public world than those who are not exposed.

Table 3 - Exposure's effect on recall valence when communicating with female recipients

|  |  |  |
| :--- | :--- | :--- |
|  | Female to Female | Male to Female |
| VARIABLES | Recall | Recall |
|  |  |  |
| Message | -0.864 | 0.408 |
|  | $(0.467)$ | $(0.284)$ |
| Exposure | -1.586 | 1.967 |
|  | $(1.884)$ | $(1.973)$ |
| Expo_message | $1.490^{* *}$ | -1.621 |
|  | $(0.514)$ | $(1.058)$ |
| Liking_topic | 2.171 | 0.154 |
|  | $(1.695)$ | $(3.789)$ |
| Liking_recip | 1.099 | -0.599 |
|  | $(1.309)$ | $(4.287)$ |
| Liking_pic | -0.0438 | $(0.485)$ |
|  | $(0.390)$ | 0.1000 |
| Liking_topic_recip | -0.275 | $(0.910)$ |
|  | $(0.280)$ | 0.134 |
| Constant | -5.141 | $(17.90)$ |
|  | $(9.344)$ | 19 |
| Observations |  |  |
| R-squared | 15 |  |
|  | 0.804 |  |
|  |  | Standard |
| **rrors in parentheses | $\mathrm{p}<0.01,{ }^{* *} \mathrm{p}<0.05,{ }^{*} \mathrm{p}<0.1$ |  |

## 5. ANALYSIS AND DISCUSSION

In this chapter we will analyse our findings in light of our research question, propose questions for further research and discuss limitations.

### 5.1 Confirming the structural discrimination against women

Our results show, in accordance with previous studies and theories discussed in the theory chapter (chapter 2), that while there is a clear SIB-effect when people communicate with men in matters of public world there is no such effect when people communicate with women (see section 4.2). Thus, our finding supports previous research (Hedberg, 2012), saying that the gender-based difference we see in the SIB-effect is due to the fact that women are perceived as less competent than men in some areas. Our result in section 4.2 indicates that because people perceive women as lacking the epistemic reliability that men possess, in a communication situation regarding matters of the public world, their recalled attitude toward the communicated topic is positively influenced by men's attitude toward that topic, but not by women's. Hence, our finding confirms the competence inadequacy perception of women that is the basis of the structural discrimination toward women discussed throughout this thesis.

### 5.2 Exposure to non-objectified images of women leads to non-discrimination

 Previous findings have shown that the competence inadequacy perception of women, at least to some extent, is caused by the objectifying portrayals of women seen throughout our society (see section 2.1). In this thesis we have asked ourselves whether it would be possible to counteract this competence inadequacy perception, by instead exposing people to non-objectified women. Although previous studies have been able to show the direct opposite - that exposure to objectified women causes people to perceive women as less competent than men - no studies have, as far as we know, tested whether exposure to non-objectified women could change this perception of women. The third finding of this thesis (see 4.3), indicates that exposure to nonobjectified women, in fact, can have a counteracting effect on the existing competence inadequacy perception of women. That is, exposure to non-objectified images makes the sender recall the original text in accordance with their message, which has been affected by the female recipient's attitude towards the topic, hence causing a SIB-effect where there was none before. In other words, when exposing people to non-objectifying portrayals of women, they perceive women as epistemically reliable. It should, however, be noted that exposure only had this effect on femalesenders. Thus, our findings partly goes against our third hypothesis in this sense that we were only able to show that exposure had an effect on female senders, and not for male senders.

A possible explanation for these findings could be that women in general more easily can relate to other women (e.g., Taylor et al., 2000) and that they therefore are more likely to embrace the exposure. Yet another plausible explanation is that the form of exposure used in our experiment was not sufficiently powerful to change the male participants' perception of female recipients, from out-group to in-group members - someone they can relate to and share reality with. As out-group members to the male senders, the female recipients would hence be less trusted when it comes to valid judgments in regards to the communicated topic (e.g., Shah et al., 1998; Kruglanski et al., 2002). A more speculative explanation for this finding is that women do not have a strong competence inadequacy perception as men to begin with, and that this makes it easier for women to be affected by the exposure to non-objectified, competent and active, images of women. Again, merely speculating, it might also be the case that men do not concern themselves with gender equality issues to the same extent that women do, as women perceive themselves as more directly afflicted with its negative consequences than do men in public world matters. Thus, because women are more concerned with the issue of gender discrimination, they are also more aware of what it entails and therefore become more receptive to the exposure. In fact, it could be that when exposure only needs to function, for women, as a reminder of female competence, it needs to change the perception for men, which may require stronger exposure.

The fact that exposure to non-objectified women pushes, at least, women towards perceiving women as more epistemically reliable, could potentially have interesting implications for the society as whole. Our finding indicates that by simply exposing women to non-objectifying portrayals for short periods of time, we can fundamentally change their general perception of women. Our results indicate that marketers, by exposing their targets to non-objectifying portrayals of women, may have an opportunity to change how many of us perceive women. Portraying women in a nonobjectifying rather than an objectifying manner contributes to this change in two ways. Not only does it reduce the actual number of objectifying exposures that leads to structural discrimination, but it also counteracts status quo by changing the perception itself, which improves women's abilities to affect people in the public world. By embracing this fact, marketers can actively take part in counteracting the structural discrimination against women.

### 5.3 Suggested further research

It would be interesting to study the durableness of the effect of exposure on perception and whether people eventually will lapse back to their previous state of mind, and if so, what it would take to create a more permanent change of perception. No doubt it would also be noteworthy to study the properties of long-term exposure and whether it would have the same, or even perhaps a stronger, more long-lasting, effect on perception. Our results indicate that exposure has an effect on female but not male participants, and despite a clear positive beta-value for the significant variable and a larger R-square, studying a larger sample would further consolidate this finding and perhaps even result in a more accurate measure for the discovered joint effect of exposure and message valence on recall valence. Furthermore we believe that exposing participants to varying degrees of exposure, in terms of, for instance, content and repetition, potentially could give a greater insight into the effects of exposure on recall valence.

In a more general sense, throughout this thesis we have discussed how sometimes groups of people, specifically women, are stereotypically perceived as epistemically unreliable in certain situations, namely in matters of public world, and subject to discrimination due to this stereotypical public perception of them. Our results indicate that, in the case of women, short-term visual exposures to the opposite of that stereotypical perception can change this perception, make the group members epistemically reliable and counteract the basis for discrimination. An interesting question, thus, becomes whether we in the same manner can change the perception of other groups that are stereotypically perceived as epistemologically unreliable.

### 5.4 Limitations

### 5.4.1 Research limitations

This thesis examines how exposure to non-objectifying images of women affects the competance inadequacy perception that leads to structural gender discrimination. This is based on the assumption, which supported by previous research, points out objectification of women as causing this competence perception. Due to time and resource limitations it was necessary to exclude objectification as a condition from our research that inhibits us from studying the effects of objectification on competence perception. Thus, although we can see an indication of exposure's effect on recall, it is not clear whether this occurs as a neutralization of the objectification effect or as something else.

Furthermore, objectification is a well-debated phenomenon and there are therefore different interpretations of what it actually means to be objectified. This thesis operationalizes nonobjectification based on Nussbaum's (1997) definition of objectification. The results of this study are thus limited to this definition of [non] objectification, and one should question whether it should be generalized for all definitions of objectification. Moreover this thesis uses non-objectification as an anti-thesis to Nussbaum's definition of objectification, in the sense that an image that excludes the determinants of objectification is considered to be non-objectifying. It could be questioned whether this an accurate way of defining non-objectification or if the concept, while excluding the features of objectification, in fact needs to include specific "non-objectifying" features neglected in the definition used in this study.

### 5.4.2 Method limitations

We used an experiment to answer the research question of this thesis, as we believe that this method could best capture the structural discrimination that we wanted to examine (see section 3.6.3). However, we could also have used other methods to test whether exposure to nonobjectifying images of women can counteract the structural gender discrimination. One of these alternative methods would be to use a more qualitative method, e.g. deep interviews. An interviewbased approach for collecting data would have made it possible to ask the participants to describe in what way they are affected by the exposure, and how this further affects their attitude towards females. This could have concluded in deeper understanding of what it is, psychologically, that makes people respond to exposure in a certain way, and how marketers could use these psychological factors to change the way people perceive women.

Additionally, we could have used a combination of an experiment and interviews to gather data to answer our research question. Adding an interview-part to our study could have made it possible to understand the results, as discussed above, on a deeper level.

### 5.4.3 Data limitations

Unfortunately, we were not able to reach the goal of having a sample size of 30 in each experiment/control group. The total sample size of our experiment was $\mathrm{N}=67$, and distributing these participants over four different groups, we ended up with the following number of participants in each group:

1. Experiment group 1: Non-objectified women exposure, female receiver, $\mathrm{n}=18$.
2. Experiment group 2: Non-objectified women exposure, male receiver, $\mathrm{n}=18$.
3. Control group 1: Neutral exposure, female receiver, $\mathrm{n}=18$.
4. Control group 2: Neutral exposure, male receiver, $\mathrm{n}=17$.

This means that our sample size might in some cases be too small to actually say anything about the strength in the beta values that we have found to be significant. This means that our findings should, when the result are built on a sample size of less than 30, be seen as indications rather than absolute true values (Wooldridge, 2009).

Furthermore, the gender distribution was 43 percent females, and not 50 as aimed for. Hence, our results do not represent a society with $50 \%$ female and male, and thus our generalized implications can be questioned as it could that our results are biased in a way that are more accurate in groups with larger fragments of men than women.

The participant sample studied is highly homogenous in terms of demographics (Stockholm-based, high-school students). Because of this it could be questioned whether the results can be generalized on a societal level. It would perhaps have been more suitable to use a more heterogeneous sample in order to obtain more generally applicable results.

### 5.5 Conclusion

The aim with this thesis was to investigate whether exposure to non-objectified portrayals of women can counteract the competence inadequacy perception of women that leads to genderbased, structural discrimination. Creating hypotheses to test this, we were able to conclude that:

1. The message valance in the messages written will be positive when the recipient has a positive attitude toward the public world topic.
2. When the recipient has a positive attitude toward the topic and the topic is public world related, the recall valence is affected by the message valence for male recipients but not for female recipients.
3. Exposing female senders to non-objectifying portrayals of women causes their message valence to affect their recall valence even when the recipient is a woman. This is not true for male senders.

We have thus been able to show that exposure to non-objectifying images, when women communicate with each other, decreases the discrimination towards women in the sense that these women are no longer perceived as less epistemic reliable than their male counterparts. However, due to the relatively small sample size of participants in the experiment, the results found should be seen as indications of what exposure to non-objectified images of women can do in terms of changing the general perception of women. Thus, further research in this field is necessary.

## 6. REFERENCES

Bergman, E. (n.d.) diskriminering. [Online] Nationalencyklopedin. Available from: http://www.ne.se/kort/diskriminering [Accessed: 16 April 2013].

Brewer, M. (2000) Research Design and Issues of Validity. In: Reis, H. and Judd, C. (eds.) Handbook of Research Methods in Social and Personality Psychology. Cambridge, Cambridge University Press.

Broverman, I.K. (1972) Sex-Role Stereotypes: A Current Appraisal. Journal of social issues, 28(2), 59-78.

Calogero, R. M. (2004) A test of objectification theory: The effect of the male gaze on appearance concerns in college. Psychology of Women Quarterly, 28, 16-21.

Carli, L. L. (2001) Gender and social influence. Journal of Social Issues, (57)4, 725-741.

Czinkota, M. R., Knight, G. A., Liesch, P. W., Steen, J. (2005) Positioning terrorism in management and marketing: Research propositions. Journal of International Management, 11(4), 581-604.

Cortese, A.J. (1999) Provocateur: Images of Women and Minorities in Advertising, Rowman and Littlefield, Lanham, MD.

Devillard S, Graven W, Lawson E, Paradise R and Sancier-Sultan S. (2012) Women Matter: making the breakthrough. [Online] McKinsey \& Company. Available from:
www.mckinsey.com/client_service/organization/ latest_thinking/women_matter [Accessed: 11 April 2013].

Dworkin, A. (1989) Pornography: Men Possessing Women. NewYork, EP Dutton.

Eagly, A. H. and Karau, S. J. (2002) Role Congruity Theory of Prejudice Toward Female Leaders. Psychological Review, 109(3), 573-598.

Echterhoff, G., Higgins, T. E. and Groll, S. (2005) Audience-tuning effects on memory: The role of shared reality. Journal of Personality and Social Psychology, 89(3), 257-276.

Echterhoff, G., Higgins, T. E. and Levine, J. M. (2009) Shared Reality: Experiencing Commonality With Others' Inner States About the World. Perspectives on Psychological Science, 4(5), 496-521.

Fredrickson, B. L. and Roberts, T.A. (1997) Objectification theory; Toward understanding women's lived experienced and mental health risks. Psychology of women quarterly, (21), 173-206.

Fredrickson, B. L., Noll, S. M., Roberts, T.A., Quinn, D. M. and Twege, J. M. (1998) That swimsuit becomes you: Sex differences in self-objectification, restrained eating, and math performance. Journal of Personality and Social Psychology, 75(1), 269-284.

Gapinski, K. D., Brownell, K. D and LaFrance, M. (2003) Body Objectification and "Fat Talk": Effects on Emotion, Motivation, and Cognitive Performance. Sex Roles, 48(2003), 377-388.

Garcia-Retamero, R. and López-Zafra, E. (2006) Prejudice against Women in Male-congenial Environments: Perceptions of Gender Role Congruity in Leadership. Sex Roles, 55 (1/2), 51-61.

Ghauri, P. and Gronhaug, K. (2010) Research Methods in Business Studies, $4^{\text {th }}$ edition. Harlow, Pearson Education Limited.

Glick, P., Larsen, S., Johnson, C. and Branstiter, H. (2005) Evaluations of sexy women in low and high status jobs. Psychology of Women Quarterly, 29, 389-395.

Goldman, R. and Papson, S. (1996) Sign Wars: The Cluttered Landscape of Advertising, Guilford, New York, NY.

Gordon, L. (1995) Bad Faith and Anti-black Racism, Humanities Press, Atlantic Highlands, NJ.
Gruber, K. J. and Gaebelein, J. (1979) Sex differences in listening comprehension. Sex Roles, (5)3, 299-310.

Hardin, C. D. and Higgins, E. T. (1996) Shared reality: How social verification makes the subjective objective, in E. T. Higgins \& R. M. Sorrentino (Eds.), Handbook of motivation and cognition: The interpersonal context (Vol. 3). New York, Guilford

Hausmann, L. R. M, Levine, J. M., Higgins, E. T. (2008) Communication and Group Perception: Extending the 'Saying is Believing' Effect. Group Processes \& Intergroup Relations, 11(4), 539-554.

Hedberg. P. H. (2012) Negative Discrimination by Memory Trace: Biased Recall and Liking of Conversation Topics after Communication with Females v Males. In: Hedberg, P.H (ed.), Interpersonal Society: Essays on shared beliefs, trust, mnemonic oppression, distributive fairness, and value creation. Stockholm, Stockholm School of Economics.

Hedberg, P. H. and Higgins, E. T. (2013) Social Construction Beyond Collaboration: How Social Verification Impacts Memory and Trusting Coordination. [Preprint]

Heflick N.A, and Goldenberg, J. L. (2009) Objectifying Sarah Palin: Evidence that objectification causes women to be perceived as less competent and less fully human. Journal of Experimental Social Psychology, 45(2009), 598-601.

Heflick, N. A., Goldenberg, J. L., Cooper, D. P. and Puvia, E. (2011) From women to objects: Appearance focus, target gender, and perceptions of warmth, morality and competence. Journal of Experimental Social Psychology, 47(2011), 572-581.

Higgins, E. T. (1992) Achieving "shared reality" in the communication game: A social action that creates meaning. Journal of Language and Social Psychology, 11, 107-131.

Higgins, E. T. (1999) "Saying is believing" effects: When sharing reality about something biases knowledge and evaluations. In L. L. Thompson, J. M. Levine \& D. M. Messick (eds.), Shared cognition in organizations: The management of knowledge. Manwah, NJ, Lawrence Erlbaum.

Higgins, E. T. and McCann, C. D. (1984) Social encoding and subsequent attitudes, impressions, and memory: ‘Context-driven’ and motivational aspects of processing. Journal of Personality and Social Psychology, 47, 26-39.

Higgins, E. T. and Rholes, W. S. (1978) "Saying is believing": Effects of message modification on memory and liking for the person described. Journal of Experimental Social Psychology, 14, 363378.

Kopietz, R., Hellmann, J. H., Higgins, E.T. and Echterhoff, G. (2010) Shared-Reality effect on Memory: Communicating to fulfil epistemic needs. Soc Cognition, 28(3), 353-378.

Kruglanski, A. W., Shah, J. Y., Pierro, A. and Mannetti, L. (2002) When similarity breeds content: Need for closure and the allure of homogeneous and self-resembling groups. Journal of Personality and Social Psychology, 83, 648-662.

Lippke, R. (1995) Radical Business Ethics, Lanham, MD, Rowman and Littlefield.

Loughnan, S., Haslam, N., Murnane, T., Vaes, J., Reynolds, C. and Suitner, C. (2010) Objectification leads to depersonalization: The denial of mind and moral concern to objectified others. European Journal of Social Psychology, 40(2010), 709-717.

MacKinnon C. A., (1988) Feminism unmodified: discourses on life and law, Cambridge, MA, Harvard University Press.

McKinley, N., \& Hyde, J., 1 (996) The objectified body consciousness scale: Development and validation. Psychology of Women Quarterly, 20, 181-215.

Merriam, B. S. (1994) Fallstudien om forskningsmetod, Lund, Studentlitteratur.

Noll, S. M., and Fredrickson, B. L. (1998) A meditational model linking self-objectification, body shame, and disordered eating. Psychology of Women Quarterly, 22, 623-636.

Nussbaum, M. C. (1995) Objectification. Philosophy and Public Affairs, (24)4, 249-291.

Olsson, H. \& Sörensen, S. (2011) Kvalitativa och Kvantitativa perspektiv, Stockholm, Liber.

Papadaki, E. L. (2012) Feminist Perspectives on Objectification. [Online] The Stanford Encyclopaedia of Philosophy (Zalta, E. N. (ed.), Available from:
http://plato.stanford.edu/archives/win2012/entries/feminism-objectification/ [Accessed: 20 April 2013].

Quinn, D. M., Kallen, R. W., Twenge, J. M. and Fredrickson, B.L. (2006), The Disruptive Effect of Self-Objectification on Performance. Psychology of Women Quarterly, 30(2006), 50-64.

Ritson, M. and Elliot, R. (1999) The social uses of advertising: an ethnographic study of adolescent advertising audiences. Journal of Consumer Research, Vol. 26, 260-77.

Schroeder, J.E. and Borgerson, J.L. (1998) Marketing images of gender: a visual analysis. Consumption, Markets, and Culture, Vol. 2, 161-201.

Shah, J. Y., Kruglanski, A. W. and Thompson, E. P. (1998) Membershi has its (epistemic) rewards: Need for closure effects on in-group bias. Journal of Personality and Social Psychology, 75, 383393.

Stern, B.B. (1993) Feminist literary criticism and the deconstruction of ads: a postmodern view of advertising and consumer research. Journal of Consumer Research, Vol. 19, 556-66.

Taylor, S.E., Cousino Klein, L., Lewis, B.P., Grunewald, T.L., Gurung, R.A.R., \& Updegraff, J.A. (2000) Biobehavioral responses to stress in females: tend-and-befriend, not fight-or-flight. Psychological Review, 107, 411-429.

Todorov, A. (2002) Communication effects on memory and judgment. European Journal of Social Psychology, 32, 531-546.

Tönnies, F. (1912) Gemeinschaft und Gesellschaft: Grundbegriffe der reinen Soziologie, 2nd edition, Berlin, Curtius.

Wooldridge, J. M. (2009) Introductory econometrics: A modern approach, 4th edition, Florence, KY, Cengage Learning.

Yahklef, A. (1999) Mapping the consumer subject in advertising. Consumption Markets and Culture, Vol. 3, 129-44.

Zaltman, G., Pinson, C. R. A., Angelmar, R. (1973) Metatheory and Consumer Research, Holt, Reinhart and Winston.

## Image References

Page 47:

Image A:
Unknown. (n.d) Untitled [Online] Available from: https://encrypted-
tbn3.gstatic.com/images?q=tbn:ANd9GcRPdd5xaZzueBHAsN7T5hmBBO7H9AogkJjcOaqiK6GE TqEz1nxRhA [Accessed: 22 March 2013]

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Image C:
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http://www.puterea.ro/img/w560/http://www.puterea.ro/images/uploads/stiri/65740/helle-thorning-schmidt_foto_wowelle.com.jpg [Accessed: 22 March 2013]

Page 48:

Image A:
Simonsson, A. (n.d) Untitled [Online] Available from: http://chef.se/chef-har-testat-stina-honkamaa/ [Accessed: 22 March 2013]

Image B:
Persson, B-Å. (n.d) Untitled, [Online] Available from:
http://www.nsd.se/inc/imagehandler.ashx?id=3479864\&height=312\&width=468\&quality=high
[Accessed: 22 March 2013]

Image C:
Unknown. (n.d) Untitled [Online] Available from:
http://btnaringsliv.files.wordpress.com/2013/01/stina.jpg [Accessed: 22 March 2013)

Page 49:

Image A:
Rupp, N. (2012) Untitled [Online] Available from:
http://www.zimbio.com/pictures/OuTQcskhuYG/DLD+Conference+2012+Day+2/GykTdfkLw_R [Accessed: 22 March 2013]

Image B:
Schultz, H-R. (n.d) Untitled [Online] Available from:
http://www.welt.de/wirtschaft/article4076766/Siemens-Vorstand-Kux-krempelt-den-Einkauf-
um.html [Accessed: 22 March 2013]

Image C:
Unknown. (n.d) Untitled [Online] Available from:
http://www.siemens.com/press/de/pressebilder/?press=/de/pressebilder/2009/corporate_commu nication/soaxx20090917-03.htm [Accessed: 22 March 2013]

Page 50:

Image A:
Acker, D. (n.d) Untitled [Online] Available from:
http://fortuneaskannie.files.wordpress.com/2012/02/ursula_burns.jpg [Accessed: 22 March 2013]

Image B:
Unknown. (n.d) Untitled [Online] Available from:
http://sf.outputlinks.com/Libraries/Image\ Uploads/Ursula_Burns_2.sflb [Accessed: 22 March 2013]

Image C:
Unknown. (n.d) Untitled [Online] Available from: https://encryptedtbn2.gstatic.com/images?q=tbn:ANd9GcRn_fq3tT_jrfn094S5gGt00t6D2RrWEQWJcZRDYjLiWTdi QeQLNQ [Accessed: 22 March 2013]

Page 51:

Image A:
Schultz, D. [n.d] Untitled [Online] Available from: http://www.nbcbayarea.com/blogs/press-here/Sheryl-Sandberg-Facebooks-Adult-121762494.html [Accessed: 22 March 2013]

Image B:
Segar, M. [n.d] Untlitled [Online] Available from:
http://www.theatlantic.com/sexes/archive/2013/03/sheryl-sandberg-gives-american-women-a-performance-review/273865/ [Accessed: 22 March 2013]

Image C:
Unknown. (n.d) Untitled [Online] Available from: http://cdn.thenextweb.com/wp-
content/blogs.dir/1/files/2012/02/sheryl-sandberg1-657x245.jpg [Accessed: 22 March 2013]

Page 53:
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Abhiiit, T. (2009) Red Apple. [Online] Available from:
http://commons.wikimedia.org/wiki/File:Red_Apple.jpg [Accessed: 23rd March 2013].
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Roberta, F. (2007) Apple Stark. [Online] Available from:
http://commons.wikimedia.org/wiki/File:Apple_stark_s.jpg [Accessed: 23rd March 2013].
Image C:
Fir0002/Flagstaffotos (2005) Golden delecious apple fruit. [Online] Available from:
http://commons.wikimedia.org/wiki/File:Golden_delicious_apple.jpg [Accessed: 23rd March 2013].
Page 54:
Image A:
Fir0002/Flagstaffoto (2009) Orange and its cross section isolated on a white background. [Online] Available from: http://commons.wikimedia.org/wiki/File:Orange_and_cross_section.jpg [Accessed: 23rd March 2013].

Image B:
Ankara (2011) Citrus sinensis. [Online] Available from:
http://commons.wikimedia.org/wiki/File:Citrus_sinensis_close-up.jpg [Accessed: 23rd March 2013].

Image C:
Unknown (2005) Ambersweet oranges. [Online] Available from
http://commons.wikimedia.org/wiki/File:Ambersweet_oranges.jpg [Accessed: 23rd March 2013].
Page 55:
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Hopson, S. (2006) Bananas. [Online] Available from
http://commons.wikimedia.org/wiki/File:Bananas.jpg [Accessed: 23rd March 2013].
Image C:
Fir0002/Flagstaffotos (2009) Banana and cross section. [Online] Available from
http://commons.wikimedia.org/wiki/File:Banana_and_cross_section.jpg [Accessed: 23rd March 2013].

Page 56:
Image A:
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Unknown (2005) Blake's Pride pears. [Online] Available from
http://commons.wikimedia.org/wiki/File:Blake\'s_Pride_pears.jpg [Accessed: 23rd March 2013].

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http://commons.wikimedia.org/wiki/File:Alexander_Lucas_10.10.10.jpg [Accessed: 23rd March 2013].

Page 57:
Image A:
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http://commons.wikimedia.org/wiki/File:Wine_grapes03.jpg [Accessed: 23rd March 2013].
Image B:
Unknown (2006) Concord Grapes. [Online] Available from
http://en.wikipedia.org/wiki/File:ConcordGrapes.jpg [Accessed: 23rd March 2013].
Image C:
Unknown (2006) More Grapes. [Online] Available from
http://commons.wikimedia.org/wiki/File:More_grapes.jpg [Accessed: 23rd March 2013].

## APPENDIX A - Experiment part 1, Exposure to (non-)objectifying images of women

A I - Image booklet handed out to experiment group

Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

BILD [English: IMAGE] A


BILD B


## BILD C



Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

## BILD A



BILD B


BILD C


Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

BILD A


BILD B


BILD C


Var vänlig rangordna bild A, B och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

## BILD A



## BILD B



## BILD C



Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

BILD A


## BILD B



BILD C


A II - Image booklet handed out to the control group
(Empty first page)

Var vänlig rangordna bild A, B och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

BILD A


BILD B


## BILD C



Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

## BILD A



BILD B


## BILD C



Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

## BILD A



BILD B


## BILD C



Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

## BILD A



## BILD B



BILD C


Var vänlig rangordna bild $\mathrm{A}, \mathrm{B}$ och C i utdelat formulär genom att sätta en 1:a på den bild Du tycker bäst om, en 2:a på den bild Du tycker näst bäst om, och en 3:a på den bild Du tycker sämst om.

Translation from Swedish to English: Please rank image A, B and C, in handed out formulary by putting number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the worst.

## BILD A



BILD B


## BILD C



## Appendix B - Formulary for Experiment part

|  | Bild A | Bild B | Bild C |
| :---: | :---: | :---: | :---: |
| Sida 1 |  |  |  |
| Sida 2 |  |  |  |
| Sida 3 |  |  |  |
| Sida 4 |  |  |  |
| Sida 5 |  |  |  |

Translation from Swedish to English:

Bild = Image
Sida $=$ Page

## Appendix C - Information regarding public topic and recipient

I Ditt fall kommer Du nu att få skicka ett meddelande om [Tillverkningsföretaget MNN]. Mottagaren i Ditt fall är:

En [kille/tjej] som vi kan kalla för [Peter/Emma]. (Det kan vara intressant för dig att veta att [Peter/Emma] verkar vara [positivt] inställd till företaget).

Translation from Swedish to English:
[Handwritten]

In Your case, You will be sending a message about [the industrial company MNN].

Your fellow student is a [male/female] who we can call [Peter/Emma]. (It might be interesting for you to know that [Peter/Emma] seems to have a [positive] attitude towards the company).

## Appendix D - Public topic text

## Tillverkningsföretaget MNN

MNN är en verkstadskoncern inom kraft- och automationsteknik. Företaget verkar i omkring hundra länder och har ungefär hundra tusen medarbetare. Huvudkontoret ligger i Europa och företaget finns framför allt i starkt industriellt präglade städer.
MNN levererar lösningar som förbättrar prestanda och minimerar miljöpåverkan för energiföretag och industrier. Hållbarhet är integrerad i verksamheten. Företaget säger sig eftersträva balans mellan ekonomisk tillväxt, miljöansvar och samhällsutveckling. MNN har även nio forskningscenter med sextusen forskare anställda och cirka sjuttio universitetssamarbeten över hela världen. Många av företagets produkter har under den senaste tiden fått olika utmärkelser för att vara revolutionerande i sitt slag när det gäller nytänkande och kostnadseffektivisering.

MNN driver också ett populärt yrkesgymnasium med jobbgaranti för de elever som slutför sin utbildning. Lojalitet är viktigt för företaget och de anställda får skriva på en speciell klausul vilket innebär att de inte får rapportera till någon utanför företaget om information som kommer till anställdas kännedom i samband med arbete. De anställda måste dessutom informera ledningen om någon på företaget inte sköter sitt jobb.

MNN har fått kritik från facket då företaget börjat betygsätta sina anställda. Genom ett standardiserat formulär ska de anställda på företaget inte bara få sina prestationer utan även sina beteenden bedömda på en skala från ett till fem. Facket menar att det finns en risk att bedömningen av någons beteende blir mer godtycklig. Även många anställda är oroliga inför det nya betygssystemet. I övrigt visar personalundersökningar att majoriteten av de anställda är nöjda med sin arbetsplats och känner att de kan utvecklas inom företaget.

För några år sedan skakades företaget av en skandal. Företagets f d VD hade ett pensionsavtal som fick stark kritik för sin storlek. Under tiden som personen var VD för företaget ökade nettovinsten sextio gånger och försäljningen trettio gånger. MNNs styrelse hade givit VD:n ett pensionspaket som baserat på detta resultat gav VD:n en engångsersättning på drygt en miljard kronor vid pensioneringen. VD:n fick senare genom ett domstolsbeslut återbetala en del av denna bonus.

Translation from Swedish to English

## Manufacturing company MNN

MNN is an engineering company in automation and power technologies. The corporation operates in approximately one hundred countries, and has approximately one hundred thousand employees. The headquarters are in Europe, and the corporation is represented mainly in cities with a strong industrial orientation.

MNN delivers solutions that improve performance and minimize environmental damage for energy corporations and heavy industry. Sustainability is an integrated aspect of the opera- tions. The corporation claims to strive for a balance between economic growth, environmental responsibility, and societal development. MNN also has nine research centers with six thou- sand employed researchers and approximately 70 collaborations with universities around the world. Many of the products of the corporation have lately received various awards for being revolutionary in its kind regarding innovative thinking and cost efficiency.

MNN also runs a popular high school of vocational training which provides a job guarantee for students who complete their education. Loyalty is important to the corporation, and em- ployees have to sign a special clause, entailing that they must not report to anyone outside the corporation about information they learn about as part of their work. The employees must also inform management if someone in the corporation does not carry out their work as they are supposed to.

MNN has received criticism from the unions, as the corporation has begun grading their employees. By means of a standardized questionnaire, employees are evaluated on a scale from 1 to 5 not only in terms of performance but also in terms of their behaviors. The union believes that there is a risk that the evaluation of some people will be more arbitrary. Many employees, too, are worried about the new grading system. Otherwise employee surveys show that the majority of the employees are satisfied with their workplace and feel that they can develop within the corporation.

A few years ago, a scandal reverberated through the corporation. The ex-CEO of the corpora- tion had received a retirement contract that was heavily criticized for its size. During the time when the person was the CEO for the corporation, the net profit increased sixty times and the sales increased thirty times. The board of MNN had given the CEO a retirement package which, based on this result, yielded the CEO a one-time compensation upon retirement of more than one billion SEK. By means of a court decision, the CEO later had to repay part of this bonus.

## Appendix E-Filler task

Rita av dessa figurer nedan:
(English: Copy the figures below:)

2.

3.

4.

5.



## Appendix F - Debriefing questions and Demographics

## Frågor om experimenten

Nedan följer frågor rörande experimentet: Hur människor kommunicerar med och förstår varandra

Vad tycker du om företaget du skrev om?

| Gillar inte <br> alls |  |  |  | Gillar väldigt <br> mycket |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

På vilket sätt skulle du beskriva företaget?

| Mycket <br> negativt |  |  |  |  | Mycket <br> positivt |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 5 | 6 | 7 |

Vad tycker du om personen du skrev till (mottagaren)?

| Gillar inte <br> alls |  |  |  | Gillar väldigt <br> mycket |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

På vilket sätt skulle du beskriva mottagaren?

| Mycket <br> negativt |  |  |  |  | Mycket <br> positivt |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Translation from Swedish to English:

## Questions regarding the experiments

Below are question regarding the experiment: How people communicate with and understand each other

How did you like the company you wrote about?

| Do not like <br> at all |  |  |  |  | Liked a lot |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

In what way would you describe the company?

| Very <br> negatively <br> n |  |  |  |  | Very |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | positively |

What did you think about the person that you wrote to (the reciever)?

| Do not like <br> at all |  |  |  | Like a lot |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

In what way would you describe the reciever?

| Very <br> negatively <br> n |  |  |  |  | Very |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | positively |

Ringa in det par av cirklar som bäst beskriver din relation till mottagaren.
(English: Circle the pair of circles that best describes your relation to the recipient.)

Self $=$ Du
The other = Mottagaren


Ringa igen in det par av cirklar som bäst beskriver din relation till mottagaren.
(English: Circle the pair of circles that best describes your relation to the recipient.)

Self $=\mathrm{Du}$
The other $=$ Mottagaren


## Frågor om experimenten

Nedan följer frågor angående experimentet: Bilder i reklam

Gillade du bilderna överlag?

| Inte alls |  |  | Väldigt <br> mycket |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 5 | 6 | 7 |
| På vilket sätt skulle du beskriva bilderna överlag? |  |  |  |  |  |
| Mycket <br> negativt |  |  |  |  |  |
| 1 | 2 | 3 | 5 | 6 | Mycket <br> positivt |

Hur hungrig känner du dig efter att ha tittat på bilderna?

| Inte alls | Väldigt |
| :--- | :--- |
| hungrig | hungrig |


| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Translation from Swedish to English:

## Questions regarding the experiments

Below are question regarding the experiment: Images in Advertising

Overall, did you like the images?

| Not at all |  |  |  |  | Very much |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

How would you, overall, discribe the images?

| Very <br> negatively |  |  |  | Very <br> positively |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

How hungy do you feel after looking at the images?

Not hungry
at all

2
3
4
5
6
7

## Personliga uppgifter

| Frågor Vänligen fyll i dina svar nedan |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Kön? | Man | Kvinna |  |  |  |  |  |
| Ålder? |  |  |  |  |  |  |  |
| Vad har din pappa för sysselsättning? |  |  |  |  |  |  |  |
| Vad har din mamma för sysselsättning? |  |  |  |  |  |  |  |
| Vad har din pappa för högsta utbildning? | Ingen | Grundskolan (årk. 1-9) | $\begin{aligned} & \text { Yrkesutbildnin } \\ & g \\ & 1-2 \text { år } \end{aligned}$ | Gymnasial utbildning 3-4 år | Universitetsutbildning 3-5 år | Doktors <br> examen | Professorsexamen |
| Vad har din mamma för högsta utbildning? | Ingen | Grundskolan (årk. 1-9) | Yrkesutbildnin $g$ $1-2$ år | Gymnasial utbildning 3-4 år | Universitetsu tbildning 3-5 år | Doktors examen | Professors examen |
| Hur många storebröder har du? |  |  |  |  |  |  |  |
| Hur många småbröder har du? |  |  |  |  |  |  |  |
| Hur många storasystrar har du? |  |  |  |  |  |  |  |
| Hur många småsystrar har du? |  |  |  |  |  |  |  |
| Vad har du för plats i syskonskaran? | Ensambarn | Äldst | Mellanbarn | Yngst |  |  |  |

Translation from Swedish to English

Personal information

| Questions Please fill in your answers below |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sex? | Male | Female |  |  |  |  |  |
| Age? |  |  |  |  |  |  |  |
| What do your father do for a living? |  |  |  |  |  |  |  |
| What do you mother do for a living? |  |  |  |  |  |  |  |
| What is the highest level of education that your father possess? | None | High school (year 1-9) | Vocational training 1-2 år | High school (Year 10-12) | University degree (3-5 years) | Doctora I degree | Professor |
| What is the highest level of education that your mother possess? | None | High school (year 1-9) | Vocational training 1-2 år | High school (Year 10-12) | University degree (3-5 years) | Doctora I degree | Professor |
| How many older brothers do you have? |  |  |  |  |  |  |  |
| How many younger brothers do you have? |  |  |  |  |  |  |  |
| How many younger sisters do you have? |  |  |  |  |  |  |  |
| How many younger sisters do you have? |  |  |  |  |  |  |  |
| What of the following are you? | Only child | Oldest child | "In-the-mid"-child | Young child |  |  |  |

## Frågor om experimentupplevelserna

Nedan följer frågor angående experimentupplevelsen gällande: Hur människor kommunicerar med och förstår varandra

Var vänlig svara på frågorna så utförligt Du kan.

Var instruktionerna kring experimentet lätta att förstå?
$\qquad$

Kändes experimentet på något sätt konstigt vid någon tidpunkt?

Beskriv med egna ord hur du uppfattade syftet med denna undersökning.
$\qquad$
$\qquad$

Övriga kommentarer:

Translation from Swedish to English:

## Questions regarding the experiment experiences

Below are questions regarding the experiment experience: How people communicate with and understand each other

Please answer the questions as thorough as possible:

Were the instructions regardin the experiment easy to understand?

Did the experiment in any way, or at any time, feel wierd?

Please describe, in you own words, how you apprehended the purpose of the study.
$\qquad$
$\qquad$
$\qquad$

Comments:
$\qquad$
$\qquad$
$\qquad$

## Frågor om experimentupplevelserna

Nedan följer frågor angående experimentupplevelsen gällande: Bilder i reklam Var vänlig svara på frågorna så utförligt Du kan.

Var instruktionerna kring experimentet lätta att förstå?

Kändes experimentet på något sätt konstigt vid någon tidpunkt?

Beskriv med egna ord hur du uppfattade syftet med denna undersökning.

Övriga kommentarer:

Translation from Swedish to English:

## Questions regarding the experiment experiences

Below are questions regarding the experiment experience: Images in Advertising Please answer the questions as thorough as possible:

Were the instructions regardin the experiment easy to understand?
$\qquad$
$\qquad$

Did the experiment in any way, or at any time, feel wierd?

Please describe, in you own words, how you apprehended the purpose of the study.
$\qquad$

Comments:

## Appendix G - Coding template

MNN är en verkstadskoncern inom kraft--- och automationsteknik. (0) Företaget verkar i omkring hundra länder och har ungefär hundra tusen medarbetare. (0) Huvudkontoret ligger i Europa och företaget finns framför allt i starkt industriellt präglade städer (0).

MNN levererar lösningar som förbättrar prestanda (+1) och minimerar miljöpåverkan (+1) för energiföretag och industrier. Hållbarhet är integrerad i verksamheten (+1). Företaget säger sig eftersträva balans mellan ekonomisk tillväxt, miljöansvar och samhällsutveckling (+1). MNN har även nio forskningscenter med sextusen forskare anställda och cirka sjuttio universitetssamarbeten över hela världen. (0) Många av företagets produkter har under den senaste tiden fått olika utmärkelser för att vara revolutionerande (+2) i sitt slag när det gäller nytänkande och kostnadseffektivisering (0).

MNN driver också ett populärt (+1) yrkesgymnasium med jobbgaranti för de elever som slutför sin utbildning. Lojalitet är viktigt för företaget och de anställda får skriva på en speciell klausul vilket innebär att de inte får rapportera till någon utanför företaget om information som kommer till anställdas kännedom i samband med arbete. De anställda måste dessutom informera ledningen om någon på företaget inte sköter sitt jobb.

MNN har fått kritik från facket (-1) då företaget börjat betygsätta sina anställda (-1). Genom ett standardiserat formulär ska de anställda på företaget inte bara få sina prestationer utan även sina beteenden bedömda på en skala från ett till fem (-1). Facket menar att det finns en risk (-1) att bedömningen av någons beteende blir mer godtycklig (-1). Även många anställda är oroliga (-1) inför det nya betygssystemet . I övrigt visar personalundersökningar att majoriteten av de anställda är nöjda (+1) med sin arbetsplats och känner att de kan utvecklas inom företaget (+1).

För några år sedan skakades företaget av en skandal (-2). Företagets fd VD hade ett pensionsavtal som fick stark kritik (-1) för sin storlek. Under tiden som personen var VD för företaget ökade nettovinsten sextio gånger och försäljningen trettio gånger (+1). MNNs styrelse hade givit VD:n ett pensionspaket som baserat på detta resultat gav VD:n en engångsersättning på drygt en miljard kronor vid pensioneringen. VD:n fick senare genom ett domstolsbeslut återbetala en del av denna bonus ( -1 ).

## Appendix H - Explanations of data variables

| Recall: | Recall valence - The positive or negative attitude found in the Recall <br> Message: |
| :--- | :--- |
| Liking_topic: | Liking of the topic communicated about - A mean between the two <br> questions regarding liking of the topic in the debriefing questions (see <br> Appendix F) to see to what extent the sender liked the topic (scale 1-7) |
| Liking_recip: | Liking of recipient - A mean between the two questions regarding liking of <br> the recipient in the debriefing questions (see Appendix F) to see to what <br> extent the sender liked the recipient (scale 1-7) |
| Liking_topic_recip: An interaction effect between Liking_topic and Liking_recip |  |
| (Liking_topic*Liking_recip) |  |

## Appendix I - Script for Introduction to the experiment

We're very happy that you all could be there today to help us with our experiments. We will now introduce ourselves and explain why you are here today. We are two Bachelor students here at Stockholm School of Economics, each in the third and last year of our Bachelors degrees. We are currently writing our Bachelor Theses, and in order to finish them we will each need to conduct an experiment. I (Experimenter A) am writing a thesis in Marketing called Images in Advertising, and I (Experimenter B) am writing a thesis within Management about how people communicate with and understand aach other. Since we both need to conduct an experiment we figured that we would help each other out and perform the two experiments at the same day. You guys will therefore perform two different experiments today, and we will start with [Experimenter A]'s experiment Images in Advertising.

## Appendix J - Script for explaining experiment part one

I will hand out an image booklet (see Appendix A) of 15 images in total - three images at five pages. You will get to look at a page with three images for about 20 seconds. During these seconds, I want you to rank the images - image A, B and C - from 1 to 3 on the formulary (see Appendix B) also handed out. You will put a number 1 on the image you like the most, a number 2 on the image you like the second most, and a number 3 on the image you like the least. The study is about what you think, so I would appreciate if you would not look at what your classmates are writing, nor talk to each other.


[^0]:    ${ }^{1}$ Where Recall is the Recall valence - the positive or negative attitude found in the Recall; Message is the Message valence - the positive or negative attitude found in the Message; Exposure is dummy variable that is equal to 1 if the participant have been exposed to a nonobjectified woman; Exposure_message is an interaction effect between exposure and message (Exposure*Message); and $u$ is the residual.
    ${ }^{2} R$-square is the ratio of the explained variation to the total variation, and tells us to what extent the sample variation in the dependent

[^1]:    2 R-square is the ratio of the explained variation to the total variation, and tells us to what extent the sample variation in the dependent variable is explained by the independent variables (Wooldridge, 2009).

[^2]:    ${ }^{3}$ Moving variables out of the residual and into the regression model, our model becomes more accurate in terms of replicating the observed outcome. It also reduces the risk of our model being biased, due to the reduced omitted variable bias. Omitted variable bias is an econometric term that refers to creating a model that excludes one or several variables that is relevant for the model (Wooldridge, 2009).

