

# GENDER EQUALITY AND MEDIA

Counteracting structural gender  
discrimination through equal representation  
of women and men in media

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**ABSTRACT** | The public debate on gender equality has gained traction in Sweden in recent years and there has been a pivotal increase in the number of women holding positions in the boards of Swedish stock market companies. A strong opinion argues that media is not taking its responsibility in reflecting the on-going societal change since women are often reduced to stereotypical portrayals, which may inhibit the stride, or at least dampen the pace, toward gender equality in society. Legislation may inhibit discriminatory actions, but counteracting structural gender discrimination calls for a deeper understanding of the subconscious processes behind discriminatory behavior, and previous research point in different directions. This study applied an experimental method, building on the Saying-is-Believing paradigm, to investigate whether women are structurally discriminated against in the public sphere, and if so, whether this kind of discrimination can be affected by exposure to counter-stereotypical portrayals of women, examining the dimensions of warmth and voice. Findings from 164 Swedish high school students suggest that women are only being discriminated against by men. Furthermore, this study was the first of its kind to find an actionable way to counteract structural gender discrimination in the sense that men were less prone to exhibit discriminatory behavior after exposure to counter-stereotypical women being talked about by others. Last, perceived warmth was found to make women less prone to exhibit discriminatory behavior.

**KEY WORDS** | Gender Discrimination, Interpersonal Communication, Saying-Is-Believing Paradigm, Mass Communication, Social Role Theory, Social Learning Theory



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“You cannot become what you cannot see.”

- Tomas Gunnarsson, a.k.a Genusfotografen

# 1. INTRODUCTION

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*In this chapter, it is motivated why gender discrimination in the public sphere was chosen as a research topic, and furthermore why media is an important force in counteracting such discrimination. Then, the purpose of this study is presented together with the research questions, expected knowledge contribution and delimitations. Finally, a short disposition of this thesis is provided.*

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## 1.1 Media Portrayals of Women Shapes Gender Roles

Sweden is often considered being in the frontline when it comes to gender equality. For example, Sweden is on fourth place in the World Economic Forum's Global Gender Gap Index (2014). However, Sweden is lagging behind when it comes to equal pay and the proportions of female managers and civil servants (World Economic Forum, 2014), suggesting that there is still a long way to go towards gender equality. As such, the public debate about gender equality has gained traction in recent years, and the Swedish business world has experienced an immense governmental pressure to let women into the public sphere of influence. As a result, there has been a pivotal increase in the number of women holding positions in the boards of Swedish stock market companies (AllBright, 2015). However, a strong opinion argues that media is not taking its responsibility in reflecting the on-going societal change in the sense that women are to be seen in media to a lesser extent than men, and are portrayed in a less dynamic manner (Holmberg & Hägglund, 2012; Kroon Lundell, 2012; Edquist & Sigurdsson, 2013; Rättvisaren, 2015; Edström & Jacobsson, 2015).

This opens up for the question of media's role in society: does media only mirror what is happening, or is it actually part of shaping the society we live in? This discussion is two-sided. Media often defend their way of doing things by saying that they are just reflecting what society looks like (Kleberg, 2006). For example, mirroring is often used as an explanation why women are not represented in news to the same extent as men are. Common defenses can be that "there are no female experts to be found" or that the ones that do exist do not want to participate. That is, many news agencies hide and say that it is not media that is distorted; it is in fact the reality. However, a significant body of research argue that our perception of the world tend to be shaped by what we see, hear and read (Bandura, 1971; Gerbner & Gross, 1976; Pollay, 1986). As such, media teaches us, already from early childhood, that boys and girls are different and should thus behave accordingly (Eagly, 1987; Jensen & Jankowski, 1991; Bussey & Bandura, 1999; Eagly, Wood & Diekmann, 2000). Boys are encouraged to be adventuresome, independent and pursuing a career within the public sphere whereas girls are encouraged to be

nurturing, polite and devoting themselves to family matters. For instance, who does not remember the beautiful fairytale princess Ariel who had to give up her voice in order to be with the charming and accomplished prince Eric?

This division between genders lives on throughout life, and is found in all different kinds of media. In advertising, women are often portrayed as straightforward objects of the male gaze (Goffman, 1979) and men are often portrayed as competent, independent and larger than, or looking down on, women, emphasizing the dependence, passivity and subjectivity of the women portrayed (Coltrane & Adams, 1997; Yusof, Jelodar, & Hamdan, 2014). In news media, women's voices, experiences and expertise are less likely to be featured than those of men (Ross & Carter, 2011; Rättviseförmedlingen, 2015; Edström & Jacobsson, 2015). In business media, women are often photographed smiling, from a bird's eye view and out of their workplace context (Holmberg & Hägglund, 2012; Kroon Lundell, 2012). Female leaders are more often expected to meet setbacks and are continuously discussing their gender in relation to enterprise, while men are described as having a more adventurous approach to leadership, which spurs the notion that these females do not belong to the group of "*normal*" businessmen and entrepreneurs, i.e. the male leaders (Kroon Lundell, 2012; Edquist & Sigurdsson, 2013).

Social constructions of reality depend heavily on what people see, hear and read rather than what they experience directly (Bandura, 1971). Thus, media representations have large influential power in society. When certain groups are reduced to stereotypical portrayals, this will have consequences on how we perceive these groups in society. In sum, the impressions and descriptions continuously found in media constantly remind the audience that women are perceived, and prescribed, to have certain stereotypical characteristics. Because of the differences in how the genders are being portrayed, media continuously reproduce the expectations of what women and men should be like. This, may inhibit the stride, or at least dampen the pace, toward gender equality in society.

## **1.2 Gender Discrimination as a Result of Media Portrayal**

Most of our actions in everyday life occur using *fast thinking*, i.e. relying on automatic cognitive systems, which suggests that media impressions subconsciously activates systems in the back of our heads, activating our thought processes and ultimately affecting our behavior (Bargh, Chen & Burrows, 1996). As such, when stereotypes found in media keep confirming traditional gender roles, which social role theory suggests consist of norms applicable to individuals based on their socially identified gender (Eagly & Crowley, 1986), the likelihood of evaluating and treating people according to their gender increases.



This kind stereotyping and evaluation is a subconscious process (Greenwald & Banaji, 1995) that can inhibit individuals in several ways. For example, young women can be less motivated to aspire for leadership positions (Davies, Spencer, Quinn & Gerhardtstein, 2002) or perform worse on math tests (Marx & Roman, 2002) when exposed to normative gender portrayals. A continuous exposure can also have more severe effects like unipolar depression, sexual dysfunction, or eating disorders (Fredrickson & Roberts, 1997).

Furthermore, stereotypes and perceptions of women portrayed in media also tend to shape social interaction and interpersonal communication (Ritson & Elliott, 1999). Psychologically, stereotyping lead to prejudice, which in turn lead to discrimination (Mackie & Smith, 1998; Hewstone, Rubin & Willis, 2002; Cuddy, Fiske & Glick, 2008). When gender discrimination occurs in interpersonal communication, women are prevented from influencing other people's understanding of the public world and from being part of constructing the social reality we all live in. As stated by Hedberg (2012), if women are not represented in the social beliefs and institutions that are continuously and collectively produced, we exclude half of the population from contributing with their knowledge and reflections when shaping our view of the world. Hence, structural discrimination may not always show, but it can have severe consequences.

Before moving, on it is worth mentioning that discrimination is not solely an effect of what is being shown in media; media is rather a catalyst that enforces the patterns that already exists in society. However, since media is considered to be the third state power in Sweden, incremental changes in media can have a pivotal influence in society.

### **1.3 Detecting and Counteracting Discrimination in Interpersonal Communication**

Hedberg (2012) applied an interpersonal communication experiment referred to as the Communication Game, i.e. Saying-is-Believing paradigm (Higgins & Rholes, 1978) as a way to detecting structural gender discrimination. Hedberg (2012) found that participants, when communicating around a public world topic, as opposed to when communicating around a private world topic, let men influence their attitude on the topic, whereas women had no influential power. This can be seen as a form of structural gender discrimination, since this suggests that women do not have the same possibility to influence a person's attitude and beliefs in society as men do.

By building on the SIB-paradigm and exposing participants for non-objectifying portrayals of women prior to entering the communication experiment, Azadi and Torstensson (2013) found

that such discrimination could be counteracted in female-to-female communication. Jonsson and Zhao (2014) built upon these results and looked closer at how to counteract also men's discrimination by investigating the mechanisms behind discrimination against women, focusing on the link between female stereotypicality and perceived competence. However, they failed to replicate the previous findings that, when communicating around a public world topic, both men and women discriminate against women in interpersonal communication (i.e. Hedberg, 2012; Azadi & Torstensson, 2013). Instead, their findings showed that, in a natural state, only men discriminated against women. Furthermore, they did not reveal any reduced discriminatory tendencies after exposure to either counter-stereotypical women (i.e. perceived as more competent) or exposure to stereotypical women (i.e. perceived as less competent). This might be due to that female leaders often face criticism when conforming to counter-stereotypical (i.e. male) characteristics instead of traditional female characteristics. That is, if perceived as being too competent and lacking in warmth, females will face what Rudman (1998) refers to as the backlash-effect.

#### **1.4 Research Gap**

As noted above, a previous study has been able to counteract women's discrimination against women in interpersonal communication (i.e. Azadi & Torstensson, 2013) by exposing experiment subjects to pictures of counter-stereotypical women (female leaders). However, how to counteract also men's discrimination is still to be discovered. Due to some questionable manipulations in the study by Jonsson and Zhao (2014), this thesis sets out to dig deeper into the matter and again ask the question of how to counteract men's discrimination.

Additionally, there are still some gaps regarding the underlying mechanisms of gender discrimination in interpersonal communication; it is not clear what it was in the manipulation by Azadi and Torstensson (2013) that got female participants to stop discriminating against women. The results by Jonsson and Zhao (2014) questioned the role of competence that previously has been considered as an explanatory factor (e.g. Hedberg, 2012; Azadi & Torstensson, 2013). Thus, the role of competence and stereotypicality seem to be complex. This study will look closer into the earlier-mentioned backlash effects and investigate the importance of warmth in connection to exposure to counter-stereotypical women as an explanatory factor in counteracting structural gender discrimination.

Interestingly, Jonsson and Zhao (2014) seem to have fallen victims for the, in media, collectively shared way of portraying women. In their priming, although using counter-stereotypical women as a means to step away for stereotypical portrayals of women, they never allowed the women

to express their own voices, but were rather talked about by somebody else, and thus to some extent still conveyed stereotypical depictions. Since their manipulation did not have any effect in counteracting discriminatory behavior against women, this raises the question of the importance of voice in relation to exposure to counter-stereotypical women as a means of counteracting structural gender discrimination.

## **1.5 Purpose and Research Question**

The overall purpose of this thesis is to find ways in which media can contribute to counteracting gender discrimination. In order for this thesis to be of relevance and of substantial value, the first aim is to establish that women in fact are being discriminated against in the public world. This will be done by applying the SIB-paradigm as a means to investigate gender discrimination and by having stricter control over some of the external factors that might have influenced the results by Jonsson and Zhao (2014). The second aim is to further investigate the link between counter-stereotypicality and gender discrimination in interpersonal communication, trying to counteract also men's discrimination against women. This will be done by looking closer into how women are being portrayed in media, by applying social role theory and social learning theory, and adding the dimensions of warmth as well as voice when examining how exposure to counter-stereotypical women might be an explanatory factor in counteracting gender discrimination.

As such, the research question is two-folded. Research question 1 is a prerequisite before investigating research question 2, which aims to find ways for media to counteract gender discrimination by digging deeper into the multi-faced notion of stereotypes reinforced by media.

The research question is thus, in a sequential order:

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**A. Are women being structurally discriminated against in interpersonal communication regarding public world topics?**

**B. If so, can this kind of discrimination be counteracted by exposure to counter-stereotypical portrayals of women?**

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## **1.6 Delimitations**

Certain delimitations are necessary in order to be able to conduct this study within the timeframe given. First, media's role in discrimination is examined, even though there might be several other factors that play an important part. Second, although portrayals of women in media might affect women also on an individual level, the focus will only be on the structural

implications on social interaction and interpersonal communication. Third, discrimination in the public world will be investigated, as opposed to discrimination in the private sphere. Fourth, the SIB-paradigm will be used as a method to detect this discrimination, even though there also might be other methods to apply. Fifth, in order to be able to compare the findings to previous studies within the SIB-paradigm (i.e. Hedberg, 2012; Azadi & Torstensson, 2013; Jonsson & Zhao, 2014), the study will be performed on a sample of high-school students in the Stockholm area. Lastly, in this thesis, the focus will only be on discrimination against women and thus investigate portrayals of women in media, as opposed to also looking at men.

### **1.7 Expected Knowledge Contribution**

By building on previous research, this study will shed further light on explanatory factors behind structural gender discrimination. Since media have such a strong power in shaping our beliefs of the world we live in, it is important to understand the mechanisms behind how portrayals of women in media affect how people interact in interpersonal communication. If women are being left out of the public debate and are not able to influence people's perceptions, half of society is excluded from contributing to the social construction process.

The aim is to first investigate the current state, that is, if the baseline found by Hedberg (2012) as well as Azadi and Torstensson (2013) still prevails, i.e. that both men and women discriminate against women in the public sphere. Second, the thesis will build upon previous research (Azadi & Torstensson, 2013; Jonsson & Zhao, 2014) and contribute to the understanding of using portrayals of counter-stereotypical women as a means to counteract discrimination. This will be done by investigating the relationship between social learning theory and social role theory, introducing the role of warmth and voice when examining gender discrimination in interpersonal communication. The final goal is to find ways to counteract also men's discrimination against women, which no previous study, within the framework of the SIB-paradigm, has been able to accomplish.

### **1.8 Disposition**

To answer the research question, this thesis will be outlined as follows: The next chapter provides a theoretical framework, from which hypotheses will be derived, forming the baseline for the study. In the third chapter, the scientific approach as well as research method chosen in order to be able to find empirical support for the hypotheses will be presented. The results from this study will be presented in chapter four. In chapter five, the results will be analyzed in the light of the theoretical framework. The final discussion will summarize the main findings and

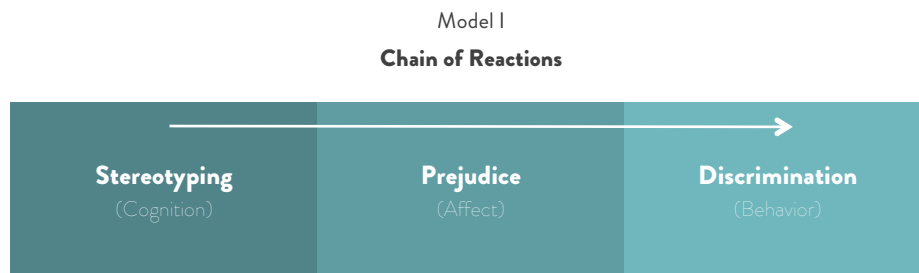
provide a critical reflection of the results as well as practical implications and suggestions for future research.

## 2. THEORETICAL FRAMEWORK

*In this chapter, the theories and previous research constituting the theoretical framework of this thesis are presented. Last the hypotheses, derived from the theoretical framework, are also presented.*

### 2.1 Automatic Cognitive Processes Leads to Discrimination

Most of our actions in everyday life occur through *fast thinking*, i.e. relying on automatic cognitive systems. Cognitive priming theory is therefore a suitable starting point when analyzing discrimination, since it posits that impressions subconsciously activate our thought processes, which ultimately shapes our behavior (Bargh et al., 1996). In everyday life, we tend to systematically evaluate and treat certain social groups more favorable than other groups, or members thereof, without being aware of it. This is more known as inter-group bias (Mackie & Smith, 1998). A substantial body of research suggest that there are three psychological components forming this bias; cognition (stereotyping), attitude (prejudice) and behavior (discrimination) (Mackie & Smith, 1998; Hewstone, Rubin & Willis, 2002; Cuddy et al., 2008). As such, subconscious stereotyping trigger either positive or negative prejudice toward a social group, which in turn leads to favorable or unfavorable treatment of this group or its individuals. It is this chain of reactions that the hypotheses in this thesis will build upon.



Stereotypes are socially shared descriptions of social groups based on salient cues such as sex, nationality and age (Allport, 1954; Banaji & Greenwald, 1995; Epley & Waytz, 2009). Not only do they describe what members of these groups should be like, they also prescribe how members of these groups should behave (Rudman & Glick, 2001; Eagly & Karau, 2002). A person who is considered belonging to a certain social group is therefore expected to share the same characteristics and behavior as the group in large.

While stereotypes refer to the beliefs people have about social groups or members thereof; prejudice refer to the affective evaluation of these groups, which can be both positive and

negative, often in favor for one's own in-group (Mackie & Smith, 1998; Cuddy et al., 2008), or depending on the context (Blair, 2002; Reid, Palomares, Anderson, & Bondad-Brown, 2009). For instance, African Americans may in one context be considered lazy, criminal and uneducated, but in another context be considered musical and athletic (Devine & Elliot, 1995).

The direction of the affective evaluation, in turn, determines the direction of behavior. As such, discrimination can refer to either favorable or unfavorable treatment of a social group, or its individual members, on account of group membership (Allport, 1954; Hewstone, Rubin & Willis, 2002; Cuddy, Fiske, & Glick, 2007). In this thesis, it is the downside of gender discrimination that is examined. That is, treating a woman unfavorably because of her group membership (gender) rather than on her individual merits. From hereon, when talking about discrimination, it is the negative treatment that is referred to.

It is important to note that people are never born knowing about stereotypes. Small children learn about stereotypes from media and their social environment (Bussey & Bandura, 1999). This will be investigated in the subsequent sections.

## **2.2 Media as a Catalyst for Gender Discrimination**

According to social learning theory, people's perception of the world tend to be shaped by what they see, hear and read rather than by what they experience directly (Bandura, 1971). Furthermore, what is being portrayed in media is also likely to be given social legitimacy (Gerbner & Gross, 1976). Since recent studies have concluded that women are not being represented in media to the same extent as men, and in the cases when women in fact are featured they are more often in a private sphere setting than a public sphere setting (Wood 1994; Coltrane & Adams, 1997; Ross & Carter, 2011; Kroon Lundell, 2012; Yusof et al., 2014; Edström & Jacobsson, 2015; Rättviseförmedlingen, 2015;), social legitimacy should be given to the exclusion of women also in a public world context.

When individuals repeatedly are exposed to a message over a long period of time, they tend not only to let it shape their thoughts, but also form the basis of their judgment and actions (Gordon, 1995). As such, the media image of women should shape people's expectations of what a woman should be like (Bandura, 1971), which should translate into everyday social interaction and communication (Ritson & Elliott, 1999) and subsequently lead to discrimination against women in the public sphere (Hedberg, 2012). In order to counteract such discrimination it is important to understand how beliefs are formed and transmitted between individuals in the society. This follows in the next section.

## 2.3 Gender Discrimination in Interpersonal Communication

Since creating and maintaining social relationships is fundamental for human wellbeing (Maslow, 1943), achieving common grounds with others appears to be essential when communicating with others (Asch, 1952; Manis, Cornell, & Moore, 1974; Dijkstra, 1983). As such, people tend to draw on information from the social context to form expectations about appropriate attitudes, behavior and beliefs (Blau & Karetberg 1982; Ritson & Elliott, 1999), and adapt their communication accordingly (Higgins & Rholes, 1978). Interestingly, it seems like this adaption can have far-reaching consequences beyond the immediate interpersonal communication context (Higgins & Rholes, 1978; Ritson & Elliott, 1999). These consequences can be examined through experiments based on the Saying-is-Believing paradigm.

### 2.3.1 The Saying-is-Believing Paradigm

Higgins and Rholes (1978) introduced the Saying-is-Believing (SIB) paradigm. The point of departure for their study was an experiment known as the Communication Game, in which experiment subjects (i.e. senders) communicate with another person (i.e. receiver) about a third person (i.e. target). The sender is first informed about the receiver's attitude towards the target. His or her task is then to describe the target, without mentioning its name, in a way so that the receiver can identify who the target is. In a first step, Higgins and Rholes (1978) found that the senders adjusted their description of the target to suit the attitude of the receiver. That is, when a receiver expressed liking of the target, the sender chose to describe the target in a more positive manner, and vice versa. This relationship is more commonly known as *message valence*.

In a second step, they found an attitude adaptation effect among senders. That is, when asked to recall the original target description, the sender's own attitude regarding their previously written message seemed to have been influenced by that of the receiver's. Whenever receivers had a positive (negative) attitude towards the target; senders would also show a positive (negative) post-experiment attitude towards the target. This relationship is more commonly known as *recall valence*.

In sum, the SIB-paradigm posits that when a sender adjusts the message to suit a receiver's attitude in a first step and in a second step remembers the target in the way s/he described it instead of what was originally disclosed, one can talk about an SIB-effect. On a technical note, the SIB-effect occurs when message valence affects recall valence (Higgins & Rholes, 1978).



### **2.3.2 Structural Gender Discrimination Within the SIB-Paradigm**

Subsequent studies have replicated the findings by Higgins and Rholes (1978) and concluded that not all receivers are equally capable of influencing a sender's memory, depending on group belonging and context (Echterhoff, Higgins, & Groll, 2005; Hedberg, 2012). When the SIB-effect is not present in the communication between a sender and a receiver, one can talk about discrimination in interpersonal communication. On an aggregated level, when this effect is common for all receivers of a specific social group, one can talk about structural discrimination in the sense that the group is not represented in the social beliefs that are continuously being produced and reproduced collectively (Hedberg, 2012). Recent studies have found that the SIB-effect also tends to be generalized to other targets (Bebermeier, Echterhoff, Bohnert, & Hellmann, 2015) and can thus be expected to have widespread and long-term effect in society.

First, it seems like the memory modification is contingent on whether we feel like the communication counterpart is someone we can connect to and hence epistemically rely on (Echterhoff et al., 2005; Echterhoff, Higgins & Levine, 2009). This is more commonly known as establishing a sense of shared reality, which is more likely to occur in communication between two members of the same social group (i.e. in-group) (e.g. Mackie & Smith, 1998; Hewstone, Rubin & Willis, 2002; Echterhoff et al., 2005; Cuddy et al., 2008). As such, when communicating with someone belonging to our own in-group, we tend to perceive them as epistemically reliable, why we are more likely to be influenced by this person's judgments regarding the communicated about topic, and vice versa (Echterhoff et al, 2005). For example, within the framework of the SIB-paradigm Echterhoff et al (2005) found that German college students did not let their beliefs about a communicated target be affected by receivers who were categorized as hairdressers (out-group) to the same extent as receivers who were categorized as fellow students (in-group). This is more commonly known as intergroup-bias. Furthermore, if unfavorable treatment of people who are not like ourselves were not enough, a substantial body of research suggest that disadvantaged groups often subconsciously fall in with the system and tend to discriminate against themselves (their in-group) according to the system-justification principle (e.g. Jost, Banaji, & Nosek, 2004; Jost & Kay, 2005).

Second, Hedberg (2012) added the notion of context to the intergroup-bias, suggesting that, depending on the communicated topic, different receivers have different influential power in the communication game. By letting senders communicate about public- or private world topics in the communication game, Hedberg (2012) found that female receivers (compared to male receivers) were more capable of producing a memory modification among both female and

male senders when communicating about a *private sphere* topic. On the other hand, he found that female receivers (compared to male receivers) were not equally capable of producing a memory modification among neither female nor male senders when communicating about a *public world* topic. The latter effect was also replicated by Azadi and Torstensson (2013). It therefore seems like women do not have the same influencing power in shaping the collective perception about the public world, which can be seen as a form of structural gender discrimination.

Thus, when communicating about a public world topic, senders should subconsciously categorize the receiver according to the most salient cue (gender). If the receiver is a woman, senders will evaluate her negatively in the sense that she is not epistemically reliable when it comes to public world topics. Hence, when recalling the original text, senders will not have been affected by her opinion about the public world topic.

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**H1: When communicating about a public world topic with female receivers, recall valence is not affected by message valence.**

---

Previous research has found that exposure to female counter-stereotypes could reduce bias against women (Dasgupta & Asgari, 2004; Jost et al., 2004; Good, Woodzicka, & Wingfield, 2010), a tendency that also has been observed within the framework of the SIB-paradigm. Azadi and Torstensson (2013) found a way to counteract discrimination in female-to-female communication through exposure to pictures of female leaders, but not in male-to-female communication. When aiming to replicate their results, Jonsson and Zhao (2014), found no support that exposure to female leaders affected discriminatory behavior. These findings will be investigated next.

## **2.4 Social Role Theory and Gender Stereotypes**

A suitable point of departure when attempting to counteract discrimination is social role theory since it encompasses the aforementioned chain of reactions, where stereotyping trigger prejudice, which in turn leads to discrimination. Taking a step back, Bakan (1956) noted that there are two fundamental dimensions in the existence of living beings: communion and agency. Gender literature has picked up this distinction because these dimensions relate respectively to masculine and feminine traits, suggesting that gender roles consist of norms applicable to individuals based on their socially identified gender (Eagly & Crowley, 1986). That is, men and women occupy specific social roles with associated stereotypes and expected behavior. As a matter of fact, much of the perceived differences between men and women can

be categorized into the two dimensions of agency and communality (Carlson, 1971; Spence et al., 1979; White, 1979; Eagly & Steffen, 1984; Eagly, 1987; Abele, 2003). While men stereotypically are perceived to be more agentic (i.e. confident, assertive and powerful) women are stereotypically perceived to be more communal (i.e. pleasant, trustworthy and likeable) (Eagly & Karau, 2002).

In later years, the notions describing social roles have taken on new labels. In examining how people make sense of each other on a more general level, both as individuals and as group members, Fiske, Cuddy, Glick and Xu (2002) defined two universal dimensions of social perception that differentiate groups and individuals: *warmth* and *competence*. Warmth represents a compliant orientation, that is, seeking to profit others more than one self, whereas competence represents self-profitable traits, which are related to the ability to bring about desired events (Peeters, 1983). The dimensions of warmth and competence are closely linked to the earlier mentioned notions of communion and agency (Cuddy et al., 2008). However, agency does not fully capture the notion of competence; agency entails a call for action, whereas competence also includes that the person have the skills and capabilities to carry also potential action through. From here on, the more universal notions of warmth and competence will be used when talking about stereotypical female and male characteristics.

#### **2.4.2 Competence, Warmth and the Backlash-Effect**

The Stereotype Content Model (SCM) (Fiske et al., 2002) is based on the judgment of warmth and competence, which in turn elicit different sets of emotions that can predict behavioral tendencies (Cuddy, Fiske, & Glick, 2007). The SCM emphasizes the fact that stereotypes can be ambivalent, comprising a positive judgment on one dimension and a negative judgment on the other. For example, high competence and low warmth elicit ambivalent emotions (i.e. envy) and disadvantageous behavior, whereas high competence and high warmth elicit univalent emotions (i.e. admiration) and supportive behavior.

Building upon social role theory, Eagly and Karau (2002) found that individuals who act in ways that are incongruent with their social role tend to be evaluated negatively and suffer from social rejection. In gender research, this is more commonly known as a backlash-effect (e.g. Rudman, 1998), which female leaders are often facing since they are displaying too much male characteristics and thus are not conforming to the female stereotype (Rudman & Glick, 2001; Cuddy et al., 2008; Rudman, Moss-Racusin, Phelan, & Nauts, 2012). Subsequently, ambivalent emotions are triggered, which are likely to translate into disadvantageous behavior in accordance with the SCM.

Counterintuitive, exposure to images of female counter-stereotypes has been suggested to be a viable method to reduce discriminatory tendencies (Dasgupta & Asgari, 2004; Good et al., 2010; Azadi & Torstensson, 2013). On the other hand, a recent study by Jonsson and Zhao (2014) disconfirmed exposure of female counter-stereotypes as an explaining factor in counteracting gender discrimination, in line with the dynamics behind the aforementioned backlash-effect (Rudman & Glick, 2001; Rudman et al., 2012). Hence, is it not clear whether it is the mere exposure to female counter-stereotypes that carries explanatory power in counteracting structural gender discrimination, or if more complex forces are operating. A substantial body of research points in the latter direction.

It seems like people tend to judge warmth before competence, a notion that has been confirmed by numerous scholars. Wojciszke, Bazinska and Jaworski (1998) suggested that the warmth dimension predicts the valence of interpersonal judgments (positive or negative), whereas the competence dimension predicts the extremity of the judgment (how positive or how negative). Cuddy et al., (2008) added to the research by suggesting that warmth judgments carry more weight than competence judgments in affective and behavioral reactions. Therefore, counteracting gender discrimination through the means of exposure to counter-stereotypical women should be contingent on the warmth dimension, as suggested by Czopp, Kay and Cheryan (2015).

Within the SIB-paradigm, when communicating about a public world topic after being exposed to counter-stereotypical women, senders should subconsciously have been affected by the previous stimuli and ascribe the perceived traits to the female receiver who they are communicating with. Based on the reasoning above, two scenarios can be identified:

(i) Counter-stereotypical women tend to be perceived as competent but not warm, eliciting envious emotions (Cuddy, Fiske, & Glick, 2007). The female receiver should thus be negatively evaluated and suffer from disadvantageous treatment since she is violating traditional gender roles. Hence, when recalling the original text, senders are not likely to have been affected by her opinion about the public world topic.

---

**H2a: When communicating about a public world topic with female receivers, recall valence is not positively affected by the interaction effect of exposure to counter-stereotypical women and message valence.**

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(ii) The warmer a competent woman is perceived to be; the more likely it is that emotions of admiration are elicited (Cuddy, Fiske, & Glick, 2007). The female receiver will thus be positively evaluated and benefit from supportive treatment. Hence, when recalling the original text, senders are likely to have been affected by her opinion about the public world topic.

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**H2b: When communicating about a public world topic with female receivers after exposure to counter-stereotypical women, recall valence is positively affected by the interaction effect of warmth and message valence.**

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As previously mentioned, there is a strong public opinion arguing that women need make their voices heard in media, which is believed to foster gender equality. However, no one has supported this reasoning empirically. This will be investigated in the following section.

### **2.4.3 Voice as a Counter-Stereotypical Female Trait**

The effect of expressing one's voice in media is, to our knowledge an unexplored field. The point of departure when examining whether voice plays a part in discrimination, is nevertheless to determine whether voice can in fact be seen a stereotypical female trait or not (Cuddy et al., 2008).

As mentioned in section 1.1, women are not only represented in media to a lesser extent than men, but are also less likely to express their voices, specifically with respect to public world related topics (Ross & Carter, 2011). For example, as shown in the news-study Global Media Monitoring Project, GMMP, when it comes to being a spokesperson or an expert in the Swedish news, women are only featured in 33 % and 21 % of the articles respectively (Edström & Jacobsson, 2015). This is a form of symbolic annihilation referred to as omission (Tuchman, 1978). Since media tends to shape the socially constructed perceptions of gender roles, the structural omission of women's voices in media is likely to have shaped also the female stereotype. As such, expressing one's voice in a public world related context should be seen as a counter-stereotypical female trait.

This is to be seen in the light of the study by Jonsson and Zhao (2014), where no significant SIB-effect was found when comparing exposure to female leaders (counter-stereotypical women) with exposure to housewives (stereotypical women). Looking closer at the stimuli articles used in their experiment, it becomes evident that they may have fallen victims for the socially constructed gender roles. That is, housewives got to express themselves about a topic

relevant to their life choice (i.e. private world), whereas female leaders were not allowed to do so (i.e. public world). Instead, they were rather talked about by (male) colleagues or managers.

Following this line of reasoning, voice should be considered an aspect of the female stereotype, however not explicitly captured by the warmth and competence dimensions. When women do not get to speak freely in media to the same extent as men about public world topics, one can assume that this translates also into everyday social interaction and communication (Gerbner & Gross, 1976; Ritson & Elliot, 1999).

### **2.4.3 The Role of Voice in Discrimination**

Closely related to voice is the notion of self-promotion (speaking directly about one's own strengths and talents), which has been found less acceptable for women than for men (Miller, Cooke, Tsang, & Morgan, 1992). Furthermore, Rudman (1998) emphasized that although female self-promotion enhanced the perception of their formal qualifications, it came at the price of social rejection. As such, women who are expressing their own voices could, in line with the notion of self-promotion, suffer from a backlash effect when violating the traditional gender roles and thus suffer from disadvantageous treatment (Cuddy et al, 2007).

On the other hand, it has been widely emphasized that people's behavior is shaped by impressions from everyday life (Bandura, 1971). Closely related is the theory of signaling effects. Within the field of marketing, researchers have found a positive relationship between favorable brand perception and high advertising spending (Kirmani & Wright, 1989) as well as high advertising creativity (Colliander & Dahlén, 2011), and vice versa. It seems like consumers interpret high (low) advertising effort as a signal that the company is more (less) confident in the advertised product, and implicitly assume that the company would not otherwise have spent so much (little) on the advertising (see also Kirmani 1990; Ambler & Hollier, 2004).

Applying the logic of marketing signals on media in general, one could assume that when a woman is allowed to express her voice, people could interpret this as a signal that media find her epistemically reliable and is confident that her voice is important to take into consideration. Following the logic above, this could lead to a positive evaluation of the woman (Kirmani & Wright, 1989) and subsequently favorable treatment of her (Cuddy et al, 2007). Furthermore, according to (Bebermeier et al., 2015) this effect should be generalizable to women in general.

Based on the ambivalent reasoning above, it seems like voice should play a part in gender discrimination. However it remains to be determined in what direction, why we open up for ambiguity. When communicating about a public world topic, senders who are exposed to

women expressing their own voices may (i) interpret this as a violation of traditional gender roles, which in turn could lead to negative evaluation of and subsequent unfavorable treatment of the female receiver, or (ii) send signals that one should take women's voices into consideration, which in turn could make experiment subjects more receptive to the attitude of the female receiver leading to non-discriminatory behavior. Thus, H2c is formulated as follows:

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**H2c: When communicating about a public world topic with female receivers after exposure to counter-stereotypical women, recall valence is either positively or negatively affected by the interaction effect of voice and message valence.**

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## 2.5 Summary of Hypotheses

Table I  
Summary of Hypotheses

Hypothesis	
<b>H1</b>	When communicating about a public world topic with female receivers, recall valence is not affected by message valence.
<b>H2a</b>	When communicating about a public world topic with female receivers, recall valence is not positively affected by the interaction effect of exposure to counter - stereotypical women and message valence.
<b>H2b</b>	When communicating about a public world topic with female receivers after exposure to counter - stereotypical women, recall valence is positively affected by the interaction effect of warmth and message valence.
<b>H2c</b>	When communicating about a public world topic with female receivers after exposure to counter - stereotypical women, recall valence is either positively or negatively affected by the interaction effect of voice and message valence.

### 3. METHODOLOGY

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*This chapter explains the research method used in this thesis. First, the process leading up to the experiment design is explained, followed by an overview of the experiment design and experiment procedure. Last follows a discussion regarding data analysis, data quality and ethical considerations.*

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#### 3.1 Initial Work

To find a relevant and novel angle of this thesis, initial efforts were spent on understanding the public opinion and discussion regarding the topic of gender discrimination. Swedish and international media were scanned, and a photographer known for working towards gender neutrality in media, Tomas Gunnarsson, was consulted, to find a perspective that would add value to the discussion. Simultaneously was a thorough review of existing research within the area of discrimination, social role theory and social learning theory conducted in order to identify a relevant research gap. In parallel consultation with Per Hedberg, researcher at Stockholm School of Economics, it was decided that this thesis should build upon the Saying-is-Believing paradigm, since previous research within the field has pointed in different directions. The purpose for this thesis was to establish a baseline for - and identify ways in which to counteract - structural gender discrimination based on existing knowledge within the domain.

#### 3.2 Scientific Approach and Data Gathering

Since knowledge already exists within the domain of the research question, this thesis applied a deductive approach. Hence follows that hypotheses are developed from existing theories, in this case social role theory, social learning theory and SIB paradigm, which in turn guides the data gathering (Bryman & Bell, 2011). To study the relationship between the chosen inputs and the following outcomes, a quantitative method of data collection was suitable, since the objective of the research question was to find generalizable results based on actual behavior.

#### 3.3 Research Design

An experimental research design was found suitable since the objective was to find causal relationships (Malhotra & Birks, 2006). A classical experimental design was applied; two experiment groups and one control group were constructed so that independent variables of interest could be manipulated and examined in a controlled environment (Bryman & Bell, 2011). The experiments were carried out in a classroom environment, a real life setting for the experiment subjects, indicating that this is a field experiment. Due to necessity of creating a constructed situation one could also consider this being a laboratory experiment. The external



validity suffers in a laboratory experiment, while it on the other hand benefits the internal validity in the sense that there is no ambiguity in the results (Bryman & Bell, 2011).

An alternative research design would have been to use a qualitative approach to get richer and deeper data to base conclusions on (Bryman & Bell, 2011). However, since the aim of this thesis was not merely to conclude that gender discrimination exists, but also to find ways in which to alter discriminatory behavior, an experimental research method was necessary.

### **3.4 Experiment Design**

This study investigates discrimination against women in interpersonal communication. Since social behavior often operates in an implicit or unconscious fashion (Greenwald & Banaji, 1995), it should be difficult to detect discrimination by mere observation. Hence, an experimental design like the Communication Game in the SIB-paradigm was preferred to examine discrimination interpersonal communication.

The SIB-paradigm posits that, when communicating, a sender tunes in to a receiver's attitude in a first step, and in a second step remembers the communicated topic in the way s/he described it instead of what was originally disclosed (Higgins & Rholes, 1978). If this relationship is not present in communication with a person from a specific social group, one can talk about discrimination against this person. Subsequent studies (e.g. Azadi & Torstensson, 2013) have showed that priming experiment subjects before entering the Communication Game, could determine whether this kind of discrimination occurs or not.

Based on the research question, and the above-mentioned reasoning, the experiment was divided into two parts; one in which experiment subjects were primed and one in which their subsequent discriminatory behavior was examined. In addition, a third part was included to control for appropriate participation and to collect demographic information.

#### **3.4.1 Experiment Groups**

In an experimental context, individuals should on a random basis be divided into different groups that receive different treatments, followed by a comparison between the groups' reactions after the treatment (Söderlund, 2010). The division into groups was made in the first part of the experiment, the priming part. The random classroom seating and the order of distributing the reading material divided experiment subjects into three different experiment groups (i.e. priming and control group). The control group was constructed in order to detect a baseline for gender discrimination, and to rule out the chance of other explanations of a causal finding. Moreover, the two stimuli groups were constructed in order to identify conditions under

which gender discrimination can be counteracted. In the second part of the experiment, the Communication Game, all experiment subjects received the same treatment.

All experiment groups received reading material consisting of three shorter articles of the same length. The control group (*group 1*) read about a neutral topic unrelated to gender, namely vegetables (see Azadi & Torstensson, 2013). The second experiment group (*group 2*) received material featuring counter-stereotypical women who were spoken about in articles (no voice). Lastly, the third experiment group (*group 3*) received material featuring counter-stereotypical women who made their own voice heard by speaking for themselves in articles (voice). As such was a 2 (no voice; voice) x 1 (counter-stereotypical) experimental between-subjects design used, complemented by a control group.

Table II  
**Experiment Group Matrix**  
Overview of experiment groups

Experiment Group	Group 1	Group 2	Group 3
<b>Stimuli</b>	Neutral	Counter - Stereotypical	
		No Voice	Voice
<b>Word Count</b>	776	785	776
<b>Receiver</b>	Female	Female	Female
<b>Sender</b>	Mixed	Mixed	Mixed

The material for experiment group 2 and 3 was developed with specific consideration to isolate the factors of interest: counter-stereotypicality (i.e. competence, warmth and voice). Both groups received stimuli material consisting of three different women. For the women to be perceived as counter-stereotypical it was decided that female leaders should be used as priming. Moreover, previous research emphasizes the malleability of stereotypes depending on context (Blair, 2002; Reid et al., 2009), meaning that including stereotypical traits in the text (e.g. being a mom) could have an unintended effect on the stimuli. Hence, it was decided that the stimuli in this study should not include any personal reflections that could be considered as stereotypical.

The selection of women was made on the basis of a representative sample of society in terms of industry, ethnicity and age (SCB, 2015). In order to control for potential inconsistencies within the two stimuli groups, three female leaders were used as priming subjects: Stina Honkamaa Bergfors, Azita Shariati and Mai-Li Hammargren.

The point of difference between experiment group 2 and 3 was voice. Experiment group 2 received material on women that were spoken about by men (who are the ones usually speaking in media), while experiment group 3 received material on women who spoke for themselves. In order to reinforce the stimuli of voice and no voice, different photos were used; in the case for women who spoke for themselves, the pictures showed them doing so, while when someone spoke about them they were simply the object of the camera's gaze.

All experiment subjects received the same treatment in experiment part 2, irrespective of experiment group. That is, everyone communicated with a female receiver who had a positive attitude towards a public world topic, since discrimination against women in the public world is the field of study in this thesis.

### **3.4.2 Experiment Questions**

In order to ensure that the stimuli used in experiment part 1 had the intended effect on the experiment groups, a couple of questions followed each article (see Appendix A). The stimuli groups received questions asking for their general impression with respect to different aspects of interest; perceived warmth, competence and voice. The control group received different reading material, why the aforementioned questions lacked relevance. The purpose of the questions for the control group was mainly a matter of timing. That is, all experiment subjects needed to spend equal time on experiment part 1.

With respect to the measure of competence and warmth, experiment subjects were asked to reflect on the characteristic traits of the person featured in the article. They were asked to rate, on a scale 1-7, the extent to which they thought a total of 12 characteristics fit their perception of the person. The scale was adapted from Fiske et al. (2002), and included 6 competence related traits [competent, confident, capable, efficient, intelligent, skillful] and 6 warmth-related traits [friendly, well-intentioned, trustworthy, warm, good-natured, sincere]. From these statements both counter-stereotypicality and warmth could be examined.

With respect to the measure of voice experiment subjects were asked to asked to rate, on a scale 1-7, the extent to which they perceived that the woman was (i) someone people listen to/is worth listen to and (ii) someone who get to have her voice heard/is worth getting to have her voice heard. This scale was developed in parallel consultation with Per Hedberg, and was intended to capture the notion of perceived voice.

The purpose of experiment part 3 was to make sure that experiment subjects participated in the experiment correctly, and to collect demographic information (see Appendix C). To ensure

appropriate participation were the following three questions asked: (i) the gender of the recipient was female/male, (ii) the attitude towards the company was positive/negative and (iii) the feedback was positive/negative. Furthermore, the subjects were asked questions regarding their thoughts about the experiments and the instructions, to detect whether the experiment subjects noticed that the two separate experiment parts were connected. Finally, some demographic questions were asked.

### **3.4.3 Experiment Subjects**

The experiment subjects were selected in order to make comparable conclusions with respect to previous studies (Hedberg, 2012; Azadi & Torstensson, 2013; Jonsson & Zhao, 2014). Hedberg (2012) motivated a sample choice of high school students by stating that they probably have been less exposed to the normative values of gender stereotyping, in comparison to for instance working adults. A sample of high school students, between the ages 16-19 at three different high schools in the Stockholm area (Vallentuna Gymnasium, Kungstensgymnasiet and Blackebergs Gymnasium, was thus used in this study.

This decision implies that this study conducted on a convenience sample. According to Bryman & Bell (2011) there are risks associated with convenience sampling, as a homogenous group cannot be considered representative for a whole population. Hence, this sample could incur difficulties to make generalizations. On the other hand, Söderlund (2010) reasons that homogeneous groups are suitable for experiments that test existing theories. Due to the deductive approach and the tight time frame of this thesis, one could argue that using a convenience sample is a sufficient sampling method for the research question.

### **3.4.4 Experiment Leaders**

In contrast to previous studies, a conscious choice of experiment leaders (from hereon referred to as experimenters) was made. Two male experimenters were hired to, one at a time, accompany one of the female experimenters on four occasions. A female experimenter always led experiment part 1, while the male experimenter led experiment part 2 when present.

This decision was made since previous research indicate that experiment subjects are less likely to express discriminatory tendencies in the presence of an experimenter from a discriminated-against group (Lowery, Hardin, & Sinclair, 2001) and that variance in responses can be attributed to specific characteristics of the experimenter such as gender (Dijkstra, 1983; Lowery, Hardin, & Sinclair, 2001). This could explain why Jonsson and Zhao (2014) did not replicate the baseline for gender discrimination by Hedberg (2012) and Azadi and Torstensson

(2013), as one could argue that the presence of two female university students could also be perceived as priming for the control group. No previous studies have, to our knowledge, investigated this as a factor of explanation within the SIB-paradigm, why this thesis sets out to clarify the effect. However we want to emphasize that it is not a central part of this thesis.

### **3.5 Pre-Studies**

Before executing the main experiment, two pre-studies were conducted during week 41 in order to validate the material for the main experiment.

#### **3.5.1 Pre-Study 1**

The first pre-study was made in order to perform manipulation checks of the stimuli material intended for experiment group 2 and 3. It was carried out with a total of 155 participants, who were students from SSE, KTH and Stockholm University, with a mean age of 23 years. Within the time frame given, getting access to perform a pre-study on high-school students was not an option, thus, the pre-study can not be considered fully representative for the main experiment sample. However, the results of this pre-study can be seen as an indication of what the subjects in our main study should think.

To control for external factors that potentially could affect the results, it was investigated whether the selected articles isolated the intended variables of counter-stereotypicality and voice. In addition, three different images were tested along with each article in order to select the pair that was perceived to be equally attractive and likeable, while differing on perceived voice. To lower the occurrence of other potential attributions, the images were selected to be similar in terms of face-ism (c.f. Archer, Iritani, Kimes, & Barrios, 1983).

As previously mentioned, counter-stereotypicality was measured by perceived competence and warmth on a scale from 1-7. In order to make comparisons to women who are considered being stereotypical, three articles featuring housewives were also included in the pre-study. An ANOVA revealed that the female leaders were perceived as more competent than the housewives, while they were simultaneously perceived as less warm (see table III). Furthermore, a paired samples t-test revealed that all female leaders were perceived as significantly more competent than warm, concluding that these female leaders are perceived to be counter-stereotypical (Fiske et al., 2002) (see Appendix E).

Table III

**Determination of Counter-Stereotypical Traits**

One-way anova on warmth and competence between female leaders and housewives

	Housewife $\mu_{diff}$	Female Leader 1 (no voice) $\mu_{diff}$	Female leader 2 (voice) $\mu_{diff}$
<b>Warmth</b>			
Housewife	-	-0.79***	-1.02***
Female Leader 1 (no voice)	0.79***	-	-0.22
Female Leader 2 (voice)	1.02***	0.22	-
<b>Competence</b>			
Housewife	-	1.56***	1.58***
Female Leader 1 (no voice)	-1.58***	-	0.02
Female Leader 2 (voice)	-1.56	-0.02	-

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ 

To make sure that the stimuli for group 2 and 3 differed in voice, while being equally attractive and likeable, an independent-samples t-test was conducted. To measure attractiveness, the scale used by Söderlund and Lange (2006) was adopted. Respondents were asked to agree, on a scale 1-7, on the following statements: *the person is beautiful; she looks good; this person is attractive*. To measure attitude toward the women, three statements on a seven-point semantic scale were used, developed by MacKenzie and Lutz (1989). The statements posed were: My opinion of the person portrayed is *Bad/Good; Pleasant/Unpleasant; Favorable/Unfavorable*. To measure voice, respondents were asked, on a scale 1-7, on the following statements: *this person is someone who gets to have her voice heard; gets to speak*.<sup>1</sup>

Table IV

**Overview of Pre-Study**

Independent samples t - tests on voice, attractiveness and likeability

	Mean Diff ( $\mu_{voice} - \mu_{no\ voice}$ )	F	t
<b>Voice</b>			
	0.41**	15.2	2.15
<b>Attractiveness</b>			
	-0.15	4.15	-0.69
<b>Likeability</b>			
	0.08	1.01	-0.42

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ 

<sup>1</sup> This scale was adapted in parallel consultation with Per Hedberg.

The independent samples t-test indicated that there were no differences on perceived attractiveness or likeability between the two stimuli groups, while perceived voice did differ between the groups. Moreover, a qualitative approach served as a base to select the specific pictures of each woman, considered as most visibly similar, which in turn were chosen for the main study.

Pre-study 1 established that the intended factors of counter-stereotypicality and voice were isolated and captured by the stimuli. Furthermore it determined which images that were to be used in each article.

### **3.5.2 Pre-Study 2**

A second pre-study was conducted to ensure that the timing of the experiment session was right as well as ensuring that the material and instructions were clear and concise. A pre-run of the experiment was conducted with students from SSE. No major issues were discovered during this occasion.

## **3.6 Experiment Procedure<sup>2</sup>**

The experiment was carried out on eight occasions between October 12th and October 23rd, 2015. All experiments took place in the facilities of the three different high schools and were carried out as a mandatory exercise during normal class hours, where the seating in the classroom was randomized.

To ensure that the experiment subjects did not make a connection between the stimuli and the Communication Game, the experiment was divided into separate parts (see model II) and it was emphasized in the introduction of each session that the experiment subjects were to participate in two separate studies, conducted by two different experimenters. After the introduction followed the priming part of the experiment (experiment part 1), which was described as a study on the topic: Efficient communication in media. Second, followed the SIB-paradigm part of the experiment (experiment part 2), which was described as a study in: How people communicate and understand each other. Additionally followed a third part (experiment part 3), which consisted of control questions to both experiment part 1 and 2, as well as demographic questions.

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<sup>2</sup> For an overview see Appendix A-D.

### 3.6.1 Preparation of Experiment Material

First, the material for all experiment parts was printed and discretely numbered before each experiment session, in order to keep track on each experiment subject throughout the process. Second, the material for experiment part 1 was collected into booklets, where the order of the three articles was randomized. Third, the booklets were sorted so that every third experiment subject was assigned the same stimuli, in order to make the experiment procedure more efficient. One could argue that this was not in line with the randomization principle, but since the classroom seating was randomized, one could consider such a distribution being randomized anyway.

The purpose of numbering the material for experiment part 2 was to link the stimuli to the SIB-paradigm in the analysis. In opposite to experiment part 1, the material was not collected into booklets, but divided into separate blocks. The first part consisted of the text on the specific company along with a handwritten note with information about the recipient (name, company, attitude). The second part consisted of a lined paper where participants were asked to write down the message to the recipient. The third part included a filler task, and the fourth was yet another lined paper, where participants were asked to recall the original text.

The purpose of numbering the material for experiment part 3 was to link the SIB-effect to demography and control questions. The material consisted of a booklet divided into three parts: questions about experiment 2, questions about experiment 1 and demographic questions.

### 3.6.2 Introduction to Experiments

The purpose of the introduction was to deliberately mislead the experiment subjects into believing that they were about to participate in two separate experiments, so they did not make a connection between the stimuli and the SIB-paradigm.

As such, each experiment session took off with a brief presentation of the experimenters and the (false) purpose of the experiment. The experimenters presented themselves as Master students writing their theses in two different programs at Stockholm School of Economics. Experimenter A was introduced as a student in Marketing, who was currently investigating efficient communication in media. Experimenter 2 was introduced as a student in Management, who was currently investigating how people communicate and understand each other. It was emphasized that both experimenters had combined their respective experiment sessions to help each other out, why the experiment subjects would participate in not just one, but two separate experiments.



### **3.6.3 Experiment Part 1: Priming**

The purpose of experiment part 1 was to expose experiment subjects to either neutral or stimuli material. Thus, as mentioned earlier, the experiment subjects were divided into three groups: one control group and two stimuli groups.

Following the abovementioned introduction, experimenter A (female) continued with more detailed instructions to experiment part 1. Experiment subjects were informed that they would receive a booklet consisting of three shorter articles with corresponding questions, and that they should start by reading through the instructions carefully. Furthermore the importance of being quiet, not comparing the booklets and answering each and every question (although some might be perceived as strange or difficult to answer) was emphasized.

The material was then distributed and it was said that they had 15 minutes to complete the experiment, and that a heads-up would be given when 5 and 1 minute(s) was remaining. When the time was up, experimenter A thanked the experiment subjects for their participation and handed over to experimenter B.

### **3.6.4 Experiment Part 2: The Communication Game**

The purpose of experiment part 2 was to investigate partly whether gender discrimination occurred in the control group, and partly whether the stimuli could counteract discrimination in accordance with the SIB-paradigm.

Experimenter B (male/female) began by introducing experiment part 2, which was described as a study in how people communicate and understand each other. The experiment subjects were informed that some students at their school already had learned about some industrial companies (i.e. public world topic) during a previous session, and that experimenter B thus knew about these students' attitude towards the companies. The experiment subjects were then informed that their fellow students were seated in another classroom during the experiment session and that they were to communicate with one of these students around a specific company.

Experiment part 2 was then divided into two different blocks. In the first block, experiment subjects (senders) received a handwritten note with information about the company they would communicate around (MNN), the receiver of their message (Emma), and her attitude towards the company (positive). The information was the same for all experiment subjects, irrespective of experiment group. Simultaneously, they received a booklet consisting of instructions and a text about the company, which they were asked to read through. They were informed that the

material would be removed after 4 minutes, and that they would then receive a lined paper where they should describe the company without mentioning its name so that the receiver could identify it. It was said that they had 6 minutes to complete this task.

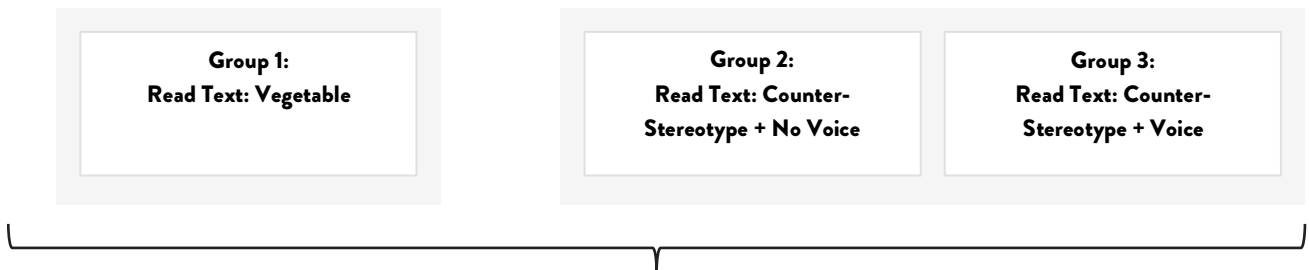
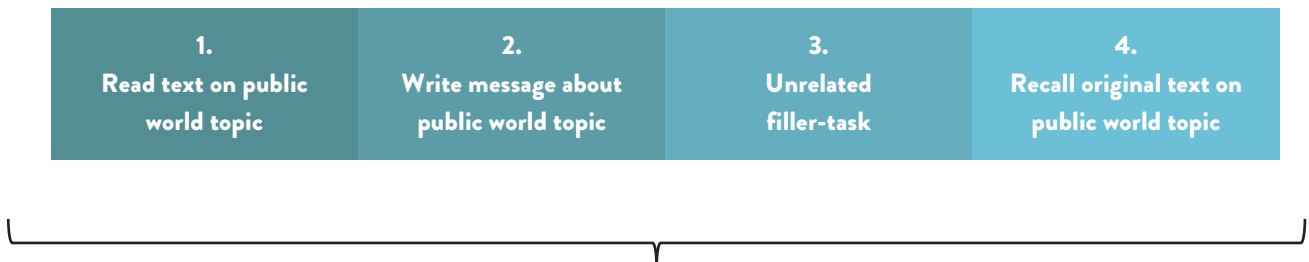
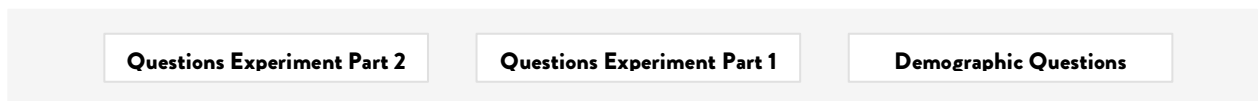
In the second block, Experimenter B collected all written messages and said that s/he would take them to the other students for identification. Experimenter B then left the room and an unrelated filler task was distributed, designed to take approximately 8 min. Meanwhile, Experimenter B was in another room reading through the written messages to detect any faulty ones (i.e. no message at all or totally irrelevant message). Experimenter B returned after 8 minutes to announce the results. The results were notified on a lined paper, handed out to each experiment subject individually, where it was indicated that Emma (handwritten) had successfully/not successfully identified the company MNN (handwritten). Simultaneously, experiment subjects were asked to recall the original text and write it down as detailed as possible within 6 minutes. When the time was up, the recall-texts were collected and experimenter B thanked for the students' participation.

### **3.6.5 Experiment Part 3: Control and Demographics**

The purpose of experiment part 3 was partly to collect demographic information, and partly to make sure that the experiment subjects participated in the experiment correctly. The SIB-effect should be questioned if the participants were able to identify the (real) purpose of the experiments, failed to identify the gender and attitude of the receiver, or if the receiver did not identify the company (Echterhoff et al, 2005). Experiment subjects received a booklet divided in three parts in the following order: (i) questions related to experiment part 2 (ii) questions related to experiment part 1 and (iii) demographic questions.

For an overview, see model II below.

## Model II

**Overview of Experiment Procedure****Experiment Part 1****Experiment Part 2****Experiment Part 3****3.7 Data Analysis**

Following the experiment sessions, the responses from experiment part 1 and 3 were entered into IBM SPSS Statistics Software. The material from experiment part 2, consisting of both written messages and recall-texts, were subsequently reviewed and assigned a score based on the coding template (see Appendix F). The template comprised the same amount of positive points and negative points (+/-8). Although the text was ambiguous, it was all in all neutral in its formation in accordance with previous studies (e.g. Hedberg, 2012). The material was reviewed by both experimenters separately and also by an independent coder, to guarantee objectivity. For each participant, the three scores formed an equally weighted mean value of the variables message valence (written message) and recall valence (recall-texts), which was then entered into the IBM SPSS Statistics file.

Experiment subjects who systematically failed to answer questions, or only participated in one experiment part, was list-wisely deleted since this study consists of two highly interdependent

parts (priming and SIB-effect). Hence, six experiment subjects were excluded from further data analysis. With the aim of testing the hypotheses and answering the research questions, the data from the final sample (N=164) was analyzed using IBM SPSS Statistics Software to calculate mean values, Cronbach's alpha, t-tests and OLS regressions with interaction effects.

### **3.8 Data Quality**

To draw any relevant conclusions, it was important that this study was performed in a trustworthy way, and that it examined what it set out to study. Related to this are the highly interrelated concepts of reliability and validity; if a study is not performed in a trustworthy way (i.e. reliability) one could not be sure that it examines what it sets out to study (i.e. validity) (Bryman & Bell, 2011).

#### **3.8.1 Reliability**

Reliability deals with issues regarding consistency of measures, and involves stability over time, internal reliability and inter-observer consistency (Bryman & Bell, 2011). As such, a high degree of reliability implies that a study, if repeated, could be expected to generate the same results.

Stability concerns whether a measure fluctuates over time. It can be dealt with by using a test-retest method, i.e. that a measure used in one occasion also is used at another occasion (Bryman & Bell, 2011). With respect to stability, the main issue in this study was the fact that the experiments were carried out on different occasions, and thus not under the exact same conditions in terms of, for instance, experimenters and facilities. To enhance stability, the experiments followed a detailed manuscript as well as a planned and standardized procedure. To further enhance the stability, the manuscript and procedure was adapted from previous experiments conducted by Hedberg (2012), Azadi and Torstensson (2013), and Jonsson and Zhao (2014).

Internal reliability concerns coherence in answers to multiple-item scales, which was highly important in experiment part 1 of this study. To enhance internal reliability, Cronbach's Alpha was consistently used when dealing with multiple-item scales measuring the concepts of competence, warmth and voice. In order to rule out any items that were unrelated to the concepts, a rule of thumb was that Cronbach's alpha should not be below 0,8 when computing an index of the multiple-item scales (Bryman & Bell, 2011).

Inter-observer consistency concerns subjective judgment of data. When conducting experiments with multiple researchers, there is a potential risk of poor consistency in their decisions (Bryman & Bell, 2011). Considering the nature of experiment part 2 of this study, this

notion was highly relevant. In order to enhance inter-observer consistency, a coding template was jointly developed and both authors were involved in the coding process.

### **3.8.2 Validity**

Validity deals with issues regarding the accuracy of measures, and involves measurement validity, internal validity, external validity and ecological validity (Bryman & Bell, 2011). A high degree of validity implies that the study do measure what it sets out to measure.

Measurement validity applies primarily to quantitative studies and concerns whether a measurement that is used to measure a concept, actually reflects that concept (Bryman & Bell, 2011). In this study, measurement validity mainly concerns whether structural gender discrimination in interpersonal communication can in fact be captured by the relationship between message valence and recall valence. Since the Communication Game and Saying-is-Believing paradigm is a commonly recognized method to measure discrimination in interpersonal communication (Higgins & Rholes, 1978; Higgins, 1992; Echterhoff et al., 2005; Hedberg, 2012), measurement validity can be considered high.

Internal validity concerns the issue of causality between dependent and independent variables, and a high internal validity implies that the examined effects are not caused by any external factors (Bryman & Bell, 2011). In this study, internal validity refers to the notion that the observed SIB-effect is in fact caused by the stimuli treatment. First, a classic experiment design was used, with a random assignment to stimuli groups or control group. As such, when comparing the results between the groups, any detected difference in the dependent variable (SIB-effect) is more likely to be attributable to the manipulated variable (stimuli). Second, to minimize the possibility of external factors influencing the results, all experiment sessions followed the same standardized procedure and manuscript. Third, the control questions included in experiment part 3, ensured that the subjects took part in the experiment as intended and that they did not make a connection between the experiment part 1 and 2.

Despite above-mentioned considerations, there are nevertheless some issues that may have affected the internal validity negatively,. It is possible that other external factors, such as the different experimenters or the questions asked during the different experiment sessions, may unintentionally have affected the results. Moreover, common for all experiments were the regular reminders of not communicating with each other and not using their phones. Still, it was difficult to keep the experiment subjects silent and focused. These issues may have interfered with the priming or participation in experiment part 2, which lowers the internal validity.

External validity concerns whether the results can be generalized beyond the specific research context. Although quantitative studies are considered suitable for generalizable results, there is still the issue of representative samples (Bryman & Bell, 2011). In this study, the choice of sample was motivated by the ambition to make comparisons with earlier studies. Adding to the external validity is the fact that students from different fields of study, from three different schools, with differing socio-economic background participated. Hence, the results of our study can be generalized to this specific experiment sample. The results should nevertheless be seen as an indication of the behavior of people in a similar environment. Since Sweden is perceived to be one of the world's most gender equal countries, to apply the findings to high-school students in less gender equal, or conservative, environments, might not be suitable. Last, the external validity should be improved since the stimuli consisted of three different female leaders, selected to be representative for the Swedish society.

Ecological validity concerns whether findings reflects real-life behavior and are applicable to people's everyday life (Bryman & Bell, 2011). Since the experiments were carried out in a laboratory setting, one could question the ecological validity of this study. However, since the laboratory setting was staged in a classroom setting, this effect could be diminished. Furthermore, one may question the use of written messages (offline) as a measure of discrimination in interpersonal communication, as this may be considered an unnatural way to communicate. However, this study aimed at capturing subconscious behaviors, which required some kind of measurement.

### **3.9 Ethical Considerations**

There are several ethical considerations that are brought in mind when collecting and analyzing the data. First, one of the main issues with this study was the issue of informed consent. That is, subjects should be informed about the research purpose before entering an experiment, to make a decision whether to participate or not (Bryman & Bell, 2011). Due to the nature of this study, it was not possible to disclose the real purpose in advance. However, the students were told that their participation was optional, and that they could choose not to participate. To lower the potential harm of the lack of informed consent, as well as the deception as a result of the misleading purpose of the study itself, de-briefing sessions are planned (c.f. Denscombe, 2004) in order to meet the students again and disclose and discuss the real purpose of the study and answer any potential questions. Second, in order to minimize the potential harm to the subjects when participating in the experiment, the participant's identity has been kept anonymous through the whole process (Denscombe, 2004). The students were are informed that their

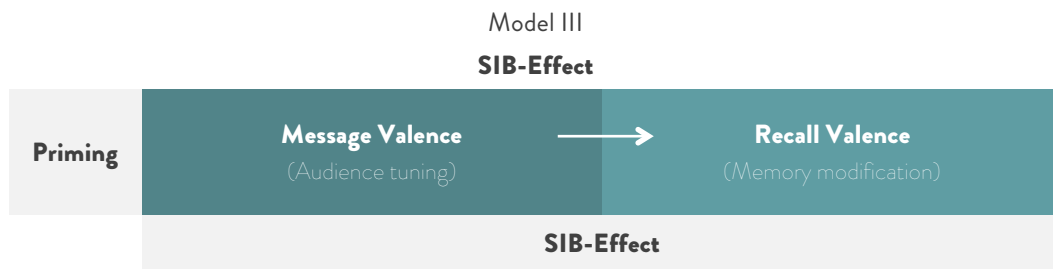
participation would be anonymous, and that the data would not be kept or used in any way outside the context of this thesis.

The final ethical concern regards the subject's right to privacy. When asking personal and demographic questions, which some individual may perceive as private or sensitive, confidentiality and informed consent are important (Bryman & Bell, 2011). Since both of these issues were addressed above, and demographic questions were kept to a minimum by only asking questions necessary for the study, the subjects right to privacy was taken into consideration.

## 4. RESULTS

*This chapter presents the empirical findings from the experiment sessions. It starts with a section where a baseline for gender discrimination within the framework of the SIB-paradigm is derived, followed by a section where strategies for counteracting gender discrimination is tested.*

The aim of this study was partly to derive a baseline for gender discrimination, and partly to identify ways in which to counteract gender discrimination within the framework of the SIB-paradigm. As such, experiment subjects were divided into three different groups, whose priming could be linked to the SIB-effect in the subsequent analysis of message-and recall valence. Experiment subjects (senders) communicated with a female receiver about a public world topic, and prior to experiment part 2 they were exposed to neutral (group 1) or counter-stereotypical stimuli without voice (group 2) or with voice (group 3).



In order to ensure that the experiment subjects participated in the experiment correctly, three control questions were asked in the end of the experiment session (Echterhoff et al., 2005). The questions controlled that respondents understood that (i) the message receiver was a female who (ii) had a positive attitude towards the topic, and (iii) succeeded in identifying the public world topic. Of the total sample (N=170), 1 participant did not recognize that it was a female recipient with a positive attitude, and 5 participants were excluded because of insufficient participation in experiment part 2. The final dataset thus consists of 164 participants.<sup>3</sup>

Table V  
**Group Matrix**  
Overview of experiment groups

Experiment Subjects			N=164				
Experiment Groups		Group 1 N=57		Group 2 N=55		Group 3 N=52	
Stimuli		Neutral		Counter - Stereotypical			
				No Voice		Voice	
Sender Gender		Female N=34	Male N=23	Female N=31	Male N=24	Female N=34	Male N=18

<sup>3</sup> For more detailed descriptives, see Appendix G.



#### 4.1 Deriving a Baseline for Gender Discrimination

The first hypothesis set out to examine the existence of an SIB-effect in the control group, and thus derive a baseline for gender discrimination. In order to test the first hypothesis (H1), that when communicating about a public world topic with female receivers, recall valence is not affected by message valence, the following Ordinary Least Squares (OLS) regression (Wooldridge, 2009) was used:

$$(a) \text{ Recall} = \beta_0 + \beta_1 \text{Message} + \mu$$

Recall (i.e. recall valence) is the dependent variable that is affected by the independent variable Message (i.e. message valence),  $\beta_0$  is the constant, and lastly,  $\mu$  is the residual in the regression. If the effect is statistically significant with a positive beta, H1 will be rejected.

Analyzing the entire control group reveals that message valence affected recall valence at a statistically significant level ( $p < 0.01$ ;  $R^2 = 0.19$ ) (see table VI). In line with the receivers' positive attitude towards the public world topic, the beta coefficient for message valence was positive. Furthermore, looking at sender gender in separate regressions revealed that message valence affected recall valence at a statistically significant level ( $p < 0.01$ ) only in female-to-female communication, but not in male-to-female communication. The explanation power for female senders is notably high ( $R^2 = 0.33$ ), indicating that there is a strong SIB-effect for female senders. Furthermore, the explanation power for male senders is notably low ( $R^2 = 0.02$ ), indicating a low correlation between message valence and recall valence for male senders.

Table VI  
Group 1: SIB-Effect in Neutral State  
OLS - regression message effect on recall

	Full Sample n=57	Female Sender n=34	Male Sender n=23
<b>Dependent Variable</b>	Recall	Recall	Recall
<b>Constant</b>	0.52	0.32	0.70
<b>Message</b>	0.41***	0.64***	0.18
	(0.11)	(0.15)	(0.15)
<b>Adjusted R<sup>2</sup></b>	0.19	0.33	0.02

*Unstandardized Coefficients; Standard errors in parenthesis; Beta without parenthesis; \*\*\* p<0.01, \*\* p<0.05, \*p<0.1*

In sum, as predicted, recall valence was unaffected by message valence when male senders communicated with a female receiver. However, recall valence was affected by message

valence for female senders communicating with a female receiver, opposite of what was hypothesized. H1 is thus partially rejected.

#### **4.1.2 Controlling for External Factors**

As mentioned in section 3.4.4, experimenter gender could be an unintended stimulus that might have influenced the results within recent studies within the SIB-paradigm (c.f. Hedberg, 2012; Azadi & Torstensson, 2013; Jonsson & Zhao, 2014). In order to control for external factors that might affect the results, experimenter gender was added as a controlling variable. When controlling for experimenter gender, it was found that experimenter gender, through an interaction effect with message valence, did not affect recall valence at a statistically significant level ( $p > 0.10$ ) neither for female nor for male senders (see Appendix H). Thus, it seems like experimenter gender has no impact on the outcome of the experiment for the control group.

## **4.2 Identifying Ways to Counteract Structural Gender Discrimination**

After each stimuli article followed questions regarding how the reader perceived the featured woman. The second set of questions aimed at disclosing the respondents' ranking of each woman regarding perceived competence and warmth. Furthermore, experiment subjects were asked to rank the women's perceived voice. These factors (competence, warmth and voice) were then used to identify ways in which to counteract discrimination.

Since the results from the control group did not reveal the baseline of gender discrimination as hypothesized, the conditions for the hypotheses H2a-c have shifted. While counter-stereotypicality, warmth and voice are still investigated as means to counteract discrimination for male senders, for female senders, they are studied as factors enhancing the already present SIB-effect. However, since the explanatory power for female senders already is relatively high in the control condition, enhancing the already strong SIB-effect for female senders should be difficult.

#### 4.2.1 Manipulation Checks

In order to ensure that the stimuli used in the first part of the experiment was perceived as intended, and thus that the stimuli had the intended effect on the experiment groups, a couple of manipulation checks followed each article as previously mentioned.

#### **Competence and Warmth**

Competence and warmth corresponds to what within gender research is described as stereotypical male and female traits. Typical male traits are related to competence, whereas typical female traits are related to warmth.

The aspect of perceived competence was measured by six different statements on a scale from 1-7. The competence index had a Cronbach's alpha of  $\alpha = 0.894$ , indicating a high internal consistency for the variable. The aspect of perceived warmth was measured by six different statements on a scale from 1-7. The warmth index had a Cronbach's alpha of  $\alpha = 0.924$ , indicating a high internal consistency for the variable. Thus, the statements were put into respective indexes.

To identify significant differences between perceived competence and warmth, a paired samples t-test on both stimuli groups (group 2 and 3) was performed. Results indicate that the mean difference between competence and warmth was significant ( $p < 0.01$ ). Thus, it can be concluded that both stimuli groups received exposure to counter-stereotypical women.

Table VII

#### **Group 2&3: Determination of Counter-Stereotypes**

Paired - samples t - test between warmth & competence

	Full Sample n=107	Group 2 n=55	Group 3 n=52
<b>Mean Competence (<math>\mu_1</math>)</b>	6.13	6.12	6.14
<b>Mean Warmth (<math>\mu_2</math>)</b>	4.38	4.78	4.57
<b>Mean Diff (<math>\mu_1 - \mu_2</math>)</b>	1.45***	1.34***	1.56***
<b>SD</b>	0.91	0.69	1.09
<b>t</b>	16.46	14.29	10.35
*** $p < 0.01$ , ** $p < 0.05$ , * $p < 0.1$			

Furthermore, an independent samples t-test revealed that there was no significant difference between the two stimuli groups with respect to perceived warmth ( $p>0.10$ ).

Table VIII  
**Group 2&3: Perceived Warmth**  
 Independent - samples t - test on warmth between group 2 & 3

	Full Sample (n=55 & n=52)	Female (n=31 & n=34)	Male (n=24 & n=18)
Mean Warmth Group 2 ( $\mu_1$ )	4.78	4.89	4.63
Mean Warmth Group 3 ( $\mu_2$ )	4.57	4.46	4.79
Mean Diff ( $\mu_1 - \mu_2$ )	0.21	0.44*	-0.16
F	0.01	1.59	3.69
t	1.16	1.87	-0.60
*** $p<0.01$ , ** $p<0.05$ , * $p<0.1$			

### Voice

The notion of voice was argued to be another counter-stereotypical trait that could affect discriminatory behavior and was measured by the statement: *This person is someone who gets to have her voice heard*, on a scale from 1-7.

Contrary to the pre-study, an independent samples t-test revealed no significant differences ( $p>0.10$ ) between group 2 and 3 on perceived voice. This could indicate that (i) the stimuli in itself had no effect or (ii) the developed scale intended to measure voice was not correct. Since there in fact are technical differences between the stimuli groups, it is inescapable to argue against the fact that in one case, the women are expressing their voices and in the other they are being spoken about. There is a possibility that the scale rather measures how the women are perceived in an everyday context rather than explicitly in the way they are depicted in the article. Thus, the notions of *voice* and *no voice* will still be used in the analysis.<sup>4</sup>

<sup>4</sup> For further reflection, see section 6.2, Critical Reflection.

Table IX

**Group 2&3: Perceived Voice**

Independent - samples t - test on voice between group 2 &amp; 3

	Group 2 & 3
Mean Voice Group 2 ( $\mu_1$ , n=54)	5.87
Mean Voice Group 3 ( $\mu_2$ , n=51)	5.94
Mean Diff ( $\mu_1 - \mu_2$ )	-0.07
F	0.10
t	-0.31

\*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ **4.2.2 Counter-Stereotypes and Discrimination**

On the basis of role congruity theory, H2a stated that: when communicating about a public world topic with female receivers, recall valence is not positively affected by the interaction effect of exposure to counter-stereotypical women and message valence.

The effect of exposure to counter-stereotypical women is investigated using the following OLS regression (b):

$$(b) \text{ Recall} = \beta_0 + \beta_1 \text{Message} + \beta_2 \text{Counter-Stereotypical} + \beta_3 (\text{Message} * \text{Counter-Stereotypical}) + \mu,$$

The independent variable counter-stereotypicality is coded as a dummy variable encompassing the effect of going from 0 = no stimuli (i.e. control group) to 1 = counter-stereotype (i.e. experiment group 2 and 3), and Message\*Counter-Stereotypical represents the interaction effect between message valence and exposure to counter-stereotypical women. If the interaction effect is statistically significant with a positive beta, H2a will be rejected.

When analyzing the effects on senders of being exposed to counter-stereotypical women, results reveal that exposure to counter-stereotypical women has no impact on recall valence through an interaction effect with message valence ( $p > 0.10$ ;  $R^2 = 0.18$ ). The relatively high  $R^2$  indicate that the model has an explanatory effect in predicting recall valence. Looking at sender gender in separate regressions does not reveal any statistically significant results for exposure to counter-stereotypical women, neither for women nor for men.

Table X

**Full Sample: Interaction Effect of Counter-Stereotypes**

OLS - regression on message effect on recall with and without interaction effect of counter - stereotypes

	Full Sample n=163		Female Sender n=98		Male Sender n=65	
Dependent Variable	Recall	Recall	Recall	Recall	Recall	Recall
Constant	0.50	0.52	0.44	0.32	0.60	0.70
Message	0.43***	0.41***	0.48***	0.64***	0.33**	0.18
	(0.07)	(0.11)	(0.09)	(0.16)	(0.19)	(0.15)
Counter-Stereotype	-0.15	-0.18	0.01	0.17	-0.41	-0.59
	(0.22)	(0.24)	(0.29)	(0.33)	(0.34)	(0.36)
Message*Stereotype (Interaction)		0.04		-0.23		0.34
		(0.145)		(0.20)		(0.23)
Adjusted R <sup>2</sup>	0.18	0.18	0.21	0.21	0.12	0.14

*Unstandardized Coefficients; Standard errors in parenthesis; Beta without parenthesis; \*\*\*p<0.01, \*\*p<0.05, \*p<0.1*

Thus, exposure to counter-stereotypical women has no significant effect on recall valence for experiment subjects communicating with a female receiver through an interaction effect with message valence. H2a is thus failed to be rejected.

#### 4.2.3 Warmth and Discrimination

On the basis of the SCM-model, H2b stated that: when communicating about a public world topic with female receivers after exposure to counter-stereotypical women, recall valence is positively affected by the interaction effect of warmth and message valence.

The effect of perceived warmth in counteracting discrimination is investigated using the following OLS regression (c):

$$(c) \text{ Recall} = \beta_0 + \beta_1 \text{Message} + \beta_2 \text{Warmth} + \beta_3 (\text{Message} * \text{Warmth}) + \mu,$$

The independent variable warmth is coded as a variable encompassing the effect of going from 0 = not at all warm to 7 = completely warm, and Message\*Warmth represents the interaction effect between message valence and perceived warmth. In order to empirically support H2b, the interaction effect should be significant with a positive beta.

When analyzing the effects of warmth, results reveal that there is a significant interaction effect on recall valence ( $p < 0.05$ ) and that the beta is positive for the entire sample. Furthermore, when adding the dimension of warmth, the explanatory power of the model increases ( $R^2 = 0.23$ ).

Looking at sender gender in separate regressions, the significant interaction effect stems from female senders, and the explanatory power also increases ( $p < 0.01$ ;  $R^2 = 0.27$ ). For men, the explanatory power decreases and there is no statistically significant interaction effect ( $p > 0.10$ ;  $R^2 = 0.14$ ).

Table XI

**Group 2&3: Interaction Effect of Warmth**

OLS - regression on message effect on recall with and without interaction effect of warmth

	Full Sample n=107		Female Sender n=65		Male Sender n=42	
Dependent Variable	Recall	Recall	Recall	Recall	Recall	Recall
Constant	0.78	1.22	0.70	1.21	1.01	0.93
Message	0.45***	-0.67*	0.41***	-0.89***	0.51***	0.66
	(0.09)	(0.38)	(0.11)	(0.40)	(0.17)	(1.07)
Warmth	-0.09	-0.20	-0.04	-0.16	-0.19	-0.17
	(0.14)	(0.14)	(0.18)	(0.17)	(0.24)	(0.27)
Message*Warmth (Interaction)		0.24**		0.29***		-0.30
		(0.08)		(0.09)		(0.22)
Adjusted R <sup>2</sup>	0.17	0.23	0.15	0.27	0.16	0.14

*Unstandardized Coefficients; Standard errors in parenthesis; Beta without parenthesis; \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$*

Thus, investigating subjects who were exposed to counter-stereotypical women and having them rate the women's perceived warmth, reveals that warmth has a significant effect on recall valence for subjects communicating with female receivers through message valence as an interaction effect ( $p < 0.05$ ), but only for female senders. H2b is thus partially rejected.

#### 4.2.4 Voice and Discrimination

Based on social role and signaling theory, H2c stated that: when communicating about a public world topic with female receivers after exposure to counter-stereotypical women, recall valence is either positively or negatively affected by the interaction effect of voice and message valence.

The effect of exposure to counter-stereotypical women expressing their voice is investigated using the following OLS regression (d):

$$(d) \text{ Recall} = \beta_0 + \beta_1 \text{Message} + \beta_2 \text{Voice} + \beta_3 (\text{Message} * \text{Voice}) + \mu,$$

The independent variable voice is coded as a dummy variable encompassing the effect of going from 0 = no voice (i.e. group 2) to 1 = voice (i.e. group 3), and Message\*Voice represents the

interaction effect between message valence and exposure to counter-stereotypical women with voice compared to counter-stereotypical women without voice. In order to empirically support H2c, the interaction effect should be significant with a positive or negative beta.

Results revealed that recall valence was negatively affected by the interaction effect of message valence and exposure to counter-stereotypical women who are expressing their voice (beta=-0.46;  $p<0.05$ ). Looking at sender gender in separate regressions, the significant interaction effect stems from female senders, but the explanatory power remains unchanged ( $p<0.10$ ;  $R^2=0.18$ ). For men, the explanatory power decreases and there is no statistically significant interaction effect ( $p>0.10$ ;  $R^2=0.18$ ).

Table XII

**Group 2&3: Interaction Effect of Voice**

OLS - regression on message effect on recall with and without interaction effect of voice

	Full Sample n=107		Female Sender n=65		Male Sender n=42	
<b>Dependent Variable</b>	Recall	Recall	Recall	Recall	Recall	Recall
<b>Constant</b>	0.31	0.19	0.56	0.42	-0.02	-0.09
<b>Message</b>	0.44**	0.72***	0.41***	0.69***	0.50***	0.73***
	(0.09)	(0.15)	(0.11)	(0.19)	(0.17)	(0.24)
<b>Voice</b>	0.08	0.33	-0.12	0.14	0.33	0.53
	(0.27)	(0.28)	(0.35)	(0.38)	(0.42)	(0.447)
<b>Message*Voice (Interaction)</b>		-0.46**		-0.43** <sup>†</sup>		-0.46
		(0.19)		(0.23)		(0.34)
<b>Adjusted R<sup>2</sup></b>	0.17	0.21	0.18	0.18	0.20	0.18
Unstandardized Coefficients; Standard errors in parenthesis; Beta without parenthesis; *** $p<0.01$ , ** $p<0.05$ , * $p<0.1$ <sup>†</sup> $p=0.088$ , conventional standards $p<0.05$ but often is $p<0.1$ acceptable. Should be seen as significant.						

Recall valence is negatively affected by the interaction effect of message valence and exposure to counter-stereotypical women expressing their voice (compared to being talked about), only in the case of female-to-female communication whereas male-to female communication was unaffected. Thus, H2c is partially rejected.

As mentioned earlier, women could suffer from a backlash effect when expressing their voice. However, it is of interest to see whether this backlash effect is also evident when counter-stereotypical females are portrayed being talked about by others. When isolating the effect of being exposed to women who are being spoken about (group 2) in a separate OLS regression,



results reveal that exposure to women who are being spoken about generates a positive effect on recall valence via an interaction with message valence ( $p < 0.10$ ;  $R^2 = 0.26$ ). Furthermore, decomposing on sender gender reveals that the positive interaction effect was present only in male-to-female communication where the explanatory power also increased ( $p < 0.10$ ;  $R^2 = 0.19$ ). For female-to-female communication, the interaction effect was not significant, and the explanatory power ( $R^2 = 0.32$ ) decreased slightly. Why the interaction effect for women was not significant is to be seen in the light of the high  $R^2$  in the control group, which leaves a narrow window for improvement.

Table XIII

**Group 1&2: Interaction Effect of No Voice**

OLS - regression on message effect on recall with and without interaction effect of voice

	Full Sample n=107		Female Sender n=65		Male Sender n=42	
<b>Dependent Variable</b>	Recall	Recall	Recall	Recall	Recall	Recall
<b>Constant</b>	0.43	0.52	0.30	0.32	0.59	0.70
<b>Message</b>	0.52***	0.41***	0.67***	0.64***	0.33**	0.18
	(0.09)	(0.11)	(0.11)	(0.15)	(0.13)	(0.15)
<b>No Voice</b>	-0.19	-0.33	0.13	0.09	-0.57	-0.79*
	(0.25)	(0.24)	(0.32)	(0.35)	(0.39)	(0.40)
<b>Message*No Voice (Interaction)</b>		0.31*^		0.05		0.55*^
		(0.18)		(0.23)		(0.29)
<b>Adjusted R<sup>2</sup></b>	0.25	0.26	0.34	0.32	0.14	0.19
<i>Unstandardized Coefficients; Standard errors in parenthesis; Beta without parenthesis; *** <math>p &lt; 0.01</math>, ** <math>p &lt; 0.05</math>, * <math>p &lt; 0.1</math>  ^ <math>p = 0.058</math>; ^ <math>p = 0.088</math>; conventional standards <math>p &lt; 0.05</math> but often is <math>p &lt; 0.1</math> acceptable. Should be seen as significant. </i>						

In sum, voice has a negative effect on recall valence through an interaction effect with message valence, in female-to-female communication. Interestingly, further analysis reveal that exposure to women who are being spoken about has a positive effect on recall valence through an interaction effect with message valence for men, and does not affect the already strong SIB-effect for of women.

### 4.3 Summary of Results

Table XIV  
Summary of Hypotheses Testing

Hypothesis	Empirical Evidence	Verdict
<b>H1</b>	Partially Rejected	When communicating about a public world topic with female receivers, recall valence for female senders is affected by message valence, however not for male senders.
<b>H2a</b>	Failed to be Rejected	When communicating about a public world topic with female receivers, recall valence is not affected by the interaction effect of exposure to counter - stereotypical women and message valence.
<b>H2b</b>	Partially Rejected	When communicating about a public world topic with female receivers after exposure to counter - stereotypical women, recall valence for female senders is positively affected by the interaction effect of warmth and message valence, however not for male senders.
<b>H2c</b>	Partially Rejected	When communicating about a public world topic with female receivers after exposure to counter - stereotypical women, recall valence for female senders is negatively affected by the interaction effect of voice and message valence, whereas for male senders, voice has no effect.

## 5. ANALYSIS

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*In this chapter, the previous empirical findings are analyzed in the light of the theoretical framework and methodology. A more general discussion will follow in the next chapter.*

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The overall purpose of this thesis was to find ways in which media can contribute to counteracting gender discrimination. In order for this thesis to be of relevance and of substantial value, the first aim was to establish that women in fact are being discriminated against in interpersonal communication regarding public world topics. The second aim was to further investigate the link between gender discrimination and counter-stereotypicality, warmth and voice, to find ways in which to diminish discriminatory behavior.

The Saying-is-Believing (SIB) paradigm was applied as a method to measure gender discrimination in interpersonal communication. An SIB-effect occurs when senders tune their messages in accordance with the attitude of the receiver, which in turn affects their recall of the original text. When the SIB-effect is consequently missing for receivers of a specific social group, one can talk about structural discrimination in the sense that the group's voice is not likely to be represented in the social beliefs that are continuously being produced and reproduced in society (Hedberg, 2012).

### 5.1 A New Baseline for the SIB-Paradigm

Since the findings from earlier studies within the framework of the SIB-paradigm point in different directions (c.f. Hedberg, 2012; Azadi & Torstensson, 2013; Jonsson & Zhao, 2014), the point of departure for this study was to establish a baseline for gender discrimination. As such, experiment subjects in the control group of this study communicated with a female receiver about a public sphere topic. It was hypothesized that female receivers would not be able to produce a memory modification amongst neither male nor female senders, in line with previous findings by Hedberg (2012) and Azadi and Torstensson (2013).

An SIB-effect was detected in the control group since message valence affected recall valence at a statistically significant level. Further analysis revealed that this effect was significant only in the case of female-to-female communication, but not for male-to-female communication. This indicates that while men seem to be discriminating against women in society at large, women do not, in line with the findings by Jonsson and Zhao (2014). Hence, this study fails to empirically support the findings by Hedberg (2012) and Azadi and Torstensson (2013).

The lack of SIB-effect in male-to-female communication strengthens the notion of inter-group bias (Echterhoff et al, 2005), which posits that senders are less prone to be influenced by members of their out-group. This points to the fact that male senders categorized the female receiver as a woman (out-group) rather than as a fellow student (in-group). Hence they were not able, or willing, to establish a shared reality with the female receiver, and thus does not let her affect their memory (Echterhoff, Higgins & Levine, 2009).

The strong SIB-effect in female-to-female communication contradicts the system justification principle (e.g. Jost et al., 2004), which suggests that disadvantaged groups should subconsciously internalize their inferior position and fall into the line of discrimination. Considering the findings by Jost and Hunyady (2002), who suggested that system justification is moderated by the degree to which the social order is perceived as legitimate, this study indicates that women may not perceive the traditional gender roles to be fair and justified (Pratto, Sidanius, & Levin, 1999). Three factors have been identified to provide possible explanations to these results: the immediate context at the time of the experiment; the social environment; and the changing media climate.

First, with respect to the immediate experiment context, Jonsson and Zhao (2014) reasoned that the female-dominated context in which the experiments were carried out could explain the SIB-effect amongst female experiment subjects. As suggested by Blair (2002), the presence of two female experimenters could be strong but yet unintended stimuli, which could in turn reduce prejudice and discriminatory tendencies. However, the manipulation of experimenter gender in this study revealed no effect of experimenter gender. Since gender discrimination in female-to-female communication has been observed in the presence of (i) one male experimenter (Hedberg, 2012), (ii) one female and one male experimenter (Azadi & Torstensson, 2013), and (iii) two female experimenters (Jonsson & Zhao, 2014), one could speculate that it is rather the liking of the experimenters rather than their gender that affects the outcome of the experiment (Lowery, Hardin, & Sinclair, 2001).

Second, the results might mirror an ongoing societal change. A vast majority of women in Sweden have breadwinner roles and are (slowly) taking on more and more leading positions. A manifestation of this can be found in the experiment sample of this study, where 63% of the participants reported that their mothers held a university diploma. As such, one might wonder whether the traditional gender roles (e.g. Eagly & Crowley, 1986) still exist. Considering the fact that people encounter high-achieving women on a daily basis, and that stereotypes reflect what people see others doing in their everyday life (Eagly & Steffen, 1984), it is highly credible that the

perception of the female stereotype and what it entails has been subject to change. The more dynamic female stereotype could have diminished the system-justification tendencies among female senders in this study. Since a shared reality is more likely to occur in communication between two members of the same group, the female senders should be expected to let the female receivers affect their memory (Echterhoff, Higgins & Levine, 2009).

Third, the strong SIB-effect in female-to-female communication could be a manifestation that media in itself is changing. With the growing digitization and the emergence of social media, we have access to far more sources, and are freer to choose what type of media we want to interact with, compared to only a few years ago (Findahl & Davidsson, 2015). We no longer have to rely solely on the daily newspapers or the ten o'clock news, since it is much easier to go online and explore media for ourselves. In recent years, the public debate regarding gender issues has gotten a lot more attention than before (T Gunnarsson 2015, pers. comm., October 15). Since members of dominant groups strive to maintain the status quo and members of subordinate groups strive to attenuate it, especially if they perceive the status quo as illegitimate (Sidanus & Pratto, 1999; Jost et al., 2004), one might on a speculative note wonder whether women are more concerned with the issue of gender discrimination and therefore seek up such media content online, whereas men do not. Hence, the public debate could, to a higher extent, have influenced female experiment subjects in this study, letting it shape their perception of reality and gender roles (Bandura, 1971). This can be an explaining factor why a new baseline seems to be evident, as compared to Hedberg (2012) and Azadi and Torstensson (2013), already after a couple of years.

To conclude, that this study did not disclose the hypothesized baseline of gender discrimination shine light on the complexity of inter- and intragroup relations. That is, it seems like there are different forces driving discrimination, depending on whether you are in a dominant or subordinate group. Since no discrimination in female-to-female communication was found, the conditions for the following analysis have shifted. While it is still relevant to analyze counter-stereotypicality, warmth and voice as potential means to counteract discrimination in male-to-female communication, for female-to-female communication these factors will rather be analyzed as means to enhance the already present SIB-effect.

## **5.2 Confirming Warmth as an Explanatory Factor**

Exposure to images of female counter-stereotypes has been suggested a viable method to reduce discriminatory tendencies (Dasgupta & Asgari, 2004; Good et al., 2010; Azadi & Torstensson, 2013). On the other hand, a recent study by Jonsson and Zhao (2014)

disconfirmed counter-stereotypicality as an explaining factor in counteracting gender discrimination, in line with the dynamics behind the backlash-effect (Rudman & Glick, 2001; Rudman et al., 2012). Based on the SCM, it was suggested that warmth should carry more weight in the affective evaluation of people and should thus determine the direction of discrimination. As such, women who are perceived as competent but cold (counter-stereotype) are likely to suffer from backlash whereas women who are perceived as both competent warm are likely to be supported (Cuddy et al, 2007).

It was therefore hypothesized that when communicating about a public world topic with female receivers, recall valence should not be positively affected by the interaction effect of exposure to counter-stereotypical women and message valence (H2a). On the other hand, it was hypothesized that when communicating about a public world topic with female receivers after exposure to counter-stereotypical women, recall valence is positively affected by the interaction effect of warmth and message valence (H2b).

As expected, in contrast to the findings by Azadi and Torstensson (2013), results revealed that exposure to counter-stereotypical women did not have an impact on recall valence via an interaction effect, neither for female nor male senders. Furthermore, looking at the component of warmth in isolation revealed that perceived warmth had a significant impact on recall valence through an interaction effect with message valence, however only in female-to-female communication. Hence, empirical evidence was found for H2a, while H2b was only partially supported.

In line with the reasoning of Cuddy et al. (2008), these results point to the fact that perceived warmth is often judged before competence, and that warmth predicts the valence (positive or negative) of interpersonal judgment. As such, it seems like the more univalent emotions evoked (i.e. highly competent and warm); the more supportive behavior is expressed, and vice versa. However, this effect was only prevalent in female-to-female communication, which will be covered below.

In this experiment, why warmth carried explanatory power in reducing only women's discriminatory tendencies, and not men's, could be explained by intergroup theory. That is, in-group members should be more prone to rate other in-group members higher on both dimensions of competence and warmth, compared to out-group members (Cuddy et al., 2008). Hence, one could argue that it was closer at hand for female, compared to male, experiment subjects, to perceive female leaders as both highly competent and highly warm and thus elicit univalent emotions, leading to enhanced supportive behavior.

In sum, these findings indicate that the suggested method to counteract discriminatory behavior through exposure to counter-stereotypical women (Dasgupta & Asgari, 2004; Good et al., 2010; Azadi & Torstensson, 2013) is in fact mediated by perceived warmth. It could be so that, depending on how the counter-stereotypical stimulus is designed, different levels of warmth are elicited, which in certain cases could dampen the backlash-effect. This notion is also highly relevant for the next part of the analysis.

### 5.3 The Effect of Voice in Media Representation

Building upon social learning- and signaling theory, arguing that voice should be seen as a non-traditional female characteristic, it was hypothesized that exposure to counter-stereotypical women expressing their own voices should be a variable of either positive or negative explanatory power in counteracting gender discrimination.

The results revealed that exposure to women expressing their voices, compared to being talked about, had a negative effect on recall valence through an interaction effect with message valence. Further analysis revealed that the effect was only present in female-to-female communication. As such, it can be concluded that voice carries negative explanatory power in gender discrimination, at least for women, why H2c was partially empirically supported. This implies that exposure to women expressing their voices tend to make women more prone to discriminate against other women. However, it has no effect on men's discrimination.

Interestingly, it was furthermore found that the effect of exposure to women who are being spoken about had a positive effect on recall valence through an interaction effect with message valence in male-to-female communication. In addition, women's already strong SIB-effect remained unaffected.

These findings indicate that exposure to counter-stereotypical women who are being spoken about, from hereon called *no voice*, is a way to counteract structural gender discrimination. On the other hand, exposure to women who are expressing their own voices seems to be a trigger for gender discrimination. Thus, we can conclude that the notion of media representation is very complex. Two possible explanations to these results have been identified, namely (i) the person expressing his or her voice in the texts and (ii) how voice is expressed. Interestingly, the dynamics seem to differ between male and female senders, which we will go through below.

First, why there was a positive interaction effect for male senders in the *no voice* scenario could be explained by the fact that the source talking about the women was a man. According to social dominance theory (Pratto, Sidanius, & Levin, 1999; Hewstone et al, 2002), men have a

higher social dominance orientation than women, and thus are more prone to exhibit in-group bias. When another man is talking about a woman and her company, one could assume that the person reading the text interpret this as a signal that the man considers the woman an in-group member and is confident in her being epistemically reliable (Kirmani & Wright, 1989). This could have spurred a sense of shared reality (Echterhoff, Higgins & Levine, 2009) and positively affected the SIB-effect in the subsequent communication game for the male senders.

Furthermore, why the interaction effect in the *no voice* scenario was not significant in female-to-female communication could probably be explained by to the high  $R^2$  in the control group, which left little space for improvement. Nevertheless, these findings strengthen the reasoning in section 5.1. That is, it seems like gender roles are changing since exposure to this kind of counter-stereotypical women diminished men's discrimination and did not lead to a backlash effect amongst women.

Second, in the comparison between the *no voice* and the *voice* scenario, there was a negative interaction effect. That the women were being directly cited when talking about their own companies could have been interpreted by the senders as a signal that the journalist does not agree with the women's statements, and thus want to create a distance between him/herself and the women in the articles (Kirmani & Wright, 1989). This could have inhibited the establishment of shared reality (Echterhoff, Higgins & Levine, 2009) and negatively affected the SIB-effect in the subsequent communication game. Why this was significant only for women, could be explained by the fact that women tend to be more sensitive to self-promoting women than men are, and are thus more likely to punish other women for violating traditional gender roles, as suggested by Rudman (1998). A more effective way to depict the women might have been to use the literary device of free indirect discourse which is a type of narration where the depicted person's words are filtered through a third-person narrator, i.e. the journalist, instead of only using direct citations.

Furthermore, an explanation to why men's discrimination was unaffected between the *no voice* and *voice* scenario may be found in the fact that men did not perceive a difference in warmth between the stimuli groups. Since female senders perceived women who expressed themselves as significantly colder than those who were being talked about, it seems like the previously mentioned backlash effect is contingent on perceived warmth (Cuddy et al, 2007). That is, perceived warmth seems to be an important factor in order for female leaders to be evaluated positively. However, since male leaders were not included in the stimuli, one cannot



rule out the possibility that warmth in fact may be a universal emotion, that is, that warmth also is important when judging male leaders.

In sum, these findings imply that it may not be explicit voice, but the corresponding perception of warmth, that is the underlying factor behind the backlash-effect of women expressing their voices. Nevertheless, it seems like women are still, to some extent, being evaluated according to traditional gender roles (Eagly & Crowley, 1986) in the sense that they suffer from reprisals when expressing their voices. On the other hand, it seems like gender roles are changing, since it was found that exposure to counter-stereotypical women who are being talked about seems to counteract discrimination.

## 6. DISCUSSION

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*This chapter summarizes, discusses and reflects upon the results and research questions of this study as well as their implications for media and society at large. Lastly are interesting directions for further research suggested.*

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### 6.1 Conclusion

The purpose of this study was to investigate whether women are structurally discriminated against in interpersonal communication regarding public world topics (RQ1), and if so, whether this kind of discrimination can be affected by exposure to counter-stereotypical portrayals of women (RQ2).

Since the results from earlier studies within the framework of the SIB-paradigm point in different directions (c.f. Hedberg, 2012; Azadi & Torstensson, 2013; Jonsson & Zhao, 2014), RQ1 is set out to investigate whether women are being discriminated against in the public sphere, or not. The intention was thus to determine a baseline for gender discrimination, which RQ2 could then build upon. Results from this study revealed a statistically significant SIB-effect only among female experiment subjects in the control group. This means that men seem to discriminate against women in the public sphere, whereas women do not. Hence a new baseline for gender discrimination, as suggested by Jonsson and Zhao (2014), was empirically supported, opposite of what was hypothesized.

The point of departure for RQ2 is thus to investigate whether exposure to counter-stereotypical portrayals of women can: (i) counteract men's discrimination against women, and (ii) enhance the already present SIB-effect among women.

In a first step, results revealed that mere exposure to counter-stereotypical women does not carry explanatory power in counteracting men's discrimination against women, neither is it a factor enhancing the already present SIB-effect among women. However, when digging deeper into the concept of counter-stereotypes, isolating the dimensions of warmth and voice, some interesting results were found which indicate that it actually is possible to counteract gender discrimination via exposure to counter-stereotypical women.

When analyzing the dimension of voice, it was found that exposure to counter-stereotypical women in fact did have an explanatory power, both positive or negative, in counteracting discrimination against women in the public sphere. That is, women were more prone to exhibit discriminatory tendencies when being exposed to counter-stereotypical women expressing their

own voices, while men's discrimination was unaffected by this stimuli. On the other hand, men were less prone to exhibit discriminatory behavior when being exposed to counter-stereotypical women being talked about by others, while women's discrimination was unaffected by this stimuli.

These findings could be explained when analyzing the dimension of warmth. Female experiment subjects perceived the women expressing their own voice as significantly colder than the women being talked about. Moreover, it was found that exposure to counter-stereotypical women, who are also perceived as warm, can make women less prone to discriminate against other women, but that warmth had no effect on men's discrimination.

In sum, according to the findings in this thesis, women are being structurally discriminated against in interpersonal communication regarding public world topics (RQ1), but only by men. Furthermore, this kind of discrimination can be counteracted by exposure to counter-stereotypical women (RQ2), but only under certain circumstances.

## **6.2 Critical Reflection**

Due to a slim time frame, this study was characterized by some limitations that are important to discuss. First, the SIB-paradigm is one of many ways to investigate gender discrimination. However, the built up knowledge around the paradigm at SSE and the previously ambivalent results (see Hedberg, 2012; Azadi & Torstensson 2013; Jonsson & Zhao, 2014) suggested that the SIB-paradigm was a suitable point of departure.

Second, the overall purpose of this thesis was to find ways in which media can help in counteracting gender discrimination, why creating compatible stimuli was essential to draw valid conclusions. Although a great effort was made to develop suitable stimuli, it would have been optimal to conduct an additional pre-study to (i) investigate what characterizes a counter-stereotypical woman for the experiment subjects, and (ii) to find a suitable way of manipulating voice. As mentioned, the measurement scale of perceived voice was not capturing the technical differences between the stimuli groups. However, it is inescapable to argue against the fact that in one case, the women are expressing their voice and in the other case, they are being spoken about. Also, the stimuli were checked for potential external differences like attractiveness and likeability, ruling out the potential of other explanatory factors between the stimuli. Adding to this, because of the time constraint, the pictures used were chosen from already existing photographs and slightly altered to be as similar as possible. Although checked for

attractiveness and likeability, since we did not fabricate the pictures ourselves, there might have been other cues differing between the images.

Third, since the SIB-paradigm builds upon shared reality, it was of great importance that experiment subjects participated in the experiment correctly. Control questions were asked and no participant guessed the actual purpose of the study and the vast majority paid attention to the information about the receiver. However, it cannot be ruled out that the level of engagement of the participants did not affect this study. Conducting the experiment in a more controlled setting could be a way of working around this, but at the cost of external validity.

Fourth, the subjective nature of preparing the data calls for consideration. Identical communication material was used in line with previous studies (Hedberg, 2012; Azadi & Torstensson 2013; Jonsson & Zhao, 2014). A coding template was developed to ensure consistency across subjects, however it was subjectively created. Optimally should a word processing algorithm been used, but it is important to note that the main issue in the coding process entails consistency, so that the correlation between message and recall valence can be measured for each participant.

Fifth, there are some limitations related to the sample itself. While previous studies have focused on students from high schools in the Stockholm city center (Azadi & Torstensson 2013; Jonsson & Zhao, 2014), this study expanded the scope to also include suburban high schools with somewhat differing socio-economic background and who are enrolled in different fields of studies. Thus, this study had a slightly broader sample compared to previous studies in this field, and since the results did not differ between the schools, expanding the scope increased external validity. Nevertheless, the results of this study should be representative of, and generalizable for, just high school students in the Stockholm area. However, since it is in young ages that people form their norms and perceptions of society (Bussey & Bandura, 1999) and these people will live with these norms for the rest of their lives, this is an important sample to understand.

Furthermore, a great effort was made to achieve a sufficiently large sample, but eight occasions was the maximum number of experiments that fit into the time frame. To have more than 30 students present during an experiment would make the logistics difficult and endanger the already semi-controlled setting. A sample size of ( $n=163$ ) is considerably larger than previous studies and the sample should still be seen as serving indications and tendencies, but it is nonetheless too small to draw any definite conclusions from.

### 6.3 General Discussion and Contribution

The point of departure for this study was the public debate about gender equality, which has gained traction in recent years. The Swedish business world has experienced an immense governmental pressure to encompass gender-equal board rooms, why we have seen a pivotal increase in the number of women holding positions in the boards of Swedish stock market companies (AllBright, 2015). However, a strong opinion argues that media is not taking its responsibility in reflecting the on-going societal change since women are seen in media to a lesser extent than men, and are portrayed in a less dynamic manner (e.g. Rättvisaren, 2015; Edström & Jacobsson, 2015). When women are rarely seen in media, the likelihood of being reduced to a stereotype and being evaluated against traditional gender roles increases. As a result, although women today are being welcomed into the public sphere, they still do not get to play by the same rules as men and suffer from reprisals for violating traditional gender roles. This is a form of subconscious discrimination that is difficult to legislate against or consciously control.

The motivation behind this study was thus to validate the public opinion, that is, if women really do play by different rules in public world contexts and if they are discriminated against. Furthermore, do more (counter-stereotypical) women need to be seen in media, since it could counteract gender discrimination?

As suggested by Jonsson and Zhao (2014), a new baseline for discrimination was detected. That is, men, but not women, seem to discriminate against women in a public world context. Furthermore, this study was the first of its kind that found a way to counteract men's discriminatory behavior. That is, exposure to counter-stereotypical women who are being spoken about. In addition, this stimulus did not lead to a backlash effect among women. On a more negative note, exposure to counter-stereotypical women expressing their voices had a negative impact on women's discriminatory tendencies. In sum, this indicates that the dynamics behind media representation of counter-stereotypical women is more complex than previously thought.

The findings of this study indicate that traditional gender roles still prevail, since (i) discrimination against women in a public sphere context exist among men in a natural state and (ii) women who are violating traditional gender roles by expressing their voices seem to be suffering from a backlash effect (Rudman, 1998). On a more positive note, the findings also indicate that traditional gender roles seem to be changing. It was found that (i) women did not discriminate against other women in a natural state, and (ii) exposure to counter-stereotypical women who

are being talked about diminished men's discriminatory behavior, while it did not affect women's already non-existing discrimination.

As such, it seems like the female stereotype is increasingly encompassing a wider range of traits, including not only stereotypically female but also male characteristics, as suggested by Diekmann and Eagly (2000). This is not surprising considering the increasing amount of women entering the public sphere. Furthermore, this indicates that automatic stereotypes and prejudice are not fixed and inescapable but rather influenced by the context (Blair, 2002; Reid et al, 2009) and that women are not necessarily evaluated upon their prescribed gender but could for instance also be evaluated upon their role of leaders. Hence, it is important to note that it is not only women's responsibility to take place in the public sphere; men also need to let women in and recognize them as valued in-group members, as suggested by Reid et al. (2009). In light of the reasoning by Eagly, Johannesen-Schmidt, and Van Engen (2003), these findings are not only encouraging for female leadership in large, but also the public world in general, since female leadership styles are often more effective than those of male, which in turn could foster long-term organizational success.

Since these findings are based on a one-time exposure, it raises the question of what effect a repeated exposure, over a longer period of time, could have on society? If women are talked about to a greater extent in public world contexts, it seems like also men's discrimination could be counteracted in a natural state. Furthermore, it was found that women suffer from a backlash effect when expressing their voices. Since our perception of the world tend to be shaped by what we see, hear and read (Bandura, 1971), it is likely that more frequent media encounters with female voices on public world matters could expand the perception of women, going away from stereotypes, and thus diminish the risk of backlash effects.

Therefore, we open up for the possibility that media plays an important role in driving the change of accepting a more holistic view of gender roles, as suggested by the public opinion. That is, a more frequent and dynamic media representation of women could counteract gender discrimination in the long run. Stretching this argument, the responsibility does not solely lie with media; we all have the opportunity of interacting with media on a daily basis. Thus, we have the power of actively be a part of shaping the media climate for the better, by, for instance, creating media content ourselves or by thoughtfully choose what articles we share with our peers.

In sum, the findings of this study show that the area of interpersonal communication is important to investigate since it is a social act we all take part in each day. Furthermore, since high school students are in a phase of their life when norms are being created and shaped, it is

of great importance to understand how they interpret what they see in media and how they transform this into emotions and actions. If we do not find ways to let women into the public debate, we also exclude half of the population from being able to contribute with knowledge when shaping our view of the world. Thus, this study is of importance in both raising awareness of the problems, but also in guiding towards potential techniques to solving these issues.

## 6.4 Practical Implications

Based on this study, we can conclude that media does not take its responsibility in reflecting the on-going societal change since women are still discriminated against in public world topics and since repeated exposure to counter-stereotypical women could counteract such discrimination. However, we want to emphasize that this does not only concern news agencies, production companies and advertising agencies but also pretty much any company that engages in external communication. To stretch it, this responsibility lies with anyone holding a social media account. Nevertheless, the implications below are formulated in a way to suit media managers.

A first step is to *get educated*. Since the findings of this study indicate that exposure to portrayals of female leaders can be a means to counteract gender discrimination media need to take actions to educate themselves on gender issues in media by continuously reading reports and follow contemporary research in the field. As mentioned earlier, since one of the problems why media is still far behind when it comes to diversity is media's way of defending their way of doing things is by saying that they are just mirroring what society looks like, as noted by e.g. Kleberg (2006). By getting educated, this view might get changed.

A second step is to *become aware* of the differences in how often, and how, men and women are being portrayed in media. This should be done both on an aggregated level, e.g. by following reports like the GMMP, but also on an organizational level, e.g. by implementing a counting system to indicate quantitative differences. A more equal representation of women in media could play a significant role in broadening the perceptions of what women in today's society should be like, both by featuring women to the same extent as men, and also in widening the contexts in which women are being featured.

Third, it is important to *think ahead*, that is, to set up procedures and internal guidelines that should govern both strategic issues as well as day-to-day work. Since the effects in this study emerged after a one-time exposure, they results should probably be even stronger if similar exposure would occur repeatedly. Thus, to formulate procedures on how to ensure an equal

gender representation in media should be stressed. For example, since publishing houses are often operating on a tight deadline, and when time is short it is easy to fall back into old patterns, a viable idea is to implement specific guidelines, on how to *not* portray women and men in stereotypical ways in order not to fall into old habits.

Fourth, and perhaps most important, is to *act*. That is, to implement and follow up on the procedures and internal guidelines formulated in the previous step. A good way to ensure that action is taken is to put gender on the agenda, that is, to make sure that these guidelines are followed up upon on a daily or weekly basis.

Finally, in order to avoid stereotypical portrayals of women in the long, management should make sure to *educate* the whole organization on the occurrence of stereotypical gender portrayals in media, as well as the consequences that come as a result. Also, effort should be made to teach employees, e.g. journalists and editors, to themselves detect differences in gender portrayals and to not pass on stereotypical portrayals.

Table XV  
**Checklist for Media Managers**

<input checked="" type="checkbox"/>	Action	Example
<input type="checkbox"/>	<i>Get educated:</i> Stay up to date by continuously reading reports on gender and media as well as following contemporary research in the field.	<i>GMMP, AllBright, Rättviseförmedlingen</i>
<input type="checkbox"/>	<i>Get aware:</i> Get to know how portrayals of genders differ in media in large, and in your organization in particular.	<i>Media monitoring</i>
<input type="checkbox"/>	<i>Think ahead:</i> Set up internal procedures and guidelines that should govern both strategic issues as well as day-to-day work	<i>Representation, context, composition, spokesperson</i>
<input type="checkbox"/>	<i>Act &amp; Evaluate:</i> Implement these internal procedures and guidelines that should govern both strategic issues as well as day-to-day work	<i>Media monitoring</i>
<input type="checkbox"/>	<i>Educate:</i> Avoid stereotypical portrayals in the long run by educating the whole organization on these issues. Encourage employees to themselves detect differences in gender portrayals.	<i>Workshops, lectures</i>



## 6.5 Future Research

As mentioned before, this study also points to the importance of the need for further research in this field in order to be able to really understand the best ways in counteracting gender discrimination via media. As easier discussed, conducting these type of experiments with people is always sensitive to external factors, thus, in order to further cement these results, additional studies in a more controlled setting could be of good use. Also, in order to be able to draw more generalized conclusions, making similar experiments in other groups in society is of large interest. It is possible that the results will differ if conducting the same experiment on e.g. older age groups with people who have been formed by media and society for a much longer time.

In order to more fully understand the results found in the control group, future studies should also investigate results found by Jonsson and Zhao (2014) not discussed in this study, i.e. the fact that in the control group of their study, no SIB-effect was present when people were communicating with a male receiver. Since the results in this study, communicating with a female receiver, were in line with the findings by Jonsson and Zhao (2014), this raises the question if their other results would also be confirmed if replicated.

The fact that exposure to counter-stereotypical women in itself were not enough to counteract gender discrimination might be due to the fact that our experiment only consist of a single exposure, in a society where the participants are constantly formed by media messages on a daily basis. Thus, a more longitudinal study would be of importance in order to better be able to understand the long-term effects of exposure to counter-stereotypical women in media.

Since different effects were found depending on *how* the women in the articles were depicted, future studies should also dig deeper into both different ways of depicting women in media as well as the underlying emotions evoked when being exposed to these types of articles. Especially, since voice, or more correctly, the lack of voice, was the factor that was successful in counteracting men's discrimination against women, it is of great interest to further investigate this dimension. One example of such a research direction could be to switch the roles. That is, what would happen if a woman were expressing her voice about a man and his company? Furthermore, the relationship of voice and warmth should be further investigated in order to understand why the women who spoke for themselves were perceived to be less warm by female participants.

The articles used did not contain any subjects like "*work-life balance as a working mom*" or "*being a female leader*", and thus not deliberately categorize the subjects as *females* but rather

*leaders*. On a speculative note, it would be interesting to investigate how exposure to articles like these would affect gender discrimination over time. Since stereotype activation is depending on contextual factors and category activation (Blair, 2002; Reid et al., 2009), there is a possibility that if people on a more general level associated these women as *leaders* instead of *female leaders*, the women might instead be evaluated according to *leader*-stereotypes instead of *female*-stereotypes, and thus the backlash-effect might not be as evident.

Last, it would be of great importance if future studies would dig deeper into the notions of *stereotypical* and *counter-stereotypical*. Since gender roles are becoming less bivariate, i.e. counter-stereotypical women used in this study are in fact more and more commonly found in society, and traditionally stereotypical women, e.g. house wives, are less and less common in society, theories of social-roles might start to get outdated, or at least, get much more complex.

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Unknown. 2015. Untitled. Available from: <http://www.expandkarlstad.se/forelasare/huvudforelasare/azita-shariati-2/> [2015-10-01]

## **Appendix A – Experiment Material, Experiment Part 1** **[PART 1, FRONT PAGE – GROUP 1]**

Marketing & Media Management

Handelshögskolan i Stockholm [*Stockholm School of Economics*]

Effektiv kommunikation i media [*Efficient communication in media*]

## **Experimentmaterial [*Experiment material*]**

## **Instruktioner [*Instructions*]**

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Detta häfte innehåller tre stycken korta artiklar med tillhörande bild. Var vänlig titta på bilderna och läs igenom varje artikel noggrant. Svara sedan på efterföljande frågor.

Även fast en del frågor kan verka lika eller är svåra att svara på är det viktigt att Du svarar på alla frågor genom att ringa in det svar Du tycker passar bäst eller fyll i med egna ord då det efterfrågas.

När Du är klar, var vänlig lägg ihop häftet. Dina svar kommer att behandlas anonymt.

Du har ungefär 15 minuter på Dig att genomföra experimentet och Du får ej prata med någon under tiden.

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*[This booklet contains three short articles with accompanying pictures. Please look at the pictures and read every article carefully. Then answer the following questions.]*

*Although some questions may appear similar, or are difficult to answer, it is important that you answer all the questions by circling the answer you think fits best or fill in your own words when prompted.*

*When you're finished, close the booklet. Your answers will be treated anonymously.*

*You have about 15 minutes to carry out the experiment, and you must not talk to anyone during that time.]*

## [PART 1, ARTICLES – GROUP 1]

### Avokado



**Avokado (*Persea americana*) är en art i familjen smörplantor, som odlas för sina frukter. Arten kan ha uppstått i södra Mexiko men har odlats ända ner till centrala Peru sedan före européerna kom. Numera odlas arten över hela världen på platser med lämpligt klimat.**

Ordet avokado kommer ytterst från ahuacatl på aztekernas språk nahuatl. Avokado blir en 20 meter smörplanta och har 12-25 centimeter långa blad. Trädet tål inte frost och växer enbart i subtropiska och tropiska klimat.

Frukten är ett knytnävsstort bär med stor kärna. Fruktköttet är mörkt och gult till ljusgrönt, medan skalet, som ej går att äta, är grönt till mörkgrönt. Ett normalt avokadoträd ger omkring 120 frukter per år.

Avokado äts vanligen rå, ofta i förrätter och sallader. Den serveras ofta i halvor med kärnan avlägsnad. För att kunna konsumeras måste avokadon ha rätt mognadsgrad, då lossnar kärnan och skalet lätt och köttet har lagom mjuk konsistens. En mogen avokado ger efter en aning om man trycker försiktigt vid skaftfästet. Fördjupningen som den borttagna kärnan lämnar efter sig kan fyllas med olika fyllningar. Löjrom, majonnäs eller enklare kaviar är omtyckta ingredienser när avokado i denna form serveras som förrätt. Avokadoköttet kan också skäras i mindre skivor eller bitar och blandas in i grönsaks- eller andra sallader. Avokadopuré kan även användas i söta efterrätter som avokadoglass och avokadomousse. Avokado är huvudingrediensen i den mexikanska dippen guacamole.

Avokadofrukten kan innehålla upp till 30 procent omättat fett, men det vanligaste är att den innehåller cirka 15 procent fett, främst enkelomättat sådant. Den har även ett högt innehåll av kalium, ett essentiellt mineral som är nödvändigt för normal hjärt- och muskelfunktion.

## **[Avocado**

***Avocado (Persea americana) is a species in the family flowering plants, grown for their fruits. The species may have originated from southern Mexico, but has been grown all the way down to central Peru since before the Europeans arrived. Nowadays the species are grown worldwide, in locations with suitable climate.***

*The word avocado has its roots from the Aztec language Nahuatl. Avocado is a 20-meter flowering plant and has 12-25 centimeter long leaves. The tree cannot stand frost and grows only in subtropical and tropical climates.*

*The fruit is the size of a fist and has a large kernel. The flesh is tender and yellow to light green, while the peel, which is not edible, green to dark green. A typical avocado tree provides about 120 fruits per year.*

*Avocados are usually eaten raw, often in starters and salads. It is often served in halves with the kernel removed. Avocados must have the right level of ripeness for the kernel and peel to be removed easily and for the flesh to have a moderately soft texture. A ripe avocado yield slightly when pressed gently at the stem end. The hole that the removed kernel leaves behind can be filled with different fillings. Whitefish roe, mayonnaise or caviar are popular ingredients when avocado is served as an appetizer. The avocado flesh can be cut into smaller pieces and mixed into vegetable or other salads. Mashed avocado can also be used in sweet desserts such as avocado ice cream and avocado mousse. Avocado is the main ingredient in the Mexican dip guacamole.*

*Avocado fruit can contain up to 30 percent unsaturated fat, but the most common is that it contains about 15 percent fat, predominantly monounsaturated such. It also has a high content of potassium, an essential mineral that is necessary for normal heart and muscle function.]*

## Tomat



**Tomat (*Solanum lycopersicum*) är en potatisväxt som bär ätlig frukt. Den röda frukten kategoriseras i livsmedelssammanhang som en grönsak. Botaniskt sett kategoriseras växtens frukter som bär. Växten härstammar från Peru, och namnet kommer från *tōmatl* i nahuatl-språket.**

Tomaten härstammar från Peru i Sydamerika och nyttjades av Inkafolket. Själva ordet tomat kommer från nahuatls *tōmatl*, och det finns belägg för att tomat har odlats i Mexiko sedan år 700 f.kr. Till Norden kom tomaten på 1600-talet men det var först mot slutet av 1700-talet som den blev allmänt känd.

Tomat i olika former innehåller stora mängder av en karotenoid, som finns i blodplasman, vars namn är lykopen. Det är just lykopenet som gör att tomaten är röd. Detta näringsämne återfinns bland annat i aprikoser, blodgrape, vattenmelon, skär guava, papaya, röd paprika, havtorn, gojibär, nypon, gac och just tomat.

Enligt en studie med 400 personer vid Sveriges lantbruksuniversitet fick de tomater som förvarades två dygn i ett kylskåp sämre smakbetyg än de som förvarades i rumstemperatur. Den rekommenderade temperaturen vid förvaring är +14°C.

Tomat är huvudingrediens då man lagar gazpacho, som är en spansk tomatsoppa med färsk basilika, selleri, vitlök och som serveras kall. Tomat används också till tomatsåsen på pizzan, i ketchup och är en av de vanligaste ingredienserna i en svensk grönsallad.

## **[Tomato**

***Tomato (Solanum lycopersicum) is a potato plant carrying edible fruit. The red fruit is categorized as a vegetable. Botanicals however speak of berries. The plant originates from Peru, and the name comes from tomatl in the Nahuatl language.***

*The tomato originates from Peru in South America and was used by the Incas. The word tomato comes from nahuatl's tomatl, and there is evidence that tomatoes have been grown in Mexico since 700 BC. The tomato came to the Nordics in the 1600s but it was only towards the end of the 1700s that it became publicly known.*

*Tomatoes in various forms contain large amounts of a carotenoid, found in the blood plasma, more known as lycopene. It is the lycopene that makes tomatoes red. This nutrient is also found among others in apricots, grapefruit, watermelon, cut guava, papaya, red pepper, sea buckthorn, goji berries, and rose hips.*

*According to a study at the Swedish University of Agricultural Sciences, examining 400 people, tomatoes were found to be tastier when stored for two days in a refrigerator than stored at room temperature. The recommended storage temperature is at + 14 ° C.*

*Tomatoes are the main ingredients when you make gazpacho, which is a Spanish tomato soup with fresh basil, celery, garlic, and served cold. Tomato is also used for the tomato sauce on the pizza, ketchup and is one of the most common ingredients in a Swedish green salad.]*

## Potatis



**Potatis (*Solanum tuberosum*) är en art som tillhör familjen potatisväxter. Potatis är också den allmänna benämningen på växtens rotfrukt vilken är stapelföda i en stor del av världen. Växten förekommer vilt i Sydamerika, där även flera snarlika arter odlas.**

De tre största potatisproducerande länderna 2007 var Kina (72 miljoner ton), Ryssland (36,7 miljoner ton) och Indien (26 miljoner ton). De tre toppkonsumerande länderna per capita och år 2005 var Vitryssland (181 kg per capita), Kirgizistan (143 kg per capita) och Ukraina (136 kg per capita).

Potatisen är en flerårig ört med parflikiga blad. I Sverige fryser den emellertid bort på vintern och blir därför inte mer än ettårig. Plantan blir mellan 30 och 80 cm hög och dess ovanjordiska delar är giftiga.

De ätbara stamknölarna växer under mark och är oftast vita, gula, eller rosa. Skalet kan variera mer i färg. Skalet går att äta om man rengör potatisen ordentligt, och det är omtvistat huruvida det är nyttigt eller inte att skala potatis.

Namnet potatis kommer via engelska potatoes (pl) från spanskans "patata". I norra och sydligaste Sverige kallas de (jord-)päror eller bara pärer. Detta kan tolkas så att denna sort eller varietet av potatis liknade päron, d.v.s. de var ej runda utan päronformade. Andra liknade i stället potatisen vid ett äpple, vilket förklarar det franska uttrycket pomme de terre, som ordagrant betyder "jordäpple".

Potatis, som är en av världens viktigaste stapelfödoor, har sitt ursprung i Sydamerika, där den har odlats sedan år 8000 f.Kr. Den "upptäcktes" i Peru år 1530 av spanjoren Gonzalo Jimenez de Quesada som år 1539 förde den till Spanien. Hur potatisen kom till Sverige är höljt i dunkel, men många växthistoriker håller för troligt att potatisen infördes i landet av hemvändande soldater från trettioåriga kriget.

## **[Potato**

***Potato (*Solanum tuberosum*) is a species belonging to the family Solanaceae. Potatoes are also the common name of the plant root vegetable which is the staple food in much of the world. The plant grows wild in South America, where also several related species are grown.***

*The three largest potato-producing countries in 2007 were China (72 million tons), Russia (36.7 million tons) and India (26 million tons). The three top consuming countries per capita in 2005 were Belarus (181 kg per capita), Kyrgyzstan (143 kg per capita) and Ukraine (136 kg per capita).*

*The potato is a perennial herb with split leaves. In Sweden, however, they freeze during the winter and therefore don't survive more than one year. The plant grows between 30 and 80 cm high and its aerial parts are poisonous.*

*The edible corms grow underground and are usually white, yellow, or pink. The shell can vary in color. The shell can be eaten if you clean the potatoes thoroughly, and it is disputed whether it is useful or not to peel potatoes.*

*The name potato come from the English potatoes (pl) and from of Spanish "patata". In the northern and southern Sweden it was called pärör. This suggests that this variety of potato resembled pears, i.e. they were not round but pear-shaped. Other assimilated potatoes with apples, which explains the French expression pomme de terre, which literally means: "earth apple".*

*Potatoes, which is one of the world's most important staple goods, originated from South America, where it has been cultivated since 8000 BC. It was "discovered" in Peru in 1530 by the Spaniard Gonzalo Jimenez de Quesada who in 1539 brought it to Spain. How the potato came to Sweden are shrouded in mystery, but many plant historian thinks that the potato was introduced in the country by returning soldiers from the Thirty Years' War.]*



**[PART 1, QUESTIONS – GROUP 1]****Frågor till (Avokado/Tomat/Potatis)****[Questions to (Avocado/Tomato/Potato)]**

Var vänlig och svara på följande frågor genom att ringa in den siffra Du tycker passar bäst. *[Please answer the following questions by circling the number that you think fits best]*

**1. Hur väl tycker Du att följande ord stämmer in på artikeln?**

*[How well do you think the following words apply to this article?]*

	Stämmer inte alls							Stämmer helt						
Gillar <i>[Like]</i>	1	2	3	4	5	6	7							
Långtråkig <i>[Long-drawn]</i>	1	2	3	4	5	6	7							
Trovärdig <i>[Trustworthy]</i>	1	2	3	4	5	6	7							
Pålitlig <i>[Reliable]</i>	1	2	3	4	5	6	7							
Intresseväckande <i>[Interesting]</i>	1	2	3	4	5	6	7							
Övertygande <i>[Convincing]</i>	1	2	3	4	5	6	7							
Inspirerande <i>[Inspiring]</i>	1	2	3	4	5	6	7							
Överflödig <i>[Redundant]</i>	1	2	3	4	5	6	7							
Tråkig <i>[Boring]</i>	1	2	3	4	5	6	7							
Välskriven <i>[Inspiring]</i>	1	2	3	4	5	6	7							
Nytänkande <i>[Innovative]</i>	1	2	3	4	5	6	7							
Personlig <i>[Personal]</i>	1	2	3	4	5	6	7							
Opartisk <i>[Objective]</i>	1	2	3	4	5	6	7							
Ointressant <i>[Uninteresting]</i>	1	2	3	4	5	6	7							

**2. Vad känner Du efter att ha läst artikeln? *[What do you feel after reading the article?]***

**Jag känner mig... *[I feel...]***

	Känner inte alls							Känner helt						
Glad <i>[Happy]</i>	1	2	3	4	5	6	7							
Lugn <i>[Calm]</i>	1	2	3	4	5	6	7							

Hungrig [ <i>Hungry</i> ]	1	2	3	4	5	6	7
Engagerad [ <i>Engaged</i> ]	1	2	3	4	5	6	7
Arg [ <i>Angry</i> ]	1	2	3	4	5	6	7
Likgiltig [ <i>Indifferent</i> ]	1	2	3	4	5	6	7
Entusiastisk [ <i>Enthusiastic</i> ]	1	2	3	4	5	6	7
Uttråkad [ <i>Bored</i> ]	1	2	3	4	5	6	7
Smart [ <i>Smart</i> ]	1	2	3	4	5	6	7
Inspirerad [ <i>Inspired</i> ]	1	2	3	4	5	6	7

Var vänlig och svara på följande frågor om innehållet i texten: *[Please answer the following questions about the text]*

**[QUESTIONS – AVOCADO]**

**3. Omkring hur många frukter ger ett avokadoträd per år?**

*[Roughly how many fruits do the avocado plant carry each year?]*

\_\_\_\_\_

**4. Hur långa blad får smörplantan?**

*[How many leaves does the plant have?]*

\_\_\_\_\_

**5. I vilken mexikansk dipp är avokado huvudingrediensen?**

*[In what Mexican dip is avocado the main ingredient?]*

\_\_\_\_\_

**6. Omkring hur många procent fett innehåller avokadon oftast?**

*[Roughly how many % fat does the avocado contain?]*

\_\_\_\_\_

**[QUESTIONS – TOMATO]**

**3. Vad kategoriseras tomaten som i livsmedelssammanhang?**

*[What is the tomato categorized as?]*

\_\_\_\_\_

**4. När kom tomaten till Norden?**

*[When did the tomato come to the Nordics?]*

---

**5. Vilken är den rekommenderade temperaturen vid förvaring?**

*[What is the recommended storage temperature?]*

---

**6. Vilket näringsämne är det som gör att tomaten är röd?**

*[What substance makes the tomato red?]*

---

**[QUESTIONS – POTATO]**

**3. Vilka var de tre största potatisproducerande länderna år 2007?**

*[Which three countries produced the most potatoes in 2007?]*

---

**4. Hur hög blir potatisplantan?**

*[How high does the potato plant get?]*

---

**5. Vad betyder "pomme de terre"?**

*[What does "pomme de terre" mean?]*

---

**6. Var har potatisen sitt ursprung?**

*[From where does potatoes originate?]*

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**[PART 1, FRONT PAGE – GROUPS 2 & 3]**

Marketing & Media Management

Handelshögskolan i Stockholm [*Stockholm School of Economics*]

Effektiv kommunikation i media [*Efficient communication in media*]

## **Experimentmaterial [*Experiment material*]**

## **Instruktioner [*Instructions*]**

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Detta häfte innehåller tre stycken korta artiklar med tillhörande bild. Var vänlig titta på bilderna och läs igenom varje artikel noggrant. Svara sedan på efterföljande frågor.

Även fast en del frågor kan verka lika eller är svåra att svara på är det viktigt att Du svarar på alla frågor genom att ringa in det svar Du tycker passar bäst.

När Du är klar, var vänlig lägg ihop häftet. Dina svar kommer att behandlas anonymt.

Du har ungefär 15 minuter på Dig att genomföra experimentet och Du får ej prata med någon under tiden.

---

*[This booklet contains three short articles with accompanying pictures. Please look at the pictures and read every article carefully. Then answer the following questions.]*

*Although some questions may appear similar, or are difficult to answer, it is important that you answer all the questions by circling the answer you think fits best.*

*When you're finished, close the booklet. Your answers will be treated anonymously.*

*You have about 15 minutes to carry out the experiment, and you must not talk to anyone during that time.]*

[PART 1, ARTICLES – GROUP 2]

## Stina Honkamaa Bergfors United Screens surfar på YouTubes tillväxtvåg



**Intäkterna för Stina Honkamaa Bergfors YouTube-nätverk United Screens rusar i höjden, samtidigt som tittandet rasar för de traditionella tv-kanalerna. I år ska omsättningen dubblas till över 40 miljoner kronor.**

Stina Honkamaa Bergfors lämnade 2013 rollen som Sveriges Google-chef och startade eget. Hon hoppade av sin tjänst på Google för att dra igång YouTube-nätverket United Screens tillsammans med tre veteraner i mediebranschen. Medieanalytikern Pierre Hedberg konstaterar att United Screens bokslut för förra året precis är klart och omsättningen var 21,2 miljoner kronor. "Tillväxten i år är riktigt bra. Bara under första kvartalet har de sålt för över 10 miljoner kronor, men enligt uppgift är målet att dubbla omsättningen till över 40 miljoner kronor."

Det som driver United Screens kraftiga tillväxt är det historiska skiftet som nu sker från traditionella tv-kanaler till webb-tv. Enligt Hedberg visar statistik att de traditionella tv-kanalerna, i åldersgruppen 15-44 år, tappade 17 % av tittarna under januari och februari jämfört med samma period förra året. "För bara några år sedan var ett tapp på två, tre procent mycket. "De förändringarna vi ser nu är verkligen dramatiska", menar han.

Det är YouTube-stjärnor som tittarna istället söker sig till. United Screens säljer dels reklamutrymme i anslutning till deras YouTube-stjärnors filmer, dels så kallat branded content. "Ett exempel på branded content var när de lät några av YouTube-stjärnorna i sitt nätverk tävla om att designa en ny flaska för ett stort bryggeri" förklarar Hedberg.

Det här är en marknad med mycket stark tillväxt. Framtiden ljus ut för Honkamaa Bergfors och hennes United Screens, trots att TV4 planerar ett eget YouTube-nätverk: "Det är inte någon konkurrens som bör bekymrar dem. Det finns redan en rad nätverk och ett nytt gör varken till eller från", avslutar medieanalytikern.

## ***[Stina Honkamaa Bergfors' United Screens is surfing on YouTube's growth wave***

***The revenues for Stina Honkamaa Bergfors' YouTube network United Screens soars while the viewership is plummeting for traditional TV channels. This year, sales doubled to over 40 million.***

*In 2013, Stina Honkamaa Bergfors quit the role as Sweden's Google-manager and started her own company. She left Google to launch the YouTube network United Screens along with three veterans from the media industry. Media analyst Pierre Hedberg concludes that United Screens' financial statements for the last year just is completed and the turnover was 21.2 million. "Growth this year is really good. Just in the first quarter, they have sold over 10 million, but reportedly, the goal is to double the turnover to over 40 million. "*

*The impetus behind United Screens' strong growth is the historic shift from traditional TV channels to web TV. According to Hedberg, statistics show that the traditional television channels, lost 17 % of viewers in the age group 15-44 years during January and February, compared with the same period last year. "Just a few years ago, a loss of two to three percent was a lot. The changes we are seeing now is really dramatic", he says.*

*Viewers are instead seeking out YouTube stars. United Screens sells partly advertising space in connection to their YouTubers clips, and partly so called branded content. "An example of branded content was when they let some of their YouTubers in their network compete to design a new bottle for a large brewery" explains Hedberg.*

*This is a market with very strong growth. The future looks bright for Honkamaa Bergfors and her United Screens, despite the fact that TV4 is planning its own YouTube networks: "That is no competition that should worry them. There are already a number of networks and a new one is not going to make any difference", the media analyst concludes.]*

## Azita Shariatis Sodexo styrs av goda värden



**Azita Shariatis Sodexo har nyligen tagit emot pris för sitt CSR-arbete. "Hållbarhetsfrågor har en stark plats i bolaget", berättar Per Liljedahl, företagets kvalitets- och miljöchef.**

Azita Shariati har haft en stadig karriärresa inom företaget. Hon började som restaurangchef, men blev snart distriktschef, regionchef, försäljningsdirektör, affärsområdeschef och därefter Sverigechef och slutligen, sedan mars i år, vd för Sodexo i Sverige och administrativ direktör i Danmark.

Sodexo har idag 11 000 anställda i Norden och omsätter 7,5 miljarder kronor. Företaget har verksamhet i 80 länder och har sedan starten 1966 haft CSR-frågor högt upp på agendan. De har nyligen uppmärksammats för sitt CSR-arbete och har fått flera utmärkelser. Under åtta år har till exempel Dow Jones Sustainability Indexes utsett Sodexo till bästa företaget inom hållbarhet i sin bransch. "CSR-frågor har en stark plats i bolaget, det är konkret och styrs och följs upp från högsta ort", berättar kvalitets- och miljöchefen Liljedahl, och fortsätter:

"Företaget har sedan några år tillbaka en global och gemensam hållbarhetsplan, Better Tomorrow Plan, där fokus ligger på miljö, arbetsgivaransvar, lokalt engagemang och att den mat som företaget levererar ska hålla hög kvalitet."

Shariati och koncernledningen är mycket delaktiga i att driva CSR-frågorna framåt, och arbetar för att konkretisera aktivitetsplanerna globalt. "Det är lite häftigt att det är samma hållbarhetsplan som gäller i till exempel Malaysia som i Sverige. Det märks att vi sticker ut globalt", avslutar Liljedahl.

## ***[Azita Shariati's Sodexo is being governed by good values***

***Azita Shariati's Sodexo has recently been awarded for its CSR work. "Sustainability has a strong position in the company", says Per Liljedahl, the company's quality and environmental manager.***

*Azita Shariati has had a steady career within the company. She started as site manager for a restaurant, but soon became district manager, regional manager, sales director, Business Area Manager and then Manager for Sweden and finally, since March this year, Managing Director of Sodexo in Sweden and administrative director in Denmark.*

*Sodexo has 11 000 employees in the Nordic countries and a turnover of SEK 7.5 billion. The company has operations in 80 countries and has since 1966 had CSR issues high on the agenda. Recently they have gotten attention for their CSR work and have received several awards. For eight years in a row, the Dow Jones Sustainability Indexes has named Sodexo the best company in sustainability in the industry. "CSR has a strong position in the company, it is hands-on and controlled, and monitored from the highest level", says quality and environmental manager Liljedahl, and continues:*

*"For some years the company has had a global and community sustainability plan, Better Tomorrow Plan, which focuses on the environment, corporate responsibility, community involvement and that the food it supplies should be of high quality."*

*Shariati and the senior management are highly involved in running CSR issues forward, and work to concretize activity plans globally. "It's pretty mind-blowing that it's the same sustainability plan that applies, for example to both Malaysia and Sweden. We clearly stand out globally," Liljedahl concludes.]*



## **Mai-Li Hammargrens Unicorns är det mest stöttade startupet från Sverige någonsin**



**Mai-Li Hammargren, som blivit internationellt uppmärksammat med sitt bolag Mutewatch, är i dagarna aktuell med lanseringen av den nya livestreamingtjänsten Unicorns. "Responsen har varit väldigt positiv" konstaterar riskkapitalisten James Kinnish.**

Mutewatch startade som ett studentprojekt år 2007. Idén var enkel: ett ljudlöst, vibrerande armband som kan användas som väckarklocka. Åtta år senare säljs klockan i 40 länder, med kunder som modeskaparen Karl Lagerfeldt och Applegrundaren Steve Wozniak.

Sedan en tid tillbaks har Hammargren dock lagt Mutewatch på is för att satsa på en ny idé, Unicorns. "Det är kort sammanfattat ett verktyg för utvecklare som vill ha feedback på sin produkt", berättar riskkapitalisten Kinnish.

Unicorns liknar appen Periscope: Du ser i realtid vad en person gör på sin mobila skärm och du kan skriva ned dina kommentarer om vad som händer i en chatt.

Enligt Kinnish är det särskilt utvecklare av mobilspel som kommer att ha nytta av tjänsten. "När till exempel företaget King vill utveckla ett nytt spel skulle de kunna använda sig av Unicorns för att få direkt feedback", förklarar han.

Unicorns har gjort succé på det amerikanska forumet Product Hunt och klättrade kort efter lanseringen till första plats. Med över 1000 röster är Unicorns det mest stöttade startupet från Sverige någonsin.

Det är även i USA som företaget sedan i mars har sin bas, eftersom det är där investerarna finns. "Just nu arbetar de på en marknadsplan för att ta in ännu mer finansiering. Responsen har varit väldigt positiv", konstaterar Kinnish.

## ***[Mai-Li Hammargren's Unicorns is the most supported Swedish start-up ever***

***Mai-Li Hammargren, who has been internationally recognized for her company Mutewatch, is currently in the spotlight again in connection to the launch of the new live streaming service Unicorns. "The response has been highly positive," says venture capitalist James Kinnish.***

*Mutewatch started as a student project in 2007. The idea was simple: a silent, vibrating bracelet that can be used as an alarm clock. Eight years later it sold in 40 countries, with customers such as fashion designer Karl Lagerfeldt and Apple founder Steve Wozniak.*

*Since some time back, Hammargren has however put Mutewatch on hold in order to pursue a new idea, Unicorns. "It is briefly summarized as a tool for developers that want feedback on their product", explains venture capitalist Kinnish.*

*Unicorns is similar to the app Periscope: You see in real time what a person does on their mobile screen and you can instantaneously comment on what happens.*

*According to Kinnish, it is especially mobile game developers that will benefit from the service. "When, for example, the company King wants to develop a new game, they could use the Unicorns to get direct feedback," he explains.*

*Unicorns has made a success on the American backer-community Product Hunt shortly after the launch soared to the first place. With over 1000 votes, Unicorns is the most supported startup from Sweden ever.*

*It is also in the US that the company has its base since March, because that is where the investors are. "Right now they are working on a marketing plan to bring in more funding. The response has been highly positive, " Kinnish concludes.]*

[PART 1, ARTICLES – GROUP 3]

## Stina Honkamaa Bergfors: “United Screens surfar på YouTubes tillväxtvåg”



**Intäkterna för Stina Honkamaa Bergfors YouTube-nätverk United Screens rusar i höjden, samtidigt som tittandet rasar för de traditionella tv-kanalerna. “I år ska omsättningen dubblas till över 40 miljoner kronor” säger hon.**

Stina Honkamaa Bergfors lämnade 2013 rollen som Sveriges Google-chef och startade eget. Hon hoppade av sin tjänst på Google för att dra igång YouTube-nätverket United Screens tillsammans med tre veteraner i mediebranschen. Honkamaa Bergfors konstaterar att deras bokslut för förra året precis är klart och att de omsatte 21,2 miljoner kronor, och tillägger ”Tillväxten i år är riktigt bra. Bara under första kvartalet har vi sålt för över 10 miljoner kronor, men målet är att dubbla omsättningen till över 40 miljoner kronor”

Det som driver United Screens kraftiga tillväxt är det historiska skiftet som nu sker från traditionella tv-kanaler till webb-tv. Enligt Honkamaa Bergfors visar statistik att de traditionella tv-kanalerna, i åldersgruppen 15-44 år, tappade 17 % av tittarna under januari och februari jämfört med samma period förra året. ”För bara några år sedan var ett tapp på två, tre procent mycket. De förändringarna vi ser nu är verkligen dramatiska” menar hon.

Det är YouTube-stjärnor som tittarna istället söker sig till. United Screens säljer dels reklamutrymme i anslutning till våra YouTube-stjärnors filmer, dels så kallat branded content. ”Ett exempel på branded content var när vi lät några av YouTube-stjärnorna i vårt nätverk tävla om att designa en ny flaska för ett stort bryggeri”, förklarar Honkamaa Bergfors.

Det här är en marknad med mycket stark tillväxt. Framtiden ljus ut för Honkamaa Bergfors och hennes United Screens, trots att TV4 planerar ett eget YouTube-nätverk: ”Det är inte någon konkurrens som bekymrar mig. Det finns redan en rad nätverk och ett nytt gör varken till eller från”, avslutar hon.

## ***[Stina Honkamaa Bergfors: "United Screens is surfing on YouTube's growth wave"]***

***The revenues for Stina Honkamaa Bergfors' YouTube network United Screens soars while the viewership is plummeting for traditional TV channels. "This year, sales should double to over 40 million" she says.***

*In 2013, Stina Honkamaa Bergfors quit the role as Sweden's Google-manager and started her own company. She left Google to launch the YouTube network United Screens along with three veterans from the media industry. Stina Honkamaa Bergfors concludes that the United Screens' financial statements for the last year just is completed and the turnover was 21.2 million, and adds: "Growth this year is really good. Just in the first quarter, we have sold over 10 million, but the goal is to double the turnover to over 40 million".*

*The impetus behind United Screen's strong growth is the historic shift from traditional TV channels to web TV. According to Honkamaa Bergfors, statistics show that the traditional television channels, lost 17% of viewers in the age group 15-44 years during January and February, compared with the same period last year. "Just a few years ago a loss of two to three percent was a lot. The changes we are seeing now is really dramatic," she says.*

*Viewers are instead seeking out YouTube stars. United Screens sells partly advertising space in connection to their YouTubers clips, and partly so called branded content. "An example of branded content was when they let some of their YouTubers in their network compete to design a new bottle for a large brewery" explains Honkamaa Bergfors.*

*This is a market with a very strong growth. The future looks bright for Honkamaa Bergfors and her United Screens, despite the fact that TV4 is planning its own YouTube networks: "That is no competition that worries us. There are already a number of networks and a new one is not going to make any difference", she concludes.]*

## Azita Shariati: "Sodexo styrs av goda värden"



**Azita Shariat's Sodexo har nyligen tagit emot pris för sitt CSR-arbete. "Hållbarhetsfrågor har en stark plats i bolaget", berättar hon.**

Azita Shariati har haft en stadig karriärresa inom företaget. Hon började som restaurangchef, men blev snart distriktschef, regionchef, försäljningsdirektör, affärsområdeschef och därefter Sverigechef och slutligen, sedan mars i år, vd för Sodexo i Sverige och administrativ direktör i Danmark.

Sodexo har idag 11 000 anställda i Norden och omsätter 7,5 miljarder kronor. Företaget har verksamhet i 80 länder och har sedan starten 1966 haft CSR-frågor högt upp på agendan. De har nyligen uppmärksammats för sitt CSR-arbete och har fått flera utmärkelser. Under åtta år har till exempel Dow Jones Sustainability Indexes utsett Sodexo till bästa företaget inom hållbarhet i sin bransch. "CSR-frågor har en stark plats i bolaget, det är konkret och styrs och följs upp från högsta ort", berättar Shariati, och fortsätter:

"Företaget har sedan några år tillbaka en global och gemensam hållbarhetsplan, Better Tomorrow Plan, där fokus ligger på miljö, arbetsgivaransvar, lokalt engagemang och att den mat som företaget levererar ska hålla hög kvalitet."

Shariati och koncernledningen är mycket delaktiga i att driva CSR-frågorna framåt, och arbetar för att konkretisera aktivitetsplanerna globalt. "Det är lite häftigt att det är samma hållbarhetsplan som gäller i till exempel Malaysia som i Sverige. Det märks att vi sticker ut globalt", avslutar hon.

## ***[Azita Shariati: "Sodexo is governed by good values"]***

***Azita Shariati's Sodexo has recently been awarded for its CSR work. "Sustainability has a strong position in the company", she says.***

*Azita Shariati has had a steady career within the company. She started as site manager for a restaurant, but soon became district manager, regional manager, sales director, Business Area Manager and then Manager for Sweden and finally, since March this year, Managing Director of Sodexo in Sweden and administrative director in Denmark.*

*Sodexo has 11 000 employees in the Nordic countries and a turnover of SEK 7.5 billion. The company has operations in 80 countries and has since 1966 had CSR issues high on the agenda. Recently they have gotten attention for their CSR work and have received several awards. For eight years in a row, the Dow Jones Sustainability Indexes has named Sodexo the best company in sustainability in the industry. "CSR has a strong position in the company, it is hands-on and controlled, and monitored from the highest level", says Shariati, and continues:*

*"For some years the company has had a global and community sustainability plan, Better Tomorrow Plan, which focuses on the environment, corporate responsibility, community involvement and that the food it supplies should be of high quality."*

*Shariati and the senior management are highly involved in running CSR issues forward, and work to concretize activity plans globally. "It's pretty mind-blowing that it's the same sustainability plan that applies, for example to both Malaysia and Sweden. We clearly stand out globally, " she concludes.]*

## **Mai-Li Hammargren: "Unicorns är det mest stöttade startupet från Sverige någonsin"**



**Mai-Li Hammargren, som blivit internationellt uppmärksammat med sitt bolag Mutewatch, är i dagarna aktuell med lanseringen av den nya livestreamingtjänsten Unicorns. "Responsen har varit väldigt positiv" konstaterar hon.**

Mutewatch startade som ett studentprojekt år 2007. Idén var enkel: ett ljudlöst, vibrerande armband som kan användas som väckarklocka. Åtta år senare säljs klockan i 40 länder, med kunder som modeskaparen Karl Lagerfeldt och Applegrundaren Steve Wozniak.

Sedan en tid tillbaks har Hammargren dock lagt Mutewatch på is för att satsa på en ny idé, Unicorns. "Det är kort sammanfattat ett verktyg för utvecklare som vill ha feedback på sin produkt", berättar hon.

Unicorns liknar appen Periscope: Du ser i realtid vad en person gör på sin mobila skärm och du kan skriva ned dina kommentarer om vad som händer i en chatt.

Enligt Hammargren är det särskilt utvecklare av mobilspel som kommer att ha nytta av tjänsten. "När till exempel företaget King vill utveckla ett nytt spel skulle de kunna använda sig av Unicorns för att få direkt feedback", förklarar hon.

Unicorns har gjort succé på det amerikanska forumet Product Hunt och klättrade kort efter lanseringen till första plats. Med över 1000 röster är Unicorns det mest stöttade startupet från Sverige någonsin.

Det är även i USA som företaget sedan i mars har sin bas, eftersom det är där investerarna finns. "Just nu arbetar vi på en marknadsplan för att ta in ännu mer finansiering. Responsen har varit väldigt positiv", konstaterar Hammargren.

## ***[Mai-Li Hammargren: "Unicorns is the most supported Swedish start-up ever"]***

***Mai-Li Hammargren, who has been internationally recognized for her company Mutewatch, is currently in the spotlight again in connection to the launch of the new live streaming service Unicorns. "The response has been highly positive", she says.***

*Mutewatch started as a student project in 2007. The idea was simple: a silent, vibrating bracelet that can be used as an alarm clock. Eight years later it sold in 40 countries, with customers such as fashion designer Karl Lagerfeldt and Apple founder Steve Wozniak.*

*Since some time back, Hammargren has however put Mutewatch on hold in order to pursue a new idea, Unicorns. "It is briefly summarized a tool for developers that want feedback on their product", she explains.*

*Unicorns is similar to the app Periscope: You see in real time what a person does on their mobile screen and you can instantaneously comment on what happens.*

*According to Hammargren, it is especially mobile game developers that will benefit from the service. "When, for example, the company King wants to develop a new game, they could use Unicorns to get direct feedback", she explains.*

*Unicorns has made a success on the American backer-community Product Hunt shortly after the launch soared to the first place. With over 1000 votes Unicorns is the most supported startup from Sweden ever.*

*It is also in the US that the company has its base since March, because that is where the investors are. "Right now we are working on a marketing plan to bring in more funding. The response has been highly positive," Hammargren concludes.]*



**[PART 1, QUESTIONS – GROUP 2 & 3]**

Var vänlig och svara på följande frågor genom att ringa in den siffra Du tycker passar bäst. (1= stämmer inte alls, 7=stämmer helt) *[Please answer the following questions by circling the number that you think fits best. (1 = strongly disagree, 7 = completely agree)]*

**1. Baserat på artikeln du nyss har läst, vilket intryck har du fått av personen?**  
*[Based on the article you just read, what impression did you get of the person?]*

**(Stina Honkamaa Bergfors/Azita Shariati/Mai-Li Hammargren) verkar vara en person som...**  
*[(Stina Honkamaa Bergfors/Azita Shariati/Mai-Li Hammargren) seems to be a person that...]*

	Stämmer inte alls					Stämmer helt	
	1	2	3	4	5	6	7
Är bra på att planera <i>[Is good at planning]</i>							
Har självdisciplin <i>[Has self-control]</i>							
Agerar moraliskt <i>[Acts morally]</i>							
Är bra på att kommunicera <i>[Is good at communicating]</i>							
Har ett bra minne <i>[Has a good memory]</i>							
Har en tanke med vad hon gör <i>[Has a thought behind actions]</i>							
Är självbehärskad <i>[Has a good memory]</i>							
Har en plan för framtiden <i>[Is self-controlled]</i>							
Agerar etiskt <i>[Acts ethically]</i>							
Kommunicerar bra med andra <i>[Communicates well with others]</i>							
Har mycket tankar <i>[Has a lot of thoughts]</i>							
Är bra på att komma ihåg saker <i>[Is good at remembering things]</i>							

**2. Baserat på artikeln på föregående sida, hur tycker Du att följande ord stämmer in på personen?** *[Based on the article you just read, to what extent do you think the following words fit with the person?]*

**(Stina Honkamaa Bergfors/Azita Shariati/Mai-Li Hammargren) verkar vara...**  
*[(Stina Honkamaa Bergfors/Azita Shariati/Mai-Li Hammargren) seems to be...]*

	Stämmer inte alls					Stämmer helt	
	1	2	3	4	5	6	7
Kompetent <i>[Competent]</i>							
Vänlig <i>[Friendly]</i>							

Självsäker [ <i>Confident</i> ]	1	2	3	4	5	6	7
Omtänksam [ <i>Good-natured</i> ]	1	2	3	4	5	6	7
Driven [ <i>Dedicated</i> ]	1	2	3	4	5	6	7
Pålitlig [ <i>Trustworthy</i> ]	1	2	3	4	5	6	7
Effektiv [ <i>Efficient</i> ]	1	2	3	4	5	6	7
Varm [ <i>Warm</i> ]	1	2	3	4	5	6	7
Intelligent [ <i>Intelligent</i> ]	1	2	3	4	5	6	7
Godhjärtad [ <i>Well-intentioned</i> ]	1	2	3	4	5	6	7
Skicklig [ <i>Skillful</i> ]	1	2	3	4	5	6	7
Ärlig [ <i>Sincere</i> ]	1	2	3	4	5	6	7

**3. Baserat på artikeln du nyss har läst, vilken uppfattning har du fått om personen i sin yrkesroll? [*Based on the article you have just read, what impression do you have about the person in her professional capacity?*]**

**Enligt min uppfattning verkar (Stina Honkamaa Bergfors/Azita Shariati/Mai-Li Hammargren) vara en person som... [*In my opinion, (Stina Honkamaa Bergfors/Azita Shariati/Mai-Li Hammargren) seems to be a person that...*]**

	Stämmer inte alls							Stämmer helt						
Motiverar anställda att prestera på topp varje dag [ <i>Motivates employees to top-perform every day</i> ]	1	2	3	4	5	6	7							
Kan hitta lösningar på svåra företagsproblem [ <i>Can find solutions to difficult business issues</i> ]	1	2	3	4	5	6	7							
Folk lyssnar på [ <i>People listen to</i> ]	1	2	3	4	5	6	7							
Är delaktig i beslut om vem som blir befördrad [ <i>Participates in promotion decisions</i> ]	1	2	3	4	5	6	7							
Anställda ser upp till [ <i>Employees look up to</i> ]	1	2	3	4	5	6	7							
Är delaktig i beslut om företagets strategi [ <i>Participates in decisions regarding strategic decisions</i> ]	1	2	3	4	5	6	7							
Är värd att lyssna på [ <i>Is worth listening to</i> ]	1	2	3	4	5	6	7							
Får anställda att leva upp till krav som ställs på dem [ <i>Makes employees feel that they should live up to their obligations</i> ]	1	2	3	4	5	6	7							
Har värdefull kunskap att dela med sig av till anställda	1	2	3	4	5	6	7							

*[Has valuable knowledge to share]*

Är delaktig i beslut om storleken på företagets julbonus <i>[Participates in deciding the size of Christmas bonuses]</i>	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

Får komma till tals <i>[Gets to speak]</i>	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

Får anställda att känna sig viktiga <i>[Makes employees feel important]</i>	1	2	3	4	5	6	7
--	---	---	---	---	---	---	---

Är delaktig i beslut om vem som får sparken <i>[Participates in deciding who gets fired]</i>	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

Är värd att få komma till tals <i>[Is worth to get to speak]</i>	1	2	3	4	5	6	7
---	---	---	---	---	---	---	---

**Appendix B – Experiment Material, Experiment Part 2**  
**[PART 2, BLOCK 1:1 – ALL GROUPS]**

Business & Management

Handelshögskolan i Stockholm [*Stockholm School of Economics*]

Hur människor kommunicerar med och förstår varandra  
[*How people communicate and understand each other*]

**Experimentmaterial [*Experiment material*]**

## Instruktioner

Den här studien handlar om hur människor kommunicerar med och förstår varandra. Jag undersöker hur människor genom skriftliga meddelanden lyckas få andra att förstå vad de menar.

Som första del i mitt experiment har ett tjugotal elever på er skola redan fått information om ett antal olika industriföretag. Tack vare detta vet jag även en del om vad dessa elever tycker om dessa företag.

Jag har delat ut ett papper där det står vilken elev just du ska kommunicera med, och vilket företag Du ska skicka ett meddelande om. På nästa sida hittar du en beskrivande text om just Ditt företag.

Du kommer att få 4 min på dig att läsa texten om företaget och sedan kommer jag att samla in texterna igen. Du får samtidigt ett tomt papper där du ska beskriva företaget Du precis läst om, på ett sätt så att mottagaren förstår vilket företag du menar utan att du nämner företagets namn.

---

### **[Instructions**

*This study is about how people communicate with and understand each other. I examine how people through written messages succeed in getting others to understand what they mean.*

*As the first part of my experiment about twenty students at your school have already received information about a number of different industrial companies. Thanks to this, I also know some of what these students think about these companies.*

*I have distributed a paper that says which student you should communicate with, and which company you will send a message regarding. On the next page, you will find a descriptive text about your company.*

*You will have 4 min to read the text about the company and then I will collect the texts again. You also get a blank sheet where you should describe the company you just read about, in a way so that the recipient understands what company you mean without you mentioning the company name.]*

## 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 företags 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.

## **[Manufacturing Company MNN**

*MNN is an engineering group 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 integrated into the operations. The corporation claims to strive for a balance between economic growth, environmental responsibility, and societal development. MNN also has nine research centers with six thousand employed researchers and about seventy university collaborations worldwide. Many of the company's products have recently received various awards for being revolutionary in its kind in terms of innovative thinking and cost efficiency.*

*MNN also runs a popular high school of vocational training that provides job guarantee for those students who complete their education. Loyalty is important to the corporation, and employees must sign a special clause, entailing that they must not report to anyone outside the corporation about information that comes to their attention 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 union, since the corporation has begun to rate their employees. Through a standardized questionnaire, employees not only get their performance but also their behavior assessed on a scale from one to five. The union believes that there is a risk that the assessment of someone's behavior becomes more arbitrary. Many employees are also worried about the new grading system. Otherwise employee surveys show that the majority of employees are satisfied with their workplace and feel that they can develop within the corporation.*

*A few years ago, the corporation was shaken by a scandal. The corporations' former CEO had a pension agreement that was heavily criticized for its size. During the time when the person was the CEO of the corporation, net profit increased sixty times and sales increased thirty times. MNN's board 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.]*

**[PART 2, BLOCK 1:2 – ALL GROUPS]**

*(Text in brackets was handwritten)*

I ditt fall ska du skicka ett meddelande om företaget (MNN)

Till en (tjej) som vi kan kalla (Emma)

Det kan även vara intressant för dig att veta att (hon) har en (positiv) inställning till företaget

---

*[In your case, you should send a message about the firm (MNN)*

*To a (girl) who we can call (Emma)*

*It may also be interesting for you to know that (she) has a (positive) attitude to the company]*



**[PART 2, BLOCK 2 – ALL GROUPS]**

(Text in brackets was handwritten)

Försök nu att beskriva det företag Du precis läst om med Dina egna ord så att (Emma) kan identifiera företaget. Meningen är att eleven Du kommunicerar med ska kunna identifiera vilket företag Du beskriver utan att Du nämner företagets namn i Ditt meddelande. Var vänlig skriv läsligt.

*[Now try to describe the company you just read about with your own words so that (Emma) can identify the company. The idea is that student you are communicating with should be able to identify which company you describe without you mentioning the company name in your message. Please write legibly.]*

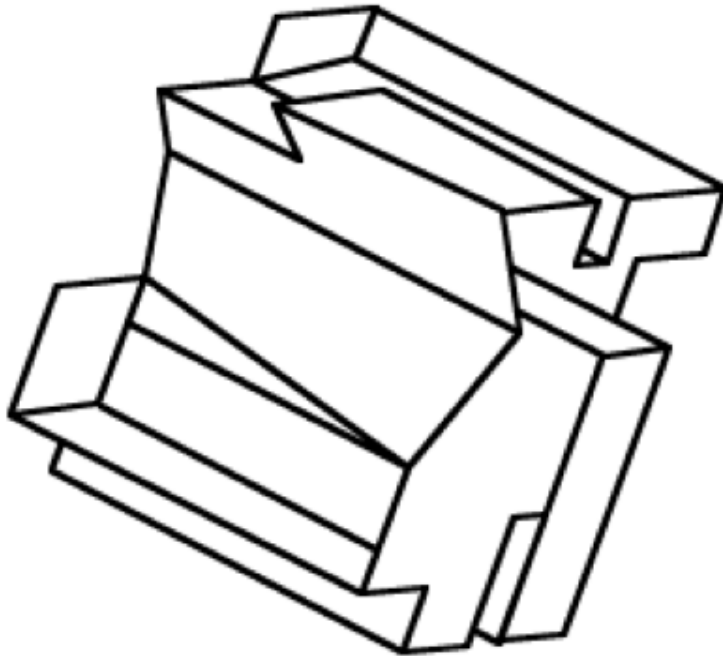
[illegible]

**[PART 2, BLOCK 3 – ALL GROUPS]**

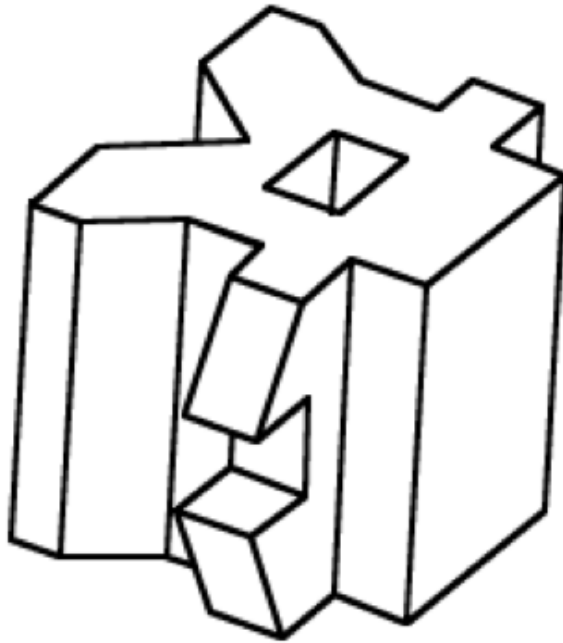
Var vänlig rita av följande figurer. Det är viktigt att Du inte pratar med någon under tiden.  
Du har ungefär 8 minuter på dig.

*[Please draw the following figures. It is important that you do not talk to anyone during the time.  
You have about 8 minutes.]*

a.



b.



**[PART 2, BLOCK 4 – ALL GROUPS]**

(Text in brackets as well as word underlining was handwritten)

(Emma) har lyckats / ~~inte lyckats~~ identifiera företaget (MNN)

Försök nu att skriva ned originaltexten om företaget som Du läste i början av experimentet så ordagrant som möjligt. Var vänlig skriv läsligt.

[(Emma) has succeeded / ~~failed~~ to identify the company (MNN)]

*Now try to write down the original text about the company that you read the beginning of the experiment as literally as possible. Please write legibly.]*

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

## **Appendix C – Experiment Material, Experiment Part 3** **[ALL GROUPS]**

Handelshögskolan i Stockholm [*Stockholm School of Economics*]

Business & Management

# **Experimentmaterial [*Experiment material*]**

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## **Instruktioner**

Den här delen innehåller frågor om båda experimenten som du nyss genomförde och några frågor om dig själv.

Först kommer frågor om experiment 2, som du gjorde sist: *Hur människor kommunicerar med och förstår varandra.*

Sedan följer frågor om experiment 1: *Effektiv kommunikation i media.*

Slutligen följer några korta frågor om dig själv.

---

## **[Instructions**

*This page contains questions about both experiments that you have just completed and some questions about yourself.*

*First comes the question regarding experiment 2, as you finished lastly: How do people communicate with and understand each other.*

*Then follows questions regarding experiment 1: Effective communication in the media.*

*Finally, there are a few brief questions about yourself.]*

På nästa sida följer frågor angående **experiment nummer 2** som Du gjorde sist.  
(Hur människor kommunicerar med och förstår varandra)

*[On the next page follows questions regarding **experiment number 2** as you finished lastly.  
(How people communicate with and understand each other)]*

Var vänlig och svara på följande frågor genom att kryssa för den ruta som Du tycker stämmer.  
[Please answer the following questions by ticking the box you think is correct.]

1. Vilket kön hade mottagaren av Ditt meddelande? [What gender did the recipient of your message have?]

- ☐ Mottagaren var tjej [The recipient was a girl]  
☐ Mottagaren var kille [The recipient was a boy]

2. Vilken inställning hade mottagaren av Ditt meddelande till företaget? [What attitude did the recipient of your message have towards the company?]

- ☐ Mottagaren var positivt inställd till företaget [The recipient was positive about the company]  
☐ Mottagaren var negativt inställd till företaget [The recipient was negative about the company]

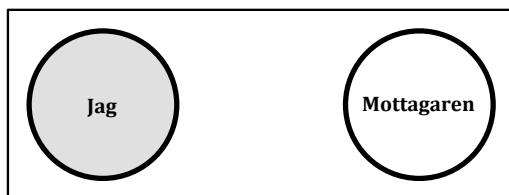
3. Vilken feedback fick Du? [What feedback do you get?]

- ☐ Mottagaren identifierade företaget [The recipient identified the company]  
☐ Mottagaren identifierade inte företaget [The recipient did not identify the company]

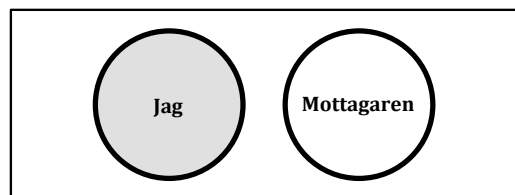
4. Vilket par av cirklar nedan (a-g) tycker Du bäst beskriver din relation till mottagaren?  
Var vänlig ringa in det alternativ du tycker stämmer bäst.

[What pair of circles below (a-g) do you think best describe your relationship with the recipient?  
Please circle the option that you feel corresponds best.]

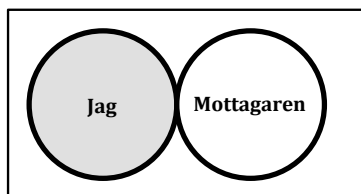
a.



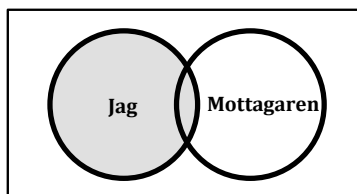
b.



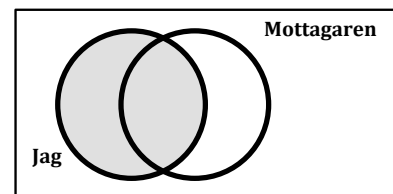
c.



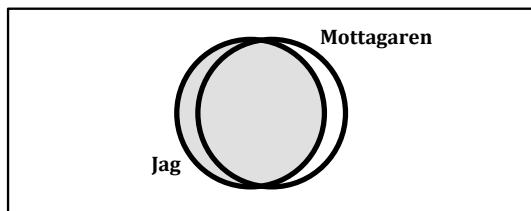
d.



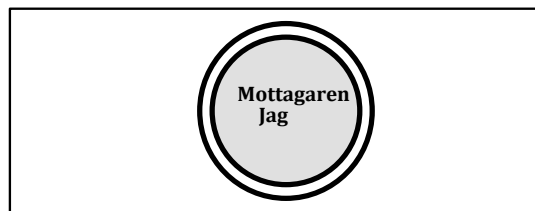
e.



f.



g.



**5. Var instruktionerna kring experimentet lätta att förstå? *[Were the instructions to the experiment easy to understand?]***

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**6. Kändes experimentet vid någon tidpunkt konstigt? *[Did the experiment at any time feel odd?]***

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**7. Beskriv med egna ord hur Du uppfattade syftet med experimentet *[Describe, in your own words, how you perceive the purpose of the experiment]***

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På nästa sida följer frågor angående **experiment nummer 1** som Du gjorde först.  
(Effektiv kommunikation i media).

*[On the next page follows questions regarding **experiment number 1** as you did first.  
(Efficient communication in media)]*

**[QUESTION 1 & 2 FOR GROUP 2 & 3 ONLY]**

Var vänlig tänk tillbaks på de 3 artiklarna som Du läste tidigare och svara på följande frågor baserat på ditt generella intryck av dem.

1. Vilket par av cirklar nedan (a-g) tycker Du bäst beskriver din relation till personerna i artiklarna (Stina Honkamaa Bergfors, Azita Shariati och Mai-Li Hammargren) ?

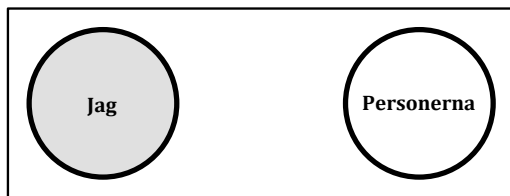
Var vänlig ringa in det alternativ du tycker stämmer bäst.

*[Please think back to the 3 articles you read earlier, and answer the following questions based on your overall impression of them.]*

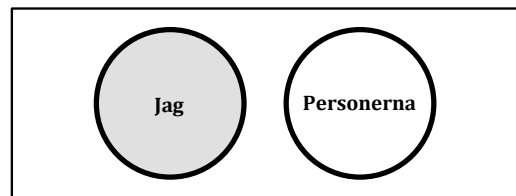
*1. What pair of circles below (a-g) do you best describe your relationship with the persons in the articles (Stina Honkamaa Bergfors, Azita Shariati and Mai-Li Hammargren)?*

*Please circle the option that you feel corresponds best.]*

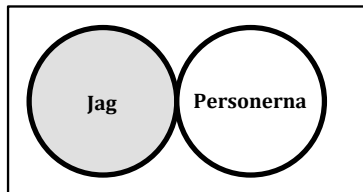
a.



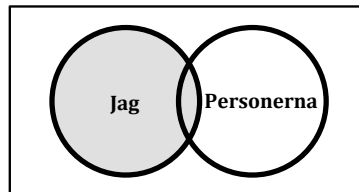
b.



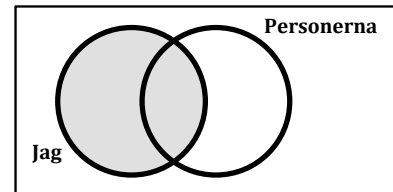
c.



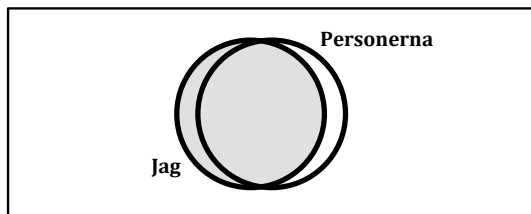
d.



e.



f.



g.



**2. Till vilken utsträckning håller Du med om följande påståenden om personerna artiklarna? [To what extent do you agree with the following statements about the persons in the articles?]**

	Stämmer inte alls							Stämmer helt						
De är framgångsrika [They are successful]	1	2	3	4	5	6	7							
Jag ser upp till dem [I look up to them]	1	2	3	4	5	6	7							
Jag identifierar mig med dem [I identify with them]	1	2	3	4	5	6	7							
Jag tror att jag i framtiden kan bli lika framgångsrik som dem [I think that in the future I can be as successful as them]	1	2	3	4	5	6	7							

**3. Var instruktionerna kring experimentet lätta att förstå? [Were the instructions to the experiment easy to understand?]**

---



---



---

**4. Kändes experimentet vid någon tidpunkt konstigt? [Did the experiment at any time feel odd?]**

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---

**5. Beskriv med egna ord hur Du uppfattade syftet med experimentet [Describe, in your own words, how you perceive the purpose of the experiment]**

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**Var vänlig svara på följande frågor om Dig själv [Please answer the following questions about yourself]**

1. Jag är: [I am]

- ☐ Kvinna [Woman]
- ☐ Man [Man]

2. Ålder: [Age] \_\_\_\_\_

3. Vilken är Din mammas högsta utbildningsnivå? [What is your mother's highest level of education?]

- ☐ Ingen [No education]
- ☐ Grundskolan (år 1-9) [Elementary school (years 1-9)]
- ☐ Gymnasial utbildning [High school education]
- ☐ Yrkesutbildning [Vocational training]
- ☐ Universitetsutbildning [University education]

4. Vilken är Din pappas högsta utbildningsnivå? [What is your father's highest level of education?]

- ☐ Ingen [No education]
- ☐ Grundskolan (år 1-9) [Elementary school (years 1-9)]
- ☐ Gymnasial utbildning [High school education]
- ☐ Yrkesutbildning [Vocational training]
- ☐ Universitetsutbildning [University education]

5. Hur många kvinnliga lärare har Du den här terminen? [How many female teachers do you have this semester?]

Jag har \_\_\_\_\_ stycken [I have \_\_\_\_]

6. Hur många manliga lärare har Du den här terminen? [How many male teachers do you have this semester?]

Jag har \_\_\_\_\_ stycken [I have \_\_\_\_]

## **Appendix D – Experiment Manuscript**

### **[INTRODUCTION]**

Hej alla!

Vi är jättegglade över att få vara här idag och att ni vill hjälpa oss med våra experiment. Vi tänkte börja med att kort presentera oss och förklara varför vi är här. Vi är två stycken mastersstudenter från Handelshögskolan i Stockholm. Båda går andra, och sista, året på våra respektive masterutbildningar. Vi skriver som sagt just nu våra masteruppsatser, och båda två behöver hjälp från er för att kunna skriva klart. Jag (Experimenter A), heter (namn) och skriver min masteruppsats inom Marknadsföring om att kommunicera effektivt i media, och jag (Experimenter B), heter (namn) och skriver uppsats inom Management om hur människor kommunicerar med och förstår varandra. Eftersom båda två gör experiment kom vi på att vi kunde slå ihop två tillfällen och dessutom hjälpa varandra. Ni kommer alltså att göra två separata experiment idag.

Vi kommer att börja med mitt (Experimenter A) experiment.

### **[EXPERIMENT PART 1]**

Jag kommer nu att dela ut häften till er alla. Börja med att läs igenom instruktionerna. Därefter följer tre stycken kortare artiklar. Var vänliga och läs igenom artiklarna noggrant och svara sedan på efterföljande frågor. Det är viktigt att svara på alla frågor, även om vissa kanske upplevs som konstiga. Det finns inga rätt eller fel svar.

Det är viktigt att ni inte pratar med varandra under tiden ni fyller i häftet. Ni har ungefär 15 minuter på er. När ni är klara kan ni stänga igen häftet och räcka upp handen så kommer jag och samlar in häftena. Sen får ni gärna sitta tysta tills alla är klara.

### **[EXPERIMENTET PART 1 UTFÖRS] (15 min)**

Tack så jättemycket för att ni deltog i min studie!

### **[EXPERIMENT PART 2]**

Hej!

Jag heter som sagt (namn) och jag skriver min masteruppsats inom Management och jag undersöker hur människor kommunicerar med och förstår varandra. Mer specifikt tittar jag på hur människor genom skriftliga meddelanden lyckas få andra att förstå vad de menar.

Som en första del i mitt experiment har ett tjugotal elever på er skola, redan under förra veckan, arbetat tillsammans med en lärare där de har fått information om ett antal olika industriföretag. Tack vare detta vet jag även en del om vad dessa elever tycker om dessa företag.

Ni kommer nu att få kommunicera med en av dessa elever om ett av företagen.

Jag kommer att börja med att dela ut ett papper där det står vilken elev just du ska kommunicera med - på grund av anonymitet är namnet påhittat, och vilket företag ni ska kommunicera kring, samt personens inställning till företaget. (Experimenter A, namn) kommer att hjälpa mig att dela ut dessa.

Ni får även en beskrivande text om just "ditt" företag. (Experimenter A delar ut lappar, Experimenter B delar ut texten)

Du kommer att få ca 4 min på dig att läsa den här texten och sen kommer jag att samla in texterna igen och sen kommer ni fått ett tomt papper där ni ska återberätta texten så personen ni ska kommunicera med ska kunna förstå vilket företag det är.

**[EXPERIMENT PART 2, BLOCK 1 UTFÖRS] (4min)**

*(Samla in texterna efter 4 min och dela ut linjerade papperna)*

Ni får nu ett tomt papper där du sen ska beskriva företaget du precis läst om, på ett sätt så att mottagaren förstår vilket företag du menar utan att du nämner företagets namn.

Meningen med det här experimentet är som sagt att undersöka hur personer kommunicerar med och förstår varandra, så det är jätteviktigt att ni inte skriver namnet på företaget när ni beskriver det.

För att hålla reda på alla papper har jag numrerat dem i förväg, men ert deltagande är anonymt. Ni har 6 minuter på er, blir ni klara innan, sitt bara tysta och vänta.

**[EXPERIMENT PART 2, BLOCK 2 UTFÖRS ] (6min)**

Nu tar jag era meddelanden till de mottagande eleverna. De kommer försöka identifiera vilket företag ni har beskrivit. När jag kommer tillbaka kommer ni att få reda på huruvida mottagaren har lyckats identifiera företaget eller inte. Under tiden som ni väntar på svar får ni en annan uppgift att utföra. Det är viktigt att ni är tysta även under denna del.

(Experimenter A delar ut filler task. Experimenter B går ut ur klassrummet för att "gå till de andra eleverna" – i.e. sätta sig i ett annat rum och vänta)

**[EXPERIMENT PART 2, BLOCK 3 UTFÖRS (FILLER TASK)] (8 min)**

Nu kommer jag att dela ut ett tomt papper där jag har fyllt i om er mottagare har lyckats identifiera företaget eller ej. Det är viktigt att ni inte pratar med varandra medan jag delar ut svaren och att ni inte jämför era resultat.

Nu vill jag veta hur mycket ni kommer ihåg av originaltexten. På de tomma raderna vill jag att ni försöker skriva allt ni kommer ihåg från originaltexten ni läste om företaget. Försök återberätta den så ordagrant ni bara kan, ni har 6 minuter på er. Om ni blir klara innan, sitt bara tysta och vänta.

**[EXPERIMENT PART 2, BLOCK 4 UTFÖRS] (6 min)**

**[EXPERIMENT PART 3]**

Nu har vi bara några korta frågor kvar. Det är frågor om båda experimenten, och frågor om er själva, som vi gärna vill att ni svarar på. När ni är klara sitt bara tysta och vänta in de andra.

**[EXPERIMENT PART 3 UTFÖRS] (8 min)**

Tack så mycket för att ni deltog i våra experiment! Nu ska vi dra en vinnare av godispåsen (välj ett av filler-task häftena).

## **[[INTRODUCTION]**

Hey all!

*We are delighted to be here today and that you will help us with our experiment. We intend to begin by briefly introduce ourselves and explain why we are here. We are two master's students from Stockholm School of Economics. Both are enrolled in the second, and final, year on our respective graduate programs. As I said, right now we both write our master's theses, and both of us need help from you. My (Experimenter A) name is (name) and I write my master's thesis in Marketing about communicating efficient in media, and my (Experimenter B), name is (name) and I write an thesis in Management about how people communicate with and understand each other. Since both of us will conduct experiments we decided that we could merge two occasions and additionally help each other. You will thus make two separate experiments today.*

*We will start with my (Experimenter A's) experiment.*

## **[EXPERIMENT PART 1]**

*I will now hand out booklets to all of you. Start with reading the instructions. The instructions are followed by three shorter articles. Kindly read the articles carefully and then answer the following questions. It is important to answer all questions, even if some might be perceived as strange. There are no right or wrong answers.*

*It is important that you do not talk with each other while you fill in the booklet. You have about 15 minutes to spare. When you're done, you can close the booklet and sit quietly until everyone is finished.*

## **[EXPERIMENT PART 1 PERFORMED] (15 min)**

*Thank you so much for your participation in my study!*

## **[EXPERIMENT PART 2]**

Hi!

*As I said, my name is (name) and I write my master's thesis in Management and examine how people communicate with and understand each other. More specifically, I look at how people through written messages succeed in getting others to understand what they mean.*

*As a first part of my experiment about twenty students at your school have, already last week, worked with a teacher where they have received information about a number of different industries. Thanks to this, I also know some of what these students think about these companies.*

*You will now communicate with one of these students about one of the companies.*

*I will start by distributing a note which tells which student you will communicate with – because of anonymity, the name is fictional, and which company you are going to communicate about, as well as the person's attitude about the company. (Experimenter A, name) will help me to distribute them.*

*You'll also get a descriptive text of just "your" company. (Experimenter A distributes patches, Experimenter B distributes text)*

*You will get about 4 minutes to read this text, and then I will collect the texts again and you'll get have a blank piece of paper where you are going to re-tell the text so that the person you should communicate with will be able to understand which company it is.*

**[EXPERIMENT PART 2, BLOCK 1 PERFORMED] (4min)**

*(Collect texts after 4 minutes and distribute lined papers)*

*You now have a blank piece of paper on which you will describe the company you just read about, in a way so that the recipient understands what company you mean without you mentioning the company name.*

*As said, the purpose of this experiment is to examine how people communicate and understand each other, so it is very important that you do not type the name of the company when you describe it.*

*To keep track of all the papers, I have numbered them in advance, but your participation is anonymous. You'll have six minutes, if you'll finish before, just sit quietly and wait.*

**[EXPERIMENT PART 2, BLOCK 2 PERFORMED] (6min)**

*Now I will take your message to the recipient students. They will try to identify which company you have described. When I come back, you will find out whether the recipient has succeeded to identify the company or not. While you are waiting for an answer, you'll get a different task to perform. It is important that you are silent also during this part.*

*(Experimenter A distributes filler task. Experimenter B goes out of the classroom to "go to the other students" – i.e. go to another room and wait)*

**[EXPERIMENT PART 2, BLOCK 3 PERFORMED (FILLER TASK)] (8 min)**

*Now I will hand out a blank piece of paper where I've filled out if your receiver has managed to identify the company or not. It is important that you do not talk to each other while I hand out the answers and that you do not compare your results.*

*Now I want to know how much you remember from the original text. On the blank lines I want you to try to write everything you remember from the original text you read about the company. Try to re-tell it as literally you can, you'll have six minutes. If you'll finish before, just sit quietly and wait.*

**[EXPERIMENT PART 2, BLOCK 4 PERFORMED] (6 min)**

**[EXPERIMENT PART 3]**

*Now we only have a few short questions remaining. There are questions about both experiments, as well as questions about yourselves, that we would like you to answer. When you're done just sit quietly and wait out the others.*

**[EXPERIMENT PART 3 PERFORMED] (8 minutes)**

*Thank you very much for participating in our experiments!]*



## Appendix E – Pre-Study 1, Determination of Warmth

Table XVI

### Determination of Warmth

Paired - samples t - test between competence & warmth

	Mean Diff ( $\mu_{\text{competence}} - \mu_{\text{warmth}}$ )	SD	t
<b>No Voice (Group 2)</b>	1.56***	1.06	12.38
<b>Voice (Group 3)</b>	1.32***	0.87	12.45
*** $p < 0.01$ , ** $p < 0.05$ , * $p < 0.1$			

## Appendix F – 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 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 företags produkter har under den senaste tiden fått olika utmärkelser för att vara revolutionerande i sitt slag när det gäller nytänkande och kostnadseffektivisering (+1).

MNN driver också ett populärt yrkesgymnasium med jobbgaranti (+1) för de elever som slutför sin utbildning. Lojalitet är viktigt för företaget (+1) 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 (0). De anställda måste dessutom informera ledningen om någon på företaget inte sköter sitt jobb (-1).

MNN har fått kritik från facket (-1) då företaget börjat betygsätta sina anställda. Genom ett standardiserat formulär ska de anställda på företaget inte bara få sina prestationer utan även sina beteenden (-1) bedömda på en skala från ett till fem. 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 med sin arbetsplats och känner att de kan utvecklas inom företaget (+1).

För några år sedan skakades företaget av en skandal. Företagets f d VD hade ett pensionsavtal som fick stark kritik för sin storlek. (-1) 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 (-1). VD:n fick senare genom ett domstolsbeslut återbetala en del av denna bonus (0).

*[MNN is an engineering group in automation and power technologies (0). The corporation operates in approximately one hundred countries and has approximately one hundred thousand employees (0). The headquarters are in Europe, and the corporation is represented mainly in cities with a strong industrial orientation (0). MNN delivers solutions that improve performance (+1) and minimize environmental damage (+1) for energy corporations and heavy industry. Sustainability is integrated into the operations. The corporation claims to strive for a balance between economic growth, environmental responsibility, and societal development. (+1) MNN also has nine research centers with six thousand employed researchers and about seventy university collaborations worldwide (0). Many of the company's products have recently received various awards for being revolutionary in its kind in terms of innovative thinking and cost efficiency (+1).]*

*MNN also runs a popular high school of vocational training that provides job guarantee (+1) for those students who complete their education. Loyalty is important to the corporation (+1), and employees must sign a special clause, entailing that they must not report to anyone outside the corporation about information that comes to their attention as part of their work (0). The employees must also inform management if someone in the corporation does not carry out their work as they are supposed to (-1).*

*MNN has received criticism from the union (-1), since the corporation has begun to rate their employees. Through a standardized questionnaire, employees not only get their performance but also their behavior (-1) assessed on a scale from one to five. The union believes that there is a risk (-1) that the assessment of someone's behavior becomes more arbitrary (-1). Many employees are also worried (-1) about the new grading system. Otherwise employee surveys show that the majority of employees are satisfied with their workplace and feel that they can develop within the corporation (+1).*

*A few years ago, the corporation was shaken by a scandal. The corporations' former CEO had a pension agreement that was heavily criticized for its size. (-1) During the time when the person was the CEO of the corporation, net profit increased sixty times and sales increased thirty times (+1). MNN's board 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 (-1). By means of a court decision, the CEO later had to repay part of this bonus (0).]*

## Appendix G – Detailed Demographics Experiment Groups

Table XVII

### Demographics – Group Matrix

Detailed experiment group demographics

Experiment Subjects		N=164			
Experiment Groups	Group 1 N=57		Group 2 N=55		Group 3 N=52
<b>Stimuli</b>	Neutral		Counter - Stereotypical		
			No Voice		Voice
<b>Receiver</b>	Female		Female		Female
	Mixed		Mixed		Mixed
<b>Sender</b>	Female N=34	Male N=23	Female N=31	Male N=24	Female N=34 Male N=18
<b>Mean Age</b>	17.4		17.3		17.3
			63.4%		
<b>Mothers With University Diploma</b>	60.7%		67.9%		61.5%
	F: 52.9%	M: 72.8%	F: 56.7%	M: 82.6%	F: 58.8% M: 66.7%
			60.6%		
<b>Fathers With University Diploma</b>	57.1%		66.0%		58.8%
	F: 55.9%	M: 59.1%	F: 60.0%	M: 73.9%	F: 60.6% M: 55.6%
			57.4%		
<b>Percentage Female Teachers</b>	56.4%		57.2%		58.6%
	F: 55.3%	M: 58.1%	F: 54.9%	M: 60.2%	F: 58.3% M: 59.2%

## Appendix H – Controlling for Experimenter Gender

Table XVIII

### Group 1: SIB-Effect with Respect to Experimenter Gender

OLS - regression on message effect on recall with and without interaction effect of experimenter gender

	Full Sample n=57 (Exp. Gender F+F, n=23 Exp. Gender F+M, n= 34)		Female Sender n=34 (Exp. Gender F+F, n=12 Exp. Gender F+M, n=22)		Male Sender n=23 (Exp. Gender F+F, n=11 Exp. Gender F+M, n=12)	
Dependent Variable	Recall	Recall	Recall	Recall	Recall	Recall
Constant	0.39	0.45	0.39	0.36	0.54	0.70
Message	0.39	0.15	0.65***	0.34	0.17	-0.11
	(0.11)	(0.21)	(0.17)	(0.30)	(0.15)	(0.31)
Experimenter_Gender	0.23	0.08	-0.13	-0.29	0.32	0.10
	(0.37)	(0.39)	(0.53)	(0.54)	(0.53)	(0.58)
Message* Experimenter_Gender (Interaction)		0.33		0.47		0.36
		(0.25)		(0.37)		(0.36)
Adjusted R <sup>2</sup>	0.18	0.19	0.31	0.32	-0.01	-0.01
Unstandardized Coefficients; Standard errors in parenthesis; Beta without parenthesis; *** p<0.01, ** p<0.05, *p<0.1						