Women’s Aspiration for Leadership – An Experimental Study on Agency and Gender

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Abstract
The present study examined the effect of manipulated (threatened or affirmed) sense of agency on Swedish students’ preference for leadership, by ease of retrieval. Three hundred and twelve students ($M_{\text{age}} = 23.04, SD = 2.70$) participated in the experiment. The aim of the study was to investigate whether individuals’ leadership preferences was affected by perceived sense of agency. By contrasting a role as a leader and a role as a problem solver, participants rated their interest for each. In total $N = 312$ participants were randomly assigned to one of the three conditions (threatened agency, affirmed agency or no agency manipulation). The hypothesis that an agency threat should lead to a decreased preference for a leadership role, as compared to a problem solver role, was not supported by the obtained results. Furthermore, men did not show higher preference, as compared to women, for a role as a leader over a role as a problem solver. Possible methodological improvements are discussed, along with suggestions for further research.

Key words: Agency, leadership, ease of retrieval, gender, gender stereotypes
In Sweden during 2010 women summed up a total of 27% of leaders in business, whilst men added up to a total of 73%. In 2012, 25.2% of members on boards of Sweden’s largest publicly quoted companies were female, whilst 74.8% were male (European Commission). These statistics demonstrate the underrepresentation of women in leading positions in Sweden. The discrepancy between women’s absence at leadership positions and the high number of female graduates (Statistiska Centralbyrån, 2015), indicates a potential loss of highly qualified human resources. The question is; where do all qualified women go? Are they not interested in leading positions?

Historically, the concept of leadership has been described using predominantly masculine terms, and theories about leadership have primarily focused on stereotypical male qualities (Eagly, 2007). Women’s underrepresentation in leadership has been explained by a variety of theoretical perspectives like the “glass ceiling” (Eagly, 2007), “the pipeline problem” (Carli & Eagly, 2001) and evolutionary perspectives (Eagly & Johannesen-Schmidt, 2001). The “glass ceiling”, depicts a barrier for women in their upward climb and a tendency to favour men over women for leading positions (Eagly & Karau, 2002). Explanations for the “glass ceiling” emphasise discrimination due to varied causes such as descriptive and prescriptive stereotypes regarding how women (and men) are respective how they should be (Heilman, 2001). Connected to the “glass ceiling” perspective of women’s underrepresentation, are the two dimensions of agency and communion. Prescriptive stereotypes suggests that women should be more communal and that men should be more agentic (Eagly & Karau, 2002; Heilman, 2001). Agency includes characteristics such as confidence, assertiveness, dominance, and aggressiveness (Abele & Wojciszke, 2007; 2014), and communion characteristics such as gentleness, nurturing and friendliness (Abele & Wojciszke, 2007; 2014). The dimension of agency has been highly connected to leadership and prescriptive stereotypes of how a good leader should be (Eagly, 2007). Therefore, if women are, or strive to become leaders, they violate the gender stereotype of communion (since leadership is connected with agency), which might have damaging consequences (Heilman, Wallen, Fuchs & Tamkins, 2004), like workplace discrimination (Heilman & Eagly, 2008). Women who possess agentic qualities and are successful in traditional male domains, are in a more vulnerable position and face more obstacles than men (Evans, 2014), and are at greater risk of suffering social and economic penalties due to counter-stereotypical
behaviour (Rudman, Moss-Racusin, Phelan & Nauts, 2012). Furthermore, women who are successful in male oriented domains, are often less liked compared to equally competent men, a dislike which negatively affect evaluations and rewards (Heilman et al., 2004). Also, the “glass ceiling” and the discrimination due to beliefs regarding prescriptive stereotypes might then be a problem which can lead to women not showing interest in leading positions.

The issue of women’s underrepresentation is important to understand, both for the individual as well as for organizations and society. Bongiorno, Bain and David (2014) demonstrated, that prejudice toward women in leadership positions have changed remarkably, and that women who show agency in leadership positions are more accepted. Whilst this development is good, women who fail to show agency are still disapproved, whilst men who fail to show agency are not. The statistics above mirror the current situation in Sweden, and even though prejudice toward women who show agency has reduced, there is no reason that the situation could not become even better. If women believe that they cannot become leaders, or believe that others do not trust them as leaders, they can never climb as high on the corporate ladder as men. In fact, Lyness and Thompson (2000) revealed that although similar career history and developmental experience, women relied on alternative strategies, than men, to reach the top.

To get a deeper insight in women’s underrepresentation, the “glass ceiling” perspective mentioned above is used from an individual perspective. Since the dimension of agency has been closely connected to leadership and stereotypes, and research has shown that women failing to show agency are discriminated, agency will be used as a factor in the present study. The aim is to investigate whether sense of agency is a factor that influences individuals’ preference for leadership.

Who wants to become a leader?

Gordon and Medland (1965) found a significantly positive relationship between an individual’s leadership aspiration and their ability to lead. Although the correlation was weak, it is still significant and indicates that a person who wants to become a leader, also could be a good one. Different factors can affect interest for leadership, and there seems to be mixed findings regarding aspiration for leadership.

Leadership self-efficacy plays a central role in the formation of individual agency (Hannah, Avolio, Luthans & Harms, 2008). Developed from Bandura’s (1982) original theory, leadership self-efficacy concerns the individual’s beliefs in personal ability to lead (Hannah et al., 2008). When examining students, still awaiting a career, Schyns and Sczesny
(2010) found that occupational self-efficacy was positively correlated to self-perceived leadership relevant attributes (task- and person oriented). Their findings highlight the importance of occupational self-efficacy for believing in a future career.

Individuals’ Motivation to lead (MTL, Chan & Drasgow, 2001) has been defined as the willingness to undertake leadership roles and engage in training activities. Three components (social-normative, affective and non-calculate) have been identified for MTL (Chan & Drasgow, 2001). Influenced by identity- and social comparison literature, Guillén, Mayo and Korotov (2015) considered whether individuals’ affective (intrinsic) MTL was affected by their comparisons of their standards of leadership and themselves. Specifically, they investigated self-to-prototype (widely held, abstract representations of leadership) and self-to-exemplar (particular representation of leadership depending on specific individuals) comparisons in regards of affiliation MTL. Their study revealed that both self-to-exemplar and self-to-prototype comparisons related positively to MTL. Thus, having a picture of a exemplar or prototype leader enhances an individual’s MTL. In fact, it has been suggested that incorporating leadership roles into ones sense of self, can motivate leadership aspiration (Ibarra, Snook & Guillén, 2010), and that prototypes are not only used to judge others, but ultimately oneself as a leader as well (Guillén et al., 2015).

Seemingly there are several aspects that can affect individuals and their interest in becoming a leader. Ease of retrieval, where people are affected by the ease of retrieving information regarding specific situations (e.g. memories, behaviours), can be an aspect which affects individuals’ interest for leadership. Schwarz et al. (1991) found that people were affected by how many examples of assertive behaviour they were asked to retrieve, and that when asked to retrieve 12 examples, attributed themselves as less assertive compared to when asked to retrieve 6 examples. Weaver et al (2013) explored masculinity threat by applying this method. Participants were asked to list 10 (threat) vs. 2 (affirmation) typical male behaviours. Participants in the threat condition were told that “most men can think of 12 things”, whilst participants in the affirmation condition received the information that “most men can think of only one thing”. By doing this they wanted to increase the participants sense of threat. In a similar way, ease of retrieval will be used in the current study to manipulate participants sense of agency.

Both leadership self-efficacy and MTL play a central role in individuals’ beliefs in their leadership capacity. Since the current study used only students as participants, one can assume that they are high striving individuals with high MTL as well as leadership self-efficacy. By threatening or affirming their agency by ease of retrieval, they might feel that
they possess qualities similar to their prototype or that they lack those qualities, which therefore can affect their interest in becoming a leader.

**Gender differences in aspiration to lead**

Hoobler, Lemmon and Wayne (2014) explain the phenomenon where women report less aspiration for the top jobs, a phenomenon known as “opt-out”. Research on women’s underrepresentation in leading positions and the “opt-out revolution” have mainly focused on trying to find evidence of the contrary, namely that women in fact do desire leading positions. However, studies comparing women and men have shown that women tend to have lower levels of leadership self-efficacy (Hoyt & Blascovich 2007; Hoyt, 2005). In an experiment, Davies, Spencer and Steele (2005) exposed participants to commercials aimed to elicit female gender stereotypes. Their results revealed that women who were exposed, showed preference for a role as a problem solver over a role as a leader, when having to choose between the two. In other words, when exposed to stereotype threats, women showed lower aspiration for leadership. However, concluding that women have lower aspirations for leadership compared to men is a bit premature. In a recent study, Cho, Harrist, Steele and Murn (2015) found that the gender difference in students’ motivation to lead (MTL) was only present in connection to extrinsic rewards (e.g. rise in salary, credentials). In other words, there was no difference between male and female students’ MTL when expecting intrinsic rewards (e.g. personal development and satisfaction). Moreover, Powell and Butterfield (2013) found that men did not “opt in” more than women. Rather individuals describing themselves and identifying with masculine gender identity, showed higher aspirations for leadership compared to individuals who identified low on masculinity. The Cho et al (2015) and Powell’s and Butterfield’s (2013) studies show the importance of looking at the narrower aspects of personality that might influence aspirations for leadership. One such narrow aspect is extraversion, from the Big Five model of personality (Digman, 1990), which is the most predictive and accurate dimension for leadership outcomes (Bono & Judge, 2004). Out of the aspects included in extraversion, agency is a factor that is particularly related to leadership outcomes. Furthermore, individuals who score high on extraversion, posses greater leadership potential because they are motivated by tendencies connected to agency (Do and Minbashian, 2014). Thus, investigating agency as a narrow aspect of extraversion is important since it can help explain and predict leadership potential. Furthermore, the narrower conceptualization can capture more accurate predictions.
In line with these findings, the present study focused on sense of agency as an aspect affecting women’s preference for leadership.

**Gender stereotypes: “Think leader, think male”**

Looking back at history, women have been more likely to engage in family tasks and stay at home, whilst men traditionally engaged in tasks requiring strength and speed. Accordingly, women are expected to be more communal and men expected to be more agentic (Eagly & Johannesen-Schmidt, 2001).

The Role Congruity theory, developed from the Social Role theory, focus on leadership roles and considers the congruity and incongruity between gender roles and other roles. Individuals and groups are perceived positively if they match the stereotypes of leadership. Accordingly, female leaders are at greater risk of prejudice because they contradict the stereotype of a leader (Eagly & Karau, 2002). Although many of the gender roles are out-dated, there are still occupational differences. Expectations for the appropriate behaviour for both men and women are fostered by gender roles and the different sexes are ascribed traits and behaviours (Diekman & Eagly, 2000), which when translated to the higher order business world, becomes a common bias phrased “think leader, think male” firstly coined by Schein (1973).

Both men and women can expect gender stereotypes. Since leadership is often connected with agentic and male traits (Koenig, Eagly, Mitchell, & Ristikari, 2011), it is not surprising that women face conflicting demands between their role as a leader and their role as a woman. Expectations of leaders to possess more agentic traits, serves as an explanation to why leaders are commonly thought to be male (Eagly, 2007). Female leaders who show agentic traits are not seldom targets of prejudice, since they divert from the traditional female gender stereotypes. The same is true for women who do not show agentic traits, they can be regarded as unsuitable leaders. This role conflict leaves women in a dilemma, since showing high qualities on either trait enhances prejudice (ibid). However you toss the coin, women are faced with a catch 22 where they must possess agentic qualities to be considered for leadership positions, this on the cost of prejudice for breaking gender stereotypical behaviour (Rudman et al., 2012).

As mentioned above, a descriptive gender stereotype holds expectations of how women are, and a prescriptive stereotype holds expectations of how women should be (Heilman, 2001). Heilman’s Lack of Fit model describes that expectations regarding a persons success or failure at a specific job, are expectations motivating personnel decisions.
Furthermore, the model specifies that the fit between a job’s requirements and an individual’s attributes are determinants of performance expectations. Success will be expected if there is a good fit, whilst failure will be expected if the fit is poor. The model suggests that the evaluations are deeply affected by these fit-derived performance expectancies (Heilman, 2001). Women holding leadership positions violate the prescriptive norms of how women should be. The poor fit between a highly successful woman and the gender stereotypes associated with how women should be, can then lead to disapproval, which further on might lead to penalties. Deviating from traditional gender norms can result in prejudice, a phenomenon that according to Rudman and Fairchild (2004) prevents individuals from appreciating their potential and also reinforces the gender status quo.

Being aware of the prescriptive norms related to gender stereotypes might hinder women from perusing a career as a leader, since such norms will most likely affect how women perceive themselves. However, this study does not examine norms as such, although norms could have an impact to which extent men and women perceive their agency. In this study agency is manipulated in a more direct way.

Agency in research and development though time

Self-ascribed agency is a better predictor of self-esteem compared to self-ascribed communion (Bi, Ybarra and Zhao, 2013). When individuals evaluate themselves, they are more influenced by agentic considerations compared to when evaluating others, where communal considerations are higher (Wojciszke, Barya, Parzuchowski, Szymbow, & Abele, 2011; Abele & Wojciszke, 2007; Abele, Bruckmüller & Wojciszke, 2014). Moreover, priming individuals with the “self” leads to agentic evaluations of their behaviour whereas behaviours of others are evaluated by communal interpretations (Wojciszke, 1997). Besides predicting self-esteem, self-assessed agency has also proven to have a predictive power for an individual’s career success (Abele, 2003; Abele & Spurk, 2011). These findings suggest that agency as a dimension of social cognition predicts and effects level of self-esteem as well as career success. However, what is still unknown is how individuals’ perceived level of agency might affect their interest in becoming a leader. The current study contributes to prior findings concerning agency by trying to reveal whether agency can be manipulated by ease of retrieval. Through this it would also be possible to see if there exists a causal explanation to why some individuals are more or less interested in becoming a leader.

From 1966 to 2009 self-evaluations among college students increased on agentic traits such as; drive to achieve, self-confidence and leadership ability. When comparing self-
evaluations on leadership ability, there was a 51% increase between 1966 and 2009 (Twenge, Campbell & Gentile, 2012). At the same time, self-evaluations on communal attributes decreased or stayed the same (Twenge, Campbell & Gentile, 2012; Twenge, 1997; Twenge, 2001). One reason for the increase in self-evaluations on agentic attributes among today’s college students could be that younger generations today are encouraged to have higher self-esteem, resulting in more positive self-views (Twenge, 2009).

The aim of this study is to investigate whether sense of agency is a factor that influence the individual’s own interest in leadership preferences. Previous research has focused on the observer view of agency, wherefore the individual’s perspective will be the main focus in the current study.

**Gaps in previous research**

A great deal of research has focused on addressing the issue of women’s underrepresentation in non-traditional fields, where the big two (communion and agency) have been in focus as well as how individuals view others who either possess or lack these traits (e.g. Rudman & Glick, 2001). However, there is a gap in research, investigating how these traits affect individuals’ own beliefs regarding ability and interest in leadership. It is likely that level of agency is a causal explanation for leadership interest, wherefore this gap is important to fill since there are great gender differences regarding leadership positions in Sweden. Therefore this study investigated how level of agency affected an individual’s interest in leadership, and more specifically, if a threatened level of agency weakened preference for leadership.

**Aims and hypotheses**

The issue of women’s underrepresentation, as described above, effects both the individual and society. Women facing a double bind will not be able to reach as far as men on the corporate ladder. Since there is a gender stereotype that women are not agentic, and thus not appropriate leaders, it might lead them to not pursue leading positions. Reflecting this issue, the current study aims to investigate whether agency is a factor that affects women’s aspiration to leadership. Since agency is closely related to self-esteem and leadership self-efficacy, threatening an individual’s sense of agency should lower their self-esteem and thus lower their aspiration for leadership. Specifically, if they have their agency threatened, will they choose a subordinate role of a problem solver, over a role as a leader, and will they
prefer problem solver tasks over leader tasks? With reason of previous research the following two hypotheses are proposed:

\[ H1: \text{Individuals who have their agency threatened will show less interest in becoming a leader. This in comparison to individuals who have their agency confirmed. Thus they will show higher preference for the role as a problem solver} \]

\[ H2: \text{The threat effect will be moderated by gender, where women will be more affected by threatened agency and show less interest for leadership.} \]

**Method**

The present study aimed to investigate whether manipulated (threatened or affirmed) sense of agency effected preference for leadership. The design of the experiment was a 2 (gender) X 3 (threat, affirmation and control) between group, independent sample with comparison groups. A restricted random assignment was used to force equal sample sizes. Threatened and affirmed sense of agency was experimentally manipulated using ease of retrieval. Participants were asked to list situations from the previous months where they acted assertive and felt confident. Thereafter they were asked to rate a list containing 20 items of tasks belonging either to a leader or a problem solver on a 7 point Likert scale, depending on their interest for the task.

**Pilot study**

Sixteen students at Lund University (62 % female) with a mean age (\( M = 24.25, SD = 2.02 \)) participated a pilot study. The pilot study was performed in order to decide number of retrieved situations for the threat condition respective the affirmation condition. Participants were given 3 minutes to come up with as many situations they could from the last month, where they felt confident and acted assertive. Results from the pilot study revealed that the mean number of retrieved situations was (\( M = 4, SD = 1.59 \)) ranging from 1-10. Therefore the participants in the affirmation condition were asked to retrieve 2 agency related situations, whilst participants in the threat condition were asked to retrieve 10.

The 20 tasks for leaders respective subordinates (problem solver in present study) in the dependent variable were picked from task descriptions on O’Net Resource Center, an American database with occupational information and descriptors (O’Net). In a second pilot
study, participants were given a list of tasks and asked to categorize them as either leader tasks or problem solver tasks. The 11 students (55% female) mean age ($M = 25.64$, $SD = 1.50$) then rated the dependent variable to check for floor- and ceiling effects. The results showed that two items from the problem solver tasks had ceiling effects (“Think creatively” and “Acting on own initiatives”). These items were thus re-phrased (“Show creativity” respective “Act decisive”) to not sound as positive.

**Design**

Ease of retrieval was used to experimentally manipulate participants sense of agency. In the present study the sense of threat and affirmation was applied in a similar way as in Weaver et al (2013) study, and participants in the threat condition was told that “most people can think of 12 situations” whilst participants in the affirmation condition was told that “most people can think of only 1 situation”.

Participants in all six conditions were thereafter asked to circle tasks belonging to either a leader or a problem solver, as well as choose between a role as a leader or as a problem solver, on 7 point Likert scales. The two categories of leader and problem solver were based on Davies et al. (2005) study where they investigated gender stereotypes for work among female students, who had to choose between a leader role or a problem solver role.

Similarly to Davies et al. (2005) the role of a problem solver was chosen because participants in the present study were all students, who most likely would not consider the role of a “follower” or “subordinate” for a future occupation.

**Participants**

Participants were 315 students at Lund University in Sweden. There were 158 male participants (50%) and 157 female participants (50%). The age of the participants ranged from 19 to 40 years old ($M = 23.04$, $SD = 2.70$). Due to invalid answers and misunderstandings of the task, 3 participants were excluded from the study before data entering, making the final number of participants 312 (156 male and 156 female). The conditions were held constant and all participants were given the same information, to be able so ensure that the only systematic difference between the groups was the independent variable and to enhance internal validity. Two criteria had to be fulfilled in order to be selected for participation; they had to speak Swedish and they had to be students at Lund University. None of the participants guessed the purpose of the study.
Materials

Three different versions of the questionnaire were distributed; one threat manipulation, one affirmation manipulation and one control condition without manipulation. Participants in the threat manipulation were given the following instructions: “List 10 examples of situations, from the previous month, were you acted assertive and felt confident”. To enhance the feeling of threat they were also told that “most people who perform this task can come up with 12 examples”. Participants in the affirmation condition were asked to perform the same task but with instructions to “list 2 examples of situations from the previous month, were you acted assertive and felt confident” along with the sentence that “most people who perform this task can only come up with one situation”. The dependent variable presented a list of 20 items where 10 items represented tasks typical for a leader (Cronbach’s alpha coefficient = 0.74), and the other 10 items tasks typical for a problem solver (Cronbach’s alpha coefficient = 0.63, presented in a mixed order. There was no higher alpha level reported if item deleted, why all items were kept in the scale measure. Examples of items included in the leader scale: “Plan for the organisations future” and “make strategic decisions” and for the problem solver scale: “brainstorm” and “prioritize order of tasks”. The participants were asked to rate the tasks on a 7-point Likert scale, where 1 = Not at all interested and 7 = very interested. They were also asked to answer which of the 2 roles (leader vs. problem solver) they would prefer if they had to choose on a 7-point Likert scale where 1 = most interested in the job as a problem solver and 7= most interested in the job as a leader. The participants in the control condition was given the same scales, but did not receive any version of the manipulation.

Procedure

Participants were recruited from study environment at campus and randomly assigned to one of the three conditions. All participants were students at Lund University and were recruited in both Lund and Helsingborg. Participants were approached during day-time in their natural study environment. Participation was requested mostly from medium sized study groups (5-6) individuals. This was done in order to save time since the manipulation task in the questionnaire required a time of 3 minutes. The questionnaire was handed out in person an filled in by pen/pencil in a controlled setting.

Participants were informed that they would partake in a study about future work interests and then given some time to read the instructions for the questionnaire. Thereafter they were given 3 minutes to complete the manipulation task. They were not informed of how
long time had passed. When 3 minutes had passed, they were asked to turn to the next page and complete the rest of the questionnaire. The two manipulation conditions (threat and affirmation) of the questionnaire took approximately 6 minutes to complete, and the control condition 3 minutes. Participants were handed the questionnaire in the following order; information and informed consent (appendix 1), manipulation (appendix 2 or 3), 20-item scale of preference for leader tasks or problem solver tasks (appendix 4), demographical questions (appendix 5). Participants were not given any compensation for participating.

Ethical considerations

All participants were informed that participation in the study was voluntary and that they could withdraw at any moment without having to explain why. They were informed that they were anonymous and that all collected data would be handled confidentially and that it could not be tracked back to them. They were informed that by completing the questionnaire they gave their consent. Participants were also given contact information if they felt that they needed or wanted to come in contact with the researcher for debriefing. Participants were not fully informed about the purpose of the research to ensure valid results of the manipulation.

Results

Descriptives

There were no differences across conditions regarding level of education ($M = 1.79$, $SD = .82$) or work experience ($M = 2.85$, $SD = .67$). Mean level of education represents a majority of participants being at the beginning of their education (not finished with their bachelor degree). Overall mean work experience represents a majority of the participants having a moderate level of work experience.

All participants, (except one in the affirmation condition) managed to retrieve at least one agency related situation. Participants who had their agency threatened had a hard time retrieving 10 situations ($M = 4.66$, $SD = 2.28$). A majority of participants (69.6 %) in the affirmation condition retrieved 2 situations.

Data screening before analysis

SPSS ANOVA was used for the analysis. Prior to analysis the two scales making up the DV (leader scale and problem solver scale) were examined using IBM SPSS. There were
no variables with more than 5% missing values. EM correlations and Little’s MCAR test showed sig=0.156 indicating that the values were missing completely at random.

Prior to analysis assumption testing was performed through residual analysis. There were four outliers, as assessed as being greater than 1.5 box-lengths from the edge of the box in a boxplot. Three cases with low scores and one with a high score on “Leadership preference” were found to be univariate outliers. When comparing data with and without the four univariate outliers, removal of the outliers improved normality of distribution. The three cases with low scores on the DV varied with more than .7 points from the lowest value. Thus, all four cases were deleted leaving 302 cases for analysis. Residuals were normally distributed as assessed by Shapiro-Wilk’s test (p > .05). There was homogeneity of variances, as assessed by Levene’s test for equality of variances, p = .25.

Hypothesis 1

It was hypothesised that individuals who had their agency threatened would show less interest in becoming a leader and more interest in becoming a problem solver, whilst individuals who had their agency affirmed would show higher preference in becoming a problem solver over a leader.

A One-way ANOVA was conducted to examine the effects of agency manipulation on “leadership preference”. The independent variable was agency manipulation (threat, affirmation and no agency manipulation). The dependent variable was constructed by subtracting the mean scores from the problem solver scale from the mean scores on the leader role scale. Negative values indicate a preference for the problem solver tasks, and positive values preference for the leader tasks, as defined by the leader minus problem solver difference. There was no statistically significant difference between the three conditions (threatened, affirmed or no agency manipulation) at a p < .05 level: F (2, 305) = .75, p = .47.

To further test the hypothesis a second ANOVA was conducted where participants were explicitly asked to choose between a role as a leader or a problem solver. Lower numbers indicates a preference for the role as a problem solver and higher numbers a preference for the role as a leader. Prior to analysis the DV (“preference to be a leader or preference to be a problem solver”) was checked and assumptions were investigated. Two females in the control condition did not answer the DV and were therefor dropped, leaving the total N = 310. Residual analysis revealed that there were no outliers. The DV was not normally distributed (somewhat negatively skewed), but a comparison with transformed
SQRT did not make it better, and since ANOVA’s are robust the distribution was kept. There was homogeneity of variances, as assessed by Levene’s test for equality of variances, \( p = .26 \).

There was no statistically significant difference between the three conditions when participants were explicitly asked to choose between the role as a leader or a problem solver: \( F(2, 303) = .67, p = .51 \).

**Hypothesis 2**

It was hypothesised that the manipulation effect would be moderated by gender and that women would be more affected by having their agency threatened and show lesser interest in becoming a leader.

A 2 X 3 between-subjects ANOVA’s was conducted to examine the effects of gender and agency condition on “preference for leader tasks or problem solver tasks”. The independent variables (IV’s) were gender (male and female) and manipulation of agency condition (threat, affirmation and no agency manipulation).

There was a statistically significant interaction between gender and level of agency for “Leadership preference” \( F(2, 302) = 3.12, p = .045 \), partial \( \eta^2 = .020 \). Thus, an analysis of simple main effects was run. There was a weak statistically significant difference in mean “Leadership preference” between females who had their agency either threatened, affirmed or not manipulated, \( F(2, 302) = 2.82, p = .06 \), partial \( \eta^2 = .018 \). Mean “Leadership preference” scores for women who had their agency threatened, affirmed and not manipulated were -.31 (SD = .57), -.40 (SD = .54) and -.14 (SD = .68), respectively, as presented in table 1. Women who had their agency affirmed had a statistically significant lower mean “Leadership preference” score than women who did not receive any agency manipulation, .26, 95% CI [.04, .49], \( p = .02 \), indicating a higher preference for problem solver tasks. They also scored lower compared to women who had their agency threatened, a non statistically significant mean difference of .09, 95% CI [-.14, .31], \( p = .44 \). There was no statistically significant mean difference on “Leadership preference” scores between women who had their agency threatened and women who did not receive any agency manipulation, .18, 95% CI [-.05, .40], \( p = .12 \).

There was no significant difference between men in the three conditions, \( F(2, 302) = 1.06, p = .35 \), partial \( \eta^2 = .007 \).

A significant difference was found between men and women in the control condition, \( F(1, 302) = 4.61, p = .03 \), partial \( \eta^2 = .015 \). Mean “Leadership preference” scores for women
was -.14 (SD = .68) and -.38 (SD = .49) for men, a significant mean difference of .24, 95% CI [.02, .46], \( p = .03 \), where men reported a higher preference for tasks connected to a problem solver role than women. No other differences were found.

Table 1.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threatened agency</td>
<td>-.31 (.57)</td>
<td>-.21 (.57)</td>
</tr>
<tr>
<td>Affirmed agency</td>
<td>-.40 (.54)</td>
<td>-.29 (.56)</td>
</tr>
<tr>
<td>Control condition</td>
<td>-.14 (.68)</td>
<td>-.38 (.49)</td>
</tr>
</tbody>
</table>

Standard deviations are presented in parenthesis. Negative values indicate preference for problem solver tasks.

A second two-way ANOVA was conducted on “dichotomous choice”, where participants were explicitly asked to choose between the two roles as a leader or problem solver. There was no statistically significant interaction effect between gender and manipulation condition for ” dichotomous choice” score, \( F(2, 304) = 1.87, p = .16 \), partial \( \eta^2 = .012 \), wherefore main effects were investigated.

A weak statistical significant main effect of gender, \( F(1, 304) = 3.41, p = .06 \), partial \( \eta^2 = .011 \), was found. Female participants were associated with a mean ” dichotomous choice” score .47, 95% CI [-.03, .97] higher than males, a weak statistical significant difference, \( p = .06 \). The marginal means for ” dichotomous choice” were 4.7 (SE = .18) for females and 4.18 (SE = .18) for males. Thus female participants reported a stronger preference for the role as a leader compared to male participants, and the hypothesis was therefore rejected.

There was no statistically significant main effect of manipulation condition on ” dichotomous choice” score, \( F(2, 304) = .43, p = .65 \), partial \( \eta^2 = .003 \). Means and standard deviations are presented in table 2.
Table 2.
Mean and standard deviations for Leadership role preference

<table>
<thead>
<tr>
<th>Condition</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Threatened agency</td>
<td>4.69 (2.20)</td>
<td>4.46 (2.22)</td>
</tr>
<tr>
<td>Affirmed agency</td>
<td>4.33 (2.31)</td>
<td>4.31 (2.25)</td>
</tr>
<tr>
<td>Control condition</td>
<td>4.92 (2.10)</td>
<td>3.77 (2.28)</td>
</tr>
</tbody>
</table>

Standard deviations are presented in parenthesis. High values indicate preference for a leader role.

Discussion

This study investigated whether manipulated (threatened or affirmed) sense of agency affected individuals’ aspiration for leadership. Individuals who had their agency threatened did not show lower interest for a leader role (over a problem solver role) compared to individuals who had their agency affirmed. When participants were asked explicitly which role they would prefer, there was no significant difference between the three conditions, and thus, no support for the first hypothesis was found.

Women did not report lower interest than men, and thus gender did not moderate the threat effect, wherefore the second hypothesis was also rejected.

One possible explanation that the hypotheses were not supported, is the high preference for the problem solver tasks. Although the pilot study did not reveal this high preference, tasks connected to the problem solver tasks might sound more appealing compared to the leader tasks. As in Davies et al. (2005) study, the same problem was presented here; constructing tasks that high achieving students would consider as enticing as leader tasks but still consider as subordinate. The hope was that participants would consider the leader tasks as somewhat higher in status. Unfortunately the results indicate that this was not true.

Another explanation for the hypotheses not finding support might be that the affirmation manipulation was not efficient enough. Although manipulations were presented in a similar way as Weaver et al., (2013) who found significant results, participants might not have perceived their agency as affirmed. The affirmation manipulation might have been too easy, resulting in the participants not perceiving their agency as affirmed, and therefore not
affecting their aspiration for leadership. Furthermore, the difference between the current study and Weaver's et al., (2013) was that they measured identity threat, which might remind the individual of the self to a greater extent, than threats to agency. Even though agency has been strongly linked to self-evaluations (eg. Wojciszke et al., 2011; Abele et al., 2014), it is possible that participants in the current study do not reflect about their agency on a daily basis, wherefore the manipulation did not affect their aspiration for leadership. The threat condition seems to have yielded difficulties since so few situations were reported.

Besides the potential methodological limitations discussed above, there might also be other explanations as of why non of the hypothesis found support. Participants in the present study consisted of university students. A majority of them reported a moderate level of work experience. Students were chosen as participants, due to low probability of prior leadership experience. However, participants being in their early twenties might contribute to explaining the non-significant results. Older people tend to hold more traditional attitudes regarding gender, which might then foster a more agentic and masculine understanding of leadership (Howell and Day, 2000). Participants young age might explain the female participant’s greater aspiration toward a leader role. Female participants in the present study might not consider the wild held gender stereotypes regarding gender as a threat, wherefore threatening their agency was ineffective. Furthermore, geographical location might help explain current results. Previous studies investigating women’s underrepresentation in leading positions and interest for leadership are not conducted in Sweden. The non-significant results might mirror the development of Sweden’s equality where women might actually posses more agency and are not frightened by threatened agency. In fact, women’s status and participation in leading roles is noticeably higher in western nations, compared to eastern nations (Hausmann, Tyson & Zahidi, 2009), why incongruity for women in the west might be less evident than for women in the east. In relation to self-to-exemplar and self-to-prototype (Guillén et al., 2015) these results make sense. Young female students in Sweden, might not hold as traditional gender stereotypes as older women and they might be more aware of women’s higher status in Sweden. Therefore, their prototype of a leader might not be as influenced by male stereotypes connected to agency. Thus, threatening their agency might not have a great impact on their aspiration for leadership.

According to the present results the “opt-out” phenomenon (Hoobler et al., 2014) should be re-thought. Results indicate that female students in Sweden “opt in”, significantly more than their male counterparts when not receiving any manipulation. Furthermore, women
showed a slightly higher preference for a role as a leader when their agency was threatened compared to male participants. The result that women showed a significantly higher interest for the leader role, compared to men in the control condition is surprising, since the general expectation is that men should possess higher levels of leadership self-efficacy compared to women (eg. Hoyt & Blascovich, 2007; Hoyt, 2005). However, as previously mentioned, mixed findings regarding MTL suggest that differences depend on whether intrinsic or extrinsic rewards are expected (Cho et al., 2015) and masculine gender identity (Powell & Butterfield, 2013). Since no rewards were communicated and gender identity was not measured, it is hard to draw any clear conclusions.

Interestingly, and in line with research on stereotype threat (eg. Sinclair & Carlsson, 2013), men who had their agency threatened reported a higher interest for the leader role when asked to choose, compared to those who did not receive a manipulation. Having their agency threatened might then have made them doubt themselves and to prove themselves, they then reported a higher interest for leadership. In fact, this trend was also found when they rated the tasks. Men who did not have their agency threatened reported a higher (non significant) interest toward problem solver tasks, than men who had their agency threatened.

Even though no support was found for the hypotheses, results indicate an “opt-in” revolution for Swedish female students. Results suggest that female students in Sweden have a positive outlook for the future and that they are not significantly affected by having their agency threatened.

**Limitations**

Considering the reliability and validity of the study, the dependent variable consisting of leader tasks and problem solver tasks as well as the dichotomous choice, was created specifically for the present study. The results that all participants, independent of condition, showed preference for the role as a problem solver over a leader role might indicate a problem with the scale. The problem solver scale had a somewhat low Cronbach’s alpha (\(\alpha = 0.63\)) value, suggesting low internal consistency. Since this scale was produced for the present study and no higher alpha values if item deleted was shown, the current scale was kept. However, the low internal consistency might serve as a limitation in the present study. The tasks connected to the role as a problem solver might sound easier and more interesting which might be a reason for the dominant preference for this role. The internal consistency for the leader scale was good (Cronbach’s alpha coefficient = 0.74) and can therefor be used as a measure for leadership interest for future research.
Since the present study was experimental and the first of its kind, the goal was not to find generalizable results. The external validity is therefore low, but there is nothing indicating that the participating students should not be representative for Swedish students in general.

**Future research**

As previously mentioned, studies where agency is manipulated, are (to my knowledge) limited. Although no support for the hypotheses was found in the current study, future research on agency and the affect for leadership is needed.

As previous studies have had mixed findings regarding gender differences in leadership aspiration, further research is needed on narrow aspects which might influence. Since gender identity seems to affect leadership aspiration (Powell and Butterfield, 2013) and agency is connected to gender stereotypes as well as leadership, it would be of great interest to investigate whether women with low gender identity who have their agency threatened would show lower aspiration for leadership compared to women with high gender identity who have their agency threatened.

The present study have not looked at different kinds of leadership. Since gender has been connected to different kinds of leadership, it would for future studies be interesting to explore whether level of agency affects the individual’s leadership aspiration for specific leadership styles.

**Conclusion**

No support was found for the hypothesis that individuals who had their agency threatened would show lower preference for a leadership role, compared to individuals who had their agency affirmed. In general, students in the present study showed low preference for leader tasks and a leader role, independent of gender and the manipulation.

In conclusion, further research is needed to resolve the question whether agency affects interest in becoming a leader or not.
WOMEN'S ASPIRATION FOR LEADERSHIP

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Om du i efterhand har några frågor, är du varmt välkommen att höra av dig till: vicky.m.low@hotmail.com

Varmt tack för ditt deltagande, det är mycket uppskattat!

Vicky Löw
Appendix 2

Här nedan följer en uppgift som du ska fullfölja på 3 minuter.

Appendix 3

Här nedan följer en uppgift som du ska fullfölja på 3 minuter.

Appendix 4

Här nedan följer exempel på typiska arbetsuppgifter som är vanliga för ledare respektive problemlösen inom en organisation. Efter varje uppgift, vänligen ringa in en siffra från 1-7 beroende på vad som bäst stämmer överens med ditt intresse för uppgiften.

<table>
<thead>
<tr>
<th>Uppgiff</th>
<th>Inte alls intresserad</th>
<th>Väldigt intresserad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hantera konflikter</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Uppvisa kreativitet</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Sätta löner</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Mellanhand mellan chef och anställda</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Prioritera ordningen av uppgifter</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Planera för organisationens framtid</td>
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<td></td>
</tr>
<tr>
<td>Motivera anställda</td>
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<tr>
<td>Delegera uppgifter</td>
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</tr>
<tr>
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<tr>
<td>Sammanställa resultat</td>
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</tr>
<tr>
<td>Agera handlingskraftigt</td>
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</tr>
<tr>
<td>Lägga schema</td>
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<tr>
<td>Sätta upp mål för anställda</td>
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<td></td>
</tr>
<tr>
<td>Hitta lösningar till intresserade parter</td>
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<td></td>
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<tr>
<td>Brainstorma</td>
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</tr>
<tr>
<td>Upprätthålla god arbetsmiljö</td>
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<td>Fatta strategiska beslut</td>
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<td>Bestämma och upprätthålla normer</td>
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</tr>
<tr>
<td>Ge konstruktiv kritik</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 5

Om du måste välja mellan två tjänster, där den ena är i rollen som ledare och den andra problemlösare, vilken skulle du välja? Vänligen ringa in en siffra från 1-7 beroende på vad som bäst stämmer överens med ditt intresse.

<table>
<thead>
<tr>
<th>Mest intresserad av tjänsten som problemlösare</th>
<th>Inte intresserad av någon av tjänsterna</th>
<th>Mest intresserad av tjänsten som ledare</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
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<td>6</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Frågor om dig:

Kön: □ Kvinna □ Man □ Annat

Ålder: __________ år

Vilken är din högst genomförda utbildning?

□ Gymnasium

□ Högskola/universitet, 1-3 år

□ Högskola/universitet, 3-5 år

□ Högskola/universitet, mer än 5 år

Inom vilket ämne? _________________________

Hur stor arbetslivserfarenhet har du?

□ Ingen

□ Liten

□ Måttlig

□ Stor

Vad tror du att denna studie handlar om?

_____________________________________

_____________________________________

_____________________________________

Tack för din medverkan!