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Bachelor's thesis in PSY2900 - Bacheloroppgave i psykologi

Supervisor: Jonathan D. Kim

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Kunnskap for en bedre verden



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**Kandidatnr.: 10045**

**PSY2900 - Bacheloroppgave i psykologi**

**Bachelor thesis**

**Trondheim 31.05.2022**

**Supervisor: Jonathan D. Kim**

## **Preface**

First and foremost, I want to thank my supervisor, Jonathan D. Kim for his guidance, reviews and feedback during my time working on the thesis as well as for all his lectures, tips, and tricks throughout the semester.

I would also thank my bachelor group members for participating in the design of the experiment in the beginning stages.

Lastly, I want to thank my significant other for much needed support and motivation.

## **Abstract**

The aim of this study is to investigate the stereotype activation of occupational role nouns, set as an example to explore gender stereotypical beliefs amongst young native Norwegian speakers. Based on previous research and the egalitarian history of Norway, the thesis has set three different hypothesis. Hypothesis 1 was that native Norwegian speakers would, in line with gender stereotypes, respond faster and more positively to gender congruent pairings than to gender incongruent pairings. Hypothesis 2 was that, due to the highly egalitarian nature of the Norwegian society gender-stereotypical beliefs amongst young Norwegian students will not be of significant large effect. Hypothesis 3 was that, due to a theoretical increase in difficulty related to translating between separate role identities compared to translating between names and role identities, responses to familial roles should be slower than responses to first names. With the use of a two-alternative forced choice task and a ANCOVA analysis, we found that native Norwegian speakers do respond more positively, but not faster to congruent occupations than to incongruent occupations. They also indicated that native Norwegian speakers show only a small degree of gender-stereotypical beliefs by responding mostly positively to the pairings presented. They also supported our last hypothesis, indicating that participants do respond faster when First Names are used in the pairings, compared to the use of Familial roles.

## Introduction

Norway is an egalitarian society. The belief that Norwegians are egalitarian, and that Norway as a state holds higher egalitarian standards than other countries, is widely held both by Norwegians and internationally (Bendixsen et al., 2018). Norway has through intellectual writing been promoting and emphasizing how much and in what ways the country promotes egalitarianism for over a century. Setting aside nuanced conflict and debates within the population, Norway has become successful in characterizing itself with social and political consciousness and regarding itself as an egalitarian welfare state (Bendixsen et al., 2018; Teigen, 2015). A theory by Jan Eivind Myhre argues that compared to other European countries, social equality was more prevalent in Norway already in the nineteenth century when Norway's liberation was marked by the liberal 1814 Constitution (Bendixsen et al., 2018). Liberal politics following the Constitution included concerns about economic growth, freedom of the press, and religion. In the nineteenth century, not everyone had equal rights as the right to vote was, as common practice in Europe at the time, denied to all women and propertyless men (Bendixsen et al., 2018). Taking this into consideration as well as the fact that women were not admitted to secondary schools until the 1870s when men already had access to schooling as high as high schools and university, it can be assumed that regardless of Norwegians' egalitarian nature, gender inequality and gender stereotypes have deep roots and can therefore still be prevalent today.

An article by Prentice and Carranza (2002) presents a framework with the main focus of categorizing the contents of prescriptive gender stereotypes. By definition, the traits and qualities that we attribute to female and male individuals are the same traits and qualities that society requires of them. An example of this is the stereotypical belief that all women are naturally caring and interested in children is mirrored in society's expectation of women to be or should be naturally caring and interested in children. Violations of society's expectations, for both men and women, could lead to repercussions from the society in terms of negative evaluations or social isolation (Prentice & Carranza, 2002). Prentice and Carranza identified four categories, gender-intensified and gender-relaxed prescription and gender-intensified and gender-relaxed proscriptions. The two prescription-focused categories are most interesting to this thesis for two reasons. First, their studies revealed a high degree of complementary traits across the two gender's prescriptions regarding social desirability. A cluster of traits that society prescribes to be highly desirable for women (gender-intensified prescription) is relaxed for men. Similarly, a cluster of masculine characteristics is intensified prescription for men but



relaxed for women. Second, an important note is that Prentice and Carranza found that rather than being completely mirrored by each other, the societal gender prescriptions are complex with degrees of social leeway different for each gender. The results showed that male and female students were not held to the same standard even though the ideal characteristics (high level of intelligence, competence, rationality, and ambition) of a Princeton student are the same for men and women, it seems like female students were given more leeway if those characteristics were not met (Prentice & Carranza, 2002). The reason why the former reason is interesting is if traits desired and prescribed to women are in some degrees not desired and presumed not existent in men, then some occupations naturally would suit one gender over the other. Feminine stereotyped traits like caring and being interested in children will benefit a kindergarten teacher, while if men presumably lack the interest in children, they would not fit in as a kindergarten teacher. The second reason calls for interest in this thesis is that the lack of repercussion for the female student does not equal a lack of gender stereotypes or discrimination. The fact that male-prescribed traits (e.g. ambition) are required in male students, with pending punishments if traits are not met and female students are required to not only have the same male-prescribed traits but also held to higher standards of feminine traits (e.g. kindness and attention to appearances), reveal that the standards held at Princeton University are discriminatory.

As examples of how Norway has attempted to extend egalitarian effort by reducing the gender discrimination amongst Norwegians, policies have been implemented to change the Norwegian language in the early 90s (Gygax et al., 2009). Norwegian used to be a gender-marked language, but as an effort to change a possible bias, the new policy removed the feminine gender marking, leaving the masculine as the generic form (Gabriel & Gygax, 2008). If this has had the intended effect can possibly be explored further in this thesis. Aside from the language reform, Norway also introduced a gender quotas reform in 2003 (Teigen, 2015). The reform required Norwegian corporate boards, which previously were dominated by male board members, to consist of at least 40% of each gender. This was an attempt to promote gender balance; similar gender quota arrangements have been implemented to prompt men and women to apply for educational directions dominated by the opposite gender. Although the reform for corporate boards was introduced in 2003, it was not until 2008 that it was fully implemented when the government implemented it as new legislation for all newly established companies (from 2006 to 2008). This was probably due to the fact that the representation was far from 40% even after the reform in 2003 (16% in 2006, 25% in 2007, and 36% in 2008).

Previous research also discusses the impact of language and if they are gender-marked (Cacciari & Padovani, 2007; Gabriel & Gygax, 2008; Gygax et al., 2009). When exploring how the representation of gender in the Norwegian language is influenced by stereotypical information and grammatical rules (masculine as the generic form), Gabriel and Gygax (2008), found that Norwegians are biased by the stereotypicality when presented with female stereotyped role nouns (e.g. nurses) and male stereotyped role nouns (e.g. pilots), but when the participants were presented with non-stereotyped role nouns they were biased to the masculine. This is still true even though at the time of their study, the Norwegian language has gone through a process of neutralizing the generic masculine form by removing feminine gender marking from the language (Gygax et al., 2009). Language does have a primed effect on our stereotypical beliefs, even when the grammatical masculine is taught and learned to be a generic form, the application of this knowledge is not as easy and has led to creating a general male-biased representation of gender (Gygax et al., 2009). In regards to occupational role nouns, Norwegian will be placed somewhere between English (no formal gender marking) and Italian, which have a formal gender system. Cacciari and Padovani (2007) tested the activation of gender stereotypes for Italian occupational role nouns to explore how word-specific gender stereotype information influences word knowledge and interpretation. They investigated the priming effect while also looking at the response time, the time that participants took to determine the gender of the target pronoun (masculine versus feminine) after being presented with role nouns of either female stereotype, male stereotype, or a neutral control word. Their findings showed that if a female stereotype-primed role noun was presented, participants tended to decide the pronoun gender as feminine faster than when the pronoun was primed with a gender-neutral control and responded even slower when primed with a gender-incongruent male stereotype. Italian, different from Norwegian, is a gender-marked language. According to Cacciari and Padovani, a priming effect has been found previously by Banaji and Hardin, and by Oakhill et al. in the English language, and sought to replicate the same findings for Italian. Their findings supported that when a gender-stereotyped role noun is read, the gender stereotype activates together with linguistic information and creates a possible priming effect for congruent stimuli (Cacciari & Padovani, 2007). The unmarked nature of the generic masculine in the Italian language also creates a male bias and therefore will cause stereotype activation of both masculine and feminine words.

Hypothesis 1 is that Native Norwegian speakers will in line with gender stereotypes (Prentice & Carranza, 2002) respond faster (Cacciari & Padovani, 2007), and more positively to gender congruent pairings than to gender incongruent pairings during the Yes-No task.

Hypothesis 2 is that, due to the highly egalitarian nature of the Norwegian society (Bendixsen et al., 2018), Norwegian speakers, between the ages of 18 and 30, will respond mostly positively in the experiment. Hypothesis 3 is that, due to a theoretical increase in difficulty related to translating between separate role identities compared to translating between names and role identity, responses to familial roles should be slower than responses to first names.

## **Methods**

### **Participants**

A total of forty-four participants (age 18-30) took part in our study: eleven male and thirty-three female. Recruitment was done by the bachelor group members, who contacted friends and acquaintances using direct recruitment.

### **Materials and research design**

The study involves an experiment hosted through PsyToolkit. The first part was a questionnaire that focused on demographics (age, gender, student status, whether they were Norwegian speakers, self-report on handedness). A two-alternative forced-choice task (2AFC) followed, where the participants were tested on their gender-stereotyped beliefs concerning occupational roles. The task asked the participants whether individuals, whose gender was identified through gender-typical titles like familial roles and first names, could be a member of gender-stereotyped occupational groups. After this was an implicit attitudes task (IAT) and a short form of the ambivalent sexism inventory (ASI) was after this. As the IAT and ASI are not of interest to this thesis, the details of these will only be presented briefly and will not be discussed in depth.

### ***Stimuli***

**2AFC.** In the two-alternative forced-choice task, participants were given pairings of either gender-typical first names (e.g., Geir) or gender-typical familial roles (e.g., Uncles), and an occupational role noun in the plural form (e.g. Wedding planners), to which they had two choices of response ('yes' and 'no'). The pairings were presented in the form '[name] - [noun]' (e.g. Geir - Wedding planners). The participants were instructed to respond as quickly as possible whether they believed that 'Geir' could be a member of the group of 'Wedding planners'. The familial roles were presented in the same manner; '[familial role] - [noun]' (e.g.

‘Uncles’ - ‘Wedding planners’),

**First names.** Espen, Geir, Robert, Nina Sandra, Ida.

Six first names were chosen from the findings of Øttl (unpub.), three female (Ida, Nina, Sandra), and three male (Espen, Geir, Robert), These two groups were based on the name’s gender typicality determined by Øttl, in order to maintain a balanced gender ranking of names. Øttl tested the gender typicality of Norwegian first names by measuring the response time for his participants to reply whether a name belonged to a female or male identity.

**Familial roles.** The familial roles are based on relationship distance (immediate family versus extended family) as well as age difference (older, equal, younger). Within immediate family relations, three female items were used: mothers (older), sisters (equal), and daughters (younger). The male equivalents were also used: fathers, brothers, and sons. From the extended family, six more roles were chosen: three female (aunts, female cousins, nieces) and three male (uncles, male cousins, nephews). In total, 12 familial role nouns were used in the two-alternative forced-choice task.

**Occupational roles.** 36 occupational role nouns (12 female stereotyped, 12 male stereotyped, and 12 non-stereotyped; Table 1) were selected based on Misersky et al. (2014), who produced a ranked rating of role nouns. The rating system used was meant to rank stereotypicality from 0 to 1, with 0 representing stereotypical male roles and 1 representing stereotypical female roles, leaving non-stereotyped roles to fall in the middle at 0.5.

**Filler items.** Filler items consist of 18 items linked to each gender. Placeholder. Gender marked etc. Specifically linked to gender

**IAT.** The Implicit Attitudes Test was added to the study, where the participants were asked to match first names to either an agentic or communal word. The 6 names used in the IAT are the same as in the two-alternative forced-choice task.

**ASI.** A Norwegian translation of the short-form Ambivalent Sexism Inventory concluded the experiment on PsyToolkit. Originally the ASI have 22 items (11 testing for hostile sexism and 11 testing for benevolent sexism), six of those items are reverse-coded. The short form only consists of 12 items and excluded the reverse coded items.

**Table 1**

*Mean score of stereotypicality for occupational role nouns as found in the findings of Misersky et al. (2014)*

Role noun	English translation	Mean score
FEMININE		
Manikyrister	Manicurists	.88
Barnevakter	Child-minders	.87
Kosmetikere	Beauticians	.85
Bryllupsplanleggere	Wedding planners	.85
Prostituerte	Prostitutes	.83
Eksotiske dansere	Exotic dancers	.83
Strippere	Strippers	.81
Fødselshjelpere	Birth attendants	.8
Frisører	Hairdressers	.79
Groupier	Groupies	.77
Synske	Clairvoyants	.76
Sekretærer	Secretaries	.75
NON-STEREOTYPED		
Fysioterapeuter	Physiotherapists	.6
Miljøaktivister	Environmentalists	.6
Fiolinister	Violinists	.59
Arkiverer	Archivists	.57
Meteorologer	Meteorologists	.55
Akrobatere	Acrobats	.53
Kunstnere	Artists	.53
Fotografer	Photographers	.51
Fagforeningsmedlemmer	Trade unionists	.51
Biologer	Biologists	.46
Oceanografer	Oceanographers	.45
Idrettsutøvere	Athletes	.42
MASCULINE		
Fabrikkbestyrere	Factory managers	.25
Fyrvoktere	Lighthouse keepers	.24
Guvernører	Governors	.23
Datateknikere	Computer technicians	.23
Skogsforvaltere	Forest rangers	.22
Trommeslagere	Drummers	.21
Brytere	Wrestlers	.2
Astronaut	Astronauts	.2
Søppeltømmere	Rubbish collectors	.17
Taktekkere	Roofers	.17
Soldater	Soldiers	.15
Kranførere	Crane operators	.15

## Procedure

The participant will have received a link to the experiment, which is hosted on the Website PsyToolkit. It was conducted by the participants independently using a computer of their choosing and a freely chosen environment. Before the experiment began, the participants were required to give informed consent through an online form. After this, participants self-reported their age, gender, handedness, if they currently are a student enrolled at a university, and if they were native Norwegian speakers in a questionnaire. All informational texts and items used in the experiments had been translated from English to Norwegian and given before each section of the study. After completing the questionnaire, participants undertook the 2AFC.

During the 2AFC the participants were randomly either given Version A or Version B. Version A paired the first names with the occupational role nouns first, before pairing the familial role with the role nouns. Version B presented the familial roles with the role nouns first. The participants are instructed to place their two index fingers on the keyboard, the left one resting on the ‘e’ and the right index finger resting on the ‘i’. The ‘e’ represents a dissenting response, saying “no, I don’t think [name/familial roles] can be a member of [occupational group]”, and ‘i’ will be the confirmative response, saying “yes, [name/familial role] can be a member of [occupational group].

The study concluded with an IAT and a short-form ASI.

## Data preparation

While preparing the data for analysis, we went through an item-by-participant and a by-participant deselection process. Item-by-participant deselection following a standard procedure from Schubert et al., 2013, removed responses faster than 300ms or which reached the maximum time of 5000ms from the two-alternative forced-choice tasks. This accounted for 9.67% of the total data. By-participant deselection removed those whose error rates were higher than 50% (N = 12), non-native Norwegian speakers (N = 2), those for whom item-by-participant deselection removed more than 10% of their data points (N = 2), and non-students (N = 5).

The error rate was calculated by the use of filler items added in the 2AFC task. 18 gender-marked items (e.g Kings) were added in with the occupational role nouns, which forces the participants to respond with a correct answer expected of them. For example, if presented with ‘Geir’ - ‘Kings’, the correct response would be confirmative, and if presented with ‘Geir’ - ‘Queens’, the correct response would be dissenting. Participants who responded incorrectly

for half the filler items, or in other words, participants whose error rates were higher than 50%, were removed during the by-participant deselection process.

The final sample now consists of 23 participants (6 male and 17 female, mean age = 22.32, SD = 1.67).

## Results

Two ANCOVA-analysis were conducted as the thesis looked to investigate two different dependent variables. One was run for Response, the participants' response in the Yes-No task, and another for the Response Time. Both analyses had Item Gender (Female or Male) and Occupational Role Gender as the fixed variables, and Versions (Version A or Version B) and the Trial number were set as covariate variables to control for the possible effects it could have had on the participants' response or response time (e.g. the further in the experiment the faster the participants will respond due to the participants getting used to the format of the experiment).

### Response

There was a small significant main effect of Item Gender,  $F(1, 9958) = 14.271$ ,  $p < .0005$ , partial  $\eta^2 = .001$ , and a small significant main effect of Role Gender,  $F(2, 9958) = 74.469$ ,  $p < .0005$ , partial  $\eta^2 = .01$ , which were qualified by a significant two-way interaction between Item Gender and Role Gender,  $F(2, 9958) = 126.14$ ,  $p < .0005$ , with a small effect size of partial  $\eta^2 = .025$ .

The main effect of Item Gender indicated that participants responded more positively to Female items (Mean = 95.3%, 95%CI [94.7%, 95.9%]) than to Male items (Mean = 93.6%, 95%CI [93%, 94.3%]; mean difference = 1.7%, 95%CI [0.4%, 2.9%]).

The main effect of Role Gender indicated that participants responded significantly more positively to Neutral occupational roles (Mean = 97.7%, 95%CI [96.9%, 98.4%]) than to Masculine occupational roles (mean = 94.8%, 95%CI [94%, 95.5%]; mean difference = 2.9%, 95%CI [1.4%, 4.4%]) or to Feminine occupational roles (mean = 91%, 95%CI [90.3%, 91.8%]; mean difference = 6.7%, 95%CI [5.1%, 8.1%]), and significantly more positive to Masculine occupations than to Feminine (mean difference = 3.8%, 95%CI [2.2%, 5.2%]).

The two-way interaction between Item Gender and Role Gender (Table 2) indicated that participants responded significantly more positively to congruent occupational role nouns

compared to incongruent occupational roles, both for female items (mean difference = 4.9%, 95%CI [2.7%, 7%]) and male items (mean difference = 12.4%, 95%CI [10.3%, 14.5%]); and that for female items, participants tended to respond more positively to neutral compared to feminine occupations (mean difference = 1.4%, 95%CI [-0.6%, 3.6%]), while for male items participants tended to respond more positively to masculine compared to neutral occupations (mean difference = 0.6%, 95%CI [-1.9%, 2.7%])

**Table 2**

*The effect of the interaction between Item Gender and Role Gender on Response (%).*

Item Gender	Role Gender	Mean	95%CI
Female	Feminine	96.5	[95.4, 97.5]
	Masculine	91.6	[90.5, 92.7]
	Neutral	97.9	[96.9, 99]
Male	Feminine	85.6	[84.5, 86.6]
	Masculine	98	[96.9, 99.0]
	Neutral	97.4	[96.3, 98.5]

## Response Time

The results indicated small but significant main effects of Item Type,  $F(1, 9407) = 194.597$ ,  $p < 0.001$ , partial  $\eta^2 = .020$ , and Role Gender,  $F(2, 9407) = 9.306$ ,  $p < 0.001$ , partial  $\eta^2 = .002$ , were found. The main effect of Role Gender was qualified by a two-way interaction between Item Gender and Role Gender,  $F(2, 9407) = 3.087$ ,  $p < .05$ , partial  $\eta^2 = .001$ . No other significant main or interaction effects were found.

The main effect of Item Type indicated that participants tended to respond faster to First Names (mean = 1085ms, 95%CI [1067ms, 1103ms]) than to Familial Roles (mean = 1264ms, 95%CI [1246ms, 1282ms]); (mean difference = 179ms, 95%CI [143ms, 215ms]).

The main effect of Role Gender indicated that participants responded significantly faster to neutral occupations compared to masculine occupations (mean difference = 46ms, 95%CI [2ms, 89ms]) and feminine occupations (mean difference = 66ms, 95%CI [22ms, 110ms]), and tended to respond faster to masculine compared to feminine occupations (mean difference = 20ms, 95%CI [-24ms, 65ms]).



The two-way interaction effect between Item Gender and Role Gender (Table 3) indicated that participants responded significantly faster to congruent occupational role nouns compared to incongruent role nouns. For female items, participants tended to respond faster to neutral occupations than to either feminine (mean difference = 32ms, 95%CI [-28ms, 94ms]) or masculine (mean difference = 48ms, 95%CI [-14ms, 110ms]), and tended to respond faster to feminine than to masculine occupations (mean difference = -16ms, 95%CI [-77ms, 47ms]). For male items, participants tended to respond faster to neutral occupations than to either feminine (mean difference = 99ms, 95%CI [-7ms, 119ms]) or masculine occupations (mean difference = 44ms, 95%CI [-17ms, 105ms]) and tended to respond faster to masculine compared to feminine occupations (mean difference = 55ms, 95%CI [-7ms, 119ms]).

**Table 3**

*The effect of the interaction between Item Gender and Role Gender on Response Time (ms)*

Item Gender	Role Gender	Mean	95%CI
Female	Feminine	1172	[1142, 1203]
	Masculine	1188	[1156, 1219]
	Neutral	1140	[1109, 1170]
Male	Feminine	1234	[1202, 1267]
	Masculine	1179	[1148, 1209]
	Neutral	1135	[1104, 1165]

## Discussion

The aim of this thesis was to explore the possible impact of different sources of stereotype information (Item Type, Item Gender and Role Gender) on the strength of gender stereotype activation. This was investigated by examining the differences in the activation of occupational gender stereotypes, in both their explicit responses and their response time in the Yes-No task. Based on previous research (Bendixsen et al., 2018; Cacciari & Padovani, 2007; Misersky et al., 2014; Prentice & Carranza, 2002), Hypothesis 1 was that native Norwegian speakers would, in line with gender stereotypes, respond faster and more positively to gender congruent pairings than to gender incongruent pairings during the Yes-No task. Hypothesis 2 was that, due to the highly egalitarian nature of the Norwegian society, as suggested in the previous works (Bendixsen et al., 2018; Teigen, 2015), gender-stereotypical beliefs amongst

young Norwegian students will not be of significant large effect. Hypothesis 3 was that, due to a theoretical increase in difficulty related to translating between separate role identities (a familial role and an occupational role) compared to translating between names and role identities, responses to familial roles should be slower than responses to first names. The results partially supported Hypothesis 1, fully supported Hypothesis 2, and partially support Hypothesis 3.

The results indicated that the participants tended to respond more positively to congruent pairings of gendered items and occupations, compared to incongruent pairings. This was in line with Hypothesis 1, and the previous research (Cacciari & Padovani, 2007; Gabriel & Gygax, 2008; Gygax et al., 2012; Prentice & Carranza, 2002). This suggests that native Norwegian speakers' explicit social perceptions related to occupation are in line with occupational gender stereotypes. An explanation for this can be that Norway also has a longstanding history of power inequality and traditional roles in spite of its egalitarian goals that have led to gender-stereotypical beliefs in occupational roles (Bendixsen et al., 2018). In Prentice and Carranza (2002), two arguments can also explain the presence of gender stereotypes amongst young native Norwegians. Firstly, the social desired traits found did correlate with the perceived typicality for the opposite genders and suggests as well that "people believe women and men to differ in most of the ways they are supposed to differ" (Prentice & Carranza, 2002). Secondly, social desirability and perceived traits of each gender are argued to be related to the different traits needed in different occupational roles. Both arguments can be possible explanations for our participants' tendencies to respond more positively to congruent stereotypical pairings than to those incongruent. However, the results showed no significant difference in Response Time between the congruent and the incongruent pairings, which does not support our Hypothesis that Norwegian speakers would also respond faster to congruent pairings. The research done by (Gabriel & Gygax, 2008) found that the Norwegian language could be overrepresented by a male bias due to the gender-marking of nouns from history, even after the implementation of new language policies intending to neutralize gender-marking. At the time, it seemed like the policies had not yet resulted to the intended omission of the male bias. Our results suggest that even native Norwegian speakers born after gender-neutralization was introduced might still have a male bias.

As expected, the results indicated that Norwegian speakers tended to respond positively to all pairings, both incongruent and congruent pairings with the average mean difference at 8.56%, as shown by the interaction effect between Item Gender and Role (female: 4.9%, male: 12%) is 8.56%, which suggests that the gender-stereotypical beliefs amongst the participants

are not very pronounced and is in keeping with Hypothesis 2. Even with a significant gender-stereotypical activation discussed in the previous paragraph, we can argue that stereotypical gendered beliefs are small in Norway. One possible explanation for these results is the strong emphasis in the Norwegian society, that regardless of the undeniable presence of inequality and stereotypes, it is highly egalitarian and gender equality is both a political ambition and a national value (Bendixsen et al., 2018). Our participants are active students between the ages of 18 and 30, which mean that they have grown in a time when Norway, influenced by its self-proclaimed egalitarian standards and feministic movements, makes effort into promoting gender equality. Examples of these are the previously mentioned policy changes, one being the removal of gender marking in the Norwegian language, and another being the gender quota arrangements (Bendixsen et al., 2018; Teigen, 2015). (18-30) highly influenced by egalitarian and feministic debates.

Our results also indicated no significant difference in the participants' response time when presented with congruent versus incongruent pairings. This is different from what Cacciari and Padovani (2007) found in their research, where the gender of feminine pronouns was decided faster with a congruent (female) than with an incongruent (male) stereotype. This suggests that the stereotypical activation might not be very different when participants are presented with pairings that contradict or are in line with their gender-stereotypical beliefs, or that the stereotype activation is not significantly pronounced.

The results also indicated that the participants tended to respond faster when the occupational roles were paired with First Names, compared to when the roles were paired with Familial roles. This is keeping in line with Hypothesis 3 and the complex nature of cognitive schemas. This suggests that the translations of First Names with Occupational Roles are easier than translating Familial roles with occupational roles. This can be explained by First Names being of prototypical nature and being general (assuming that the names presented are not associated with a specific person for whom the participants have developed a detailed and specific mental representation) and there is a faster process compared to Familial roles, of which all participants have their own set role schema. However, the results indicate that this is only true for the main effect of Item Type. The lack of a three-way interaction, between Item Type, Item Gender, and Role Gender, suggests the stereotype effect is stronger than the Item Type effect. If these findings are held to be true, then it can be useful for future research. If the complexity of the Item Type does not in any way affect the activation of gender stereotypes, then the single-use of First Names should be sufficient in similar research in the future, with the added cognitive benefit of a faster response. It also seems that any effect of the distance of

the Item Types (general First Names versus closer relation with Familial Roles) in relation to the participants is overpowered by the stereotype effect. This can also simplify future research designs. An interesting find in our analysis for Response Time indicated that participants responded significantly faster when presented with pairings consisting of neutral occupational roles, as opposed to both congruent and incongruent stereotyped pairings. This was indicated for both female items and male items, and would be interesting to investigate further going forward.

Contrary to what was expected, for both female and male items, the participants responded faster to neutral occupations than to the congruent pairings and they responded more positively to neutral occupations than to feminine occupations for female items. These findings are interesting as it was not in line with previous research (Cacciari & Padovani, 2007; Gygax et al., 2012) that led to Hypothesis 1. With the assumption that participants, in line with gender stereotypes, would not only respond faster and more positively to the congruent occupation than to the incongruent, but also compared to the neutral occupation. Our finding suggests that the young native Norwegian speakers showed a difference in the way their gender-stereotypical beliefs are being activated than previous researchers have found (Cacciari & Padovani, 2007; Gabriel & Gygax, 2008; Prentice & Carranza, 2002). For some reason yet to be discovered, it seems that participants need less time to make up their minds when asked if individuals, of either gender, can be part of a neutral occupational role group. One possible explanation could be that the cognitive resource needed to respond to gender-stereotypical occupations, congruent or not, is larger than what is needed to respond to neutral occupations.

Suggestions of directions for future research are to look into why the participants responded faster to neutral pairings than to both congruent and incongruent pairings. This could be interesting in explaining the activation difficulty in each of the tasks as well as shed light on the effect of changes in gender-marking in language or increased balanced gender representation in the corporate board on stereotype activation. It will also be interesting to investigate if the faster Response time is due to easier processing with a lack of stereotype activation and if the ideal society of having no stereotypes in occupational roles is met, there should be no difference between the current congruent versus incongruent, and not between the stereotyped roles and neutral roles.

Another suggestion is to replicate the experiment with a more gender-balanced sample. Our sample did not consist of equal participants of each gender, with the majority being female participants. It will be interesting if the highly positive results we found here would be found again if the sample had been gender balanced or with mostly male participants. The study can

also be replicated with older age groups to explore the differences and investigate the effect of gender-neutralization in the Norwegian and the implementation of gender quotas. The older age group has had more time learning the language as it was, with the gender imbalance from historical and traditional roots.

As Norway is a multicultural country, it could also be interesting to do the same study within other minority groups of different ethnicities. It might show a difference in Norwegians that are native Norwegian speakers and Norwegians that are immigrants or children of immigrants. This could shed more light on the effect of language as children born of immigrants in Norway has learnt the changed version of Norwegian and only know it with the masculine as the generic form, but also have other semantic and cultural gender information from their origin culture. Not only will it reveal more of the effect of the change in language policy, but also give some indication to if Norway's efforts to promote gender equality as a National value does impact stereotype activation of immigrants and immigrant children.

In conclusion, our results indicated that native Norwegian speakers do respond more positively, but not faster to congruent occupations than to incongruent occupations. They also indicated that native Norwegian speakers show only a small degree of gender-stereotypical beliefs by responding mostly positively to the pairings presented. They also supported our last hypothesis, indicating that participants do respond faster when First Names are used in the pairings, compared to the use of Familial roles. Some interesting and unexpected findings indicate that participants need less time to decide regarding neutral occupations than both the congruent and incongruent pairings, as well as responding significantly more positively to neutral occupations compared to the congruent (feminine) occupational roles for female items. Our findings suggests that gender stereotypes are still present even though to a small degree in native Norwegian speakers between the age of 18 to 30 years old. It supports the theories that Norway is highly egalitarian and the efforts done by the government might have influenced young Norwegian to be mostly positive in regard to gender equality in occupational roles. It is still interesting to note that even with drastic policy implementation like neutralizing the language and imposing gender quotas, gender stereotypes are still found. The intended effect might not have yet to be fully met, and need more time, or it was simply not as effective as initially hoped.

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