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Overcoming Gender Stereotypes

A Depiction of Six Swedish Students in Non-Traditional Fields

Att överkomma könsstereotyper

En skildring av sex svenska studenter på ”icke-traditionella” utbildningar

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Abstract

The study investigates the factors that encouraged six Swedish students to choose a female or male-dominated field of study in higher education. This is of interest as gender norms and stereotypes may inflict and limit students' educational choices. The purpose is likewise to elucidate the educational choices from a gender perspective. The study explores two questions: “*Which factors may have encouraged the students to opt for a non-traditional career?*” “*How can the students’ educational choices be understood from a gender perspective?*”. To fulfil the purpose and question of issue a qualitative method was used, including female and male students aged 22–36. For the analyse of the interviews, the study relies on the theoretical framework of Linda Gottfredson – *The Theory of Circumscription, Compromise and Self-Creation*, *Social Cognitive Career Theory (SCCT)* by Lent, Brown & Hackett and *The Stereotypical Gender Contract* by Hirdman. The results indicate that students' non-traditional educational choices consist of both internal and external factors. On the one hand, it is possible to find explanations in *upbringings* that have been more tolerant regarding gender roles. It has also been shown that several of the students in various ways have been exposed to the profession through *past experiences*. Nevertheless, there are also personal motives that led to the choice of education as well as a supportive network in form of family members and significant persons in the environment. From a gender perspective, this means that the students, through their upbringing, where it appears to have been less strict attitudes concerning gender roles, also contributed to less restrictions on their educational choice. On the other hand, the results imply that harmful gender norms and stereotypes still affect students’ choice of occupation why more work is needed in order to stop these negative patterns.

Keywords: STEM, HEED, gender stereotypes, gender roles, gender norms, non-traditional career

Preface

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1. Introduction

One of the aims of the Swedish Gender Equality Policy is to fulfil an equal education for both men and women (Swedish Gender Equality Agency 2018). The importance of achieving the same opportunities and conditions regarding education, choice of study and personal development, is particularly pronounced. Progress has been made, but there are still areas remaining unequal (SOU 2015:86, 23). The labour market continues to be gender segregated, although less segregated over the past ten years. The positive progress is related to the fact that women are increasingly establishing themselves into traditionally male-dominated occupations. The same development has not yet been found among men in female-dominated occupations. Change remains to take place in healthcare and service work, where most workers still are women. In technical and manual areas, which still employs mostly men, the share of women is, however, advancing.

The uneven gender distribution also exists within the education system (SOU 2015:86, 24-25). This is evident within the compulsory school, upper secondary school as well as in the tertiary education. The effects mentioned are, for example, that boys underperform compared to girls in compulsory school and moreover unequal representation among the different programs and orientations in high school. The same pattern can also be seen at university level, where 58 per cent of six million students in OECD countries, were women who have graduated with a bachelor's degree (Organisation for Economic Cooperation and Development [OECD] 2016). Furthermore, there are prominent gender differences across the different fields of study.

Gender norms and stereotypes limit students' future educational choices and opportunities. Therefore, this subject is highly relevant in the study and career guidance education. By creating a greater awareness of others and our own norms and beliefs, it is possible to change and increase the individual's opportunities.

1.1 Aim and objectives

The study aims to investigate and analyse students' who opt for non-traditional educational choices in Sweden. With this aim and the described problem area, the question thus becomes the following:

- Which factors may have encouraged students to opt for a non-traditional career?
- How can students' educational choices be understood from a gender perspective?

1.2 Delimitations

This study is delimited to examine *encouraging factors* in students who have chosen a non-traditional career. Thus, the selection of the factors that emerged in the interviews was made based on positive starting points that were found in the students' stories. Factors have also been selected when it has been shown that there were connections or contradictions to previous research. Since this is a small study, other factors have not been taken into consideration, although it could have been interesting, for example *social class* and *ethnicity*. It was not possible to study the impact of social classes due to the respondents' similar social backgrounds. Regarding ethnicity, this was not believed to be relevant as the study only included one person with a foreign background. Both concepts (class and ethnicity) were not considered representative enough to draw any major conclusions.

A total of six interviews were conducted. The size of the sample was considered reasonable given the time frame of the study. The selected respondents had to meet a number of criteria (described in the method section "5.2"). This was to ensure that the selected respondents were relevant and could fulfil the expectations that existed within the purpose and questions of the study.

This study focuses on Gottfredson's and SCCT's explanations about the importance of the environment in the formation of a career. Gottfredson emphasizes how adults can influence children at an early age to have certain ideas and thoughts about professions. This thesis has therefore studied the respondents' personal networks to understand which role the

networks played in the respondents' choice of profession. More specifically, there is an emphasis on parental influence in the study. This is described in more detail in Gottfredson's theory of Stages of Circumscription, which is an explanation of how individuals in four different stages develop career ambitions in relation to their own self-image (Gottfredson 2002, 95 - 96). Parents are an interesting factor considering that they can influence their children's career choices based on their own values, norms and life experiences. This, in turn, can shape attitudes regarding, for example, gender roles and which educations and professions are considered acceptable and desirable. In the long run, it can have an impact on issues concerning gender equality, areas of education and the labour market.

Regarding the choice of theories, different academic disciplines can offer an abundance of perspectives and approaches. In this case, the theoretical framework was limited to the theories that exist in the field of study and career guidance, given the study's objectives and time constraints.

1.3 Disposition

The study is separated into eight chapters, including chapter (1) consisting of the introduction. Chapter (2) introduces the background information of the study topic. It addresses the concepts of sex and gender and how they are applied in the study and presents gender segregation and its effects, as well as provides an explanation of the Swedish context and the acronyms of STEM and HEED. Chapter (3) presents previous research concerning studies of non-traditional careers and its influencing factors. It involves both national studies in Sweden as well as international ones. The focus is on the navigation into non-traditional career paths and studies about gender stereotypes and labour markets. To analyse the results from the collected data, the study is based on Gottfredson's Theory of Circumscription, Compromise and Self-Creation, Social Cognitive Career Theory (SCCT), by Lent, Brown & Hackett and The Stereotypical Gender Contract by Hirdman. How the

theories are used is further explained in chapter (4). Chapter (5) contains a description of the method used for the study, the selection of informants, collection and analysis of data and ethical perspectives. The final chapters referring to (6), (7) and (8) consist of results, analysis and discussion of the study's result, theory, method and future research suggestions.

2. Background

Aimed at achieving a better understanding, this chapter explains the background related to the chosen subject of the gender segregation in higher education. The chapter will include a definition of sex and gender followed by a clarification of how the concepts will be applied in the study. It will also give a background to gender segregation and its effects, an explanation of the Swedish context and last, the meaning of STEM and HEED.

2.1 Understanding Sex and Gender

To understand the meaning of sex and gender and its possible significance in the educational choices being made, it is also important to look more closely at the very meaning of these concepts (Björk & Hedenus 2015, 21 – 22). Nonetheless, to understand this, it is also of utmost prominence to be aware that the definition is not always obvious. There are many “grey areas” surrounding the concepts and they have been discussed extensively in research and literature.

Björk & Hedenus (2015, 22) explores the concepts and also discusses feminist theory at large. It is for example, mentioned how “women's studies” or “sex research” is increasingly being replaced by “gender studies”. A shift the authors consider have enabled the opportunity to explore more of men and masculinities and also helped making the understanding of people more complex. This includes, for example, being able to discuss terms such as *femininity* and *masculinity*, which can both be expressed by “male” and “female bodies”.

From the beginning, sex and gender were introduced to simplify the understanding of socially constructed gender differences and biological differences between male and female bodies (Björk & Hedenus 2015, 22). *Gender* refers to the former, that is, the socially

constructed differences. While *sex* seeks to explain the biological differences. This can be perceived as a simplified explanation of the concepts as the distinction has also received a lot of criticism. By this, the concept of gender, despite being linked to social categorization, continues to be associated to “biological bodies”. Meaning “femininity” being bound to “women” and “masculinity” to “men”.

The philosopher Judith Butler goes even further and rejects the concept of gender and questions the existing categorizations. According to Butler the "naturalized concept of gender" is a violent limitation of reality (Butler 2007, 36). Butler continues by explaining how "the inner essence of gender" is maintained through constantly repeated actions in which our bodies becomes the subject of "gender stylization" (ibid., 28). It is this "stylization" of gender that can be attributed to Butler's theory of *performativity*.

Another aspect of sex and gender is presented by Susan Bordo (1997, 16) which emphasizes the *material* meaning of the body. Bordo reinforces the significance of the body and the bodily experiences. This by focusing on the "direct grip" in the way culture interacts with our bodies.

From the feminist perspective, the importance of gender studies is emphasized, to open up socio-cultural and biological sex for a critical examination (Grahm & Lykke 2015, 78). It also highlights the essential connection between sex/gender and social class arrangements such as class, racialization, ethnicity, sexuality, functionality, nationality etc.

2.1.1 How Sex and Gender Are Applied in this Study

Since the study is not intended to examine *sex* from a quantitative aspect, the word *gender* thus becomes a more suitable concept. Gender allows for a broader and more complex discussion, in which the social differences are consolidated. This is relevant as this study primarily presents and examines students' own perceptions of gender norms and the effects of these, in relation to their educational choices.

2.2 Gender Segregation and Its Effects

A better understanding of the concepts of sex and gender opens up for further exploration of the gender segregation in education and the labour market. Gender segregation and particularly, the effect it has on occupations, can be discussed based on many different theories. These theories can be *neoclassical* and *human capital theories*, *institutional* and *labour market segmentation theories*, and *non-economic* and *feminist (gender) theories* (Anker 2001, 14). The mentioned theories will not be elaborated further in this study but some of the effects Anker points out will be presented.

Richard Anker (2001, 6) argues how the occupational gender segregation remains a problem and how it cannot be understated. This segregation often leads women to disadvantages in the form of lower paid jobs and professions of lower status. In the long run it causes to reproduce gender stereotypes. Another critical aspect Anker presents is how gender segregation contributes negatively to the labour market, regarding efficiency and function. Excluding women from most professions lead to a loss of human resources and reduced income levels. Anker (2001, 7) also exemplifies how gender segregation stagnates the labour market and how it effects both sexes. This has the outcome of reducing the chances of a rapid response to different types of changes, such as economical and global. Education and future generations are also affected by the gender segregation. The negative effect of segregation influences decisions made by youths, their parents and schools, concerning the amount of education being provided to girls and boys and which fields should be pursued. An effect often reflected and related by the opportunities the actual labour market presents.

2.3 The Swedish Context

Sweden is known for being one of the OECD countries with the highest level of gender equality (Christophe & Bourrousse 2017, 4). With a score of 83,6 out of 100 points, Sweden is ranked first in the EU, according to the Gender Equality Index (EIGE 2019, 1).

This is, for example, evident through the increasing rate of employment among women and their outnumbered representation in education compared to men. Sweden has also for decades promoted equality in: “[...] childcare and parental leave policies, individual taxation and mainstreaming gender issues” which has contributed positively to the development (Christophe & Bourrousse 2017, 7). Despite this, wage differences between men and women persists and women tend to remain a minority in leadership positions, in influential and well-paid occupations as well as in entrepreneurship roles (ibid., 4). The effects of the uneven distribution within different programs in higher education are also highlighted in Christophe and Bourrousse's study. At present, health care and nursing continue to be dominated by women with 84 per cent, while the programmes in engineering consist of 66 per cent men (Swedish Higher Education Authority, [UKÄ] 2019).

2.4 STEM and HEED

This section presents a definition of the acronyms of *Science, Technology, Engineering, and Math* (STEM) and *Health care, Elementary Education, and the Domestic sphere* (HEED), which will consequently play a central role in this study. Research on women's interest in traditionally male-dominated fields has been steadily advancing and has a well-known representation in the acronym of STEM (Croft, Schmader & Block 2015, 18). Research of the underrepresentation of men in female-dominated roles has not yet been studied to the same extent. Thus, the acronym of HEED can be regarded as a newer establishment introduced by Croft, Schmader & Block (2015, 18) and refers to *communal roles*. Communal roles are a description of occupations that have traditionally been occupied by women: “[...] (e.g., careers in health care, early childhood education, and domestic roles including child care)” (ibid., 1). Both STEM and HEED do not represent a general depiction of all occupational roles with an underrepresentation of any gender. Although the acronyms can be considered a directive towards certain professions, where particular skills or abilities are prominent.

3. Previous Research

This chapter focus on a selection of identified factors in non-traditional educations, which are relevant to the study's question. In addition, other external factors are also presented that can be important when discussing educational choices from a gender perspective, for example changes in gender stereotypes and labour markets.

3.1 Navigating into Non-traditional Career Paths

Research on women and their underrepresentation in STEM careers has been more prevalent than that of men and their interest in HEED careers (Tellhed, Bäckström & Björklund 2017, 1–2). Thus, the article by Tellhed, Bäckström & Björklund focus on both STEM and HEED by using data from a representative sample of 1327 Swedish high school students. By using methods as self-efficacy (the belief of our own abilities) and social belongingness (the feeling of fitting in socially), the authors intended to measure gender differences regarding STEM and HEED majors. The results of the research showed self-efficacy as an important key factor in the persuasion of STEM careers for women (Tellhed, Bäckström & Björklund 2017, 7). For men social belongingness was a more decisive factor for their interest in HEED majors.

Pre-collage orientations, influences during the college years and personal attributes proved to be essential factors for whether students choose traditional, neutral or non-traditional career paths (Sax, J., & Bryant, N. 2006, 10). Furthermore, women who chose “male-coded” career paths were more likely to be more high-performing, confident in their mathematical skills, self-realizing and engaged in science and less family oriented. (ibid.,

11). Men who were interested in “female coded” careers tended to have lower math skills and career aspirations. They also demonstrated more egalitarian views on gender roles.

In a study done in Alberta, Canada, Ciccocioppo et al. (2002, 1) presents various factors that guide the career choice of female students into non-traditional fields of study. One of the factors encouraging women into STEM was influences and support from both the education system (e.g. teachers, guidance counsellors), as well as personal networks in the form of family, friends and partners (ibid., 5). Likewise, academic interest and strengths in high school or early postsecondary level were emphasized as motivators (ibid., 7). Some of these factors are also shared by men and their motives for seeking untraditional career paths (Chusmir, 1990, 4). In addition, Chusmir explains that non-traditional educational choices can consist of a combination of several factors such as:

[...] personal influences (background, attitudes and values, and intrinsic needs), with family influences (attitudes toward family roles, relationship with children, and marital status) and societal influences (gender role norms and support and counseling) playing an external moderating role (Chusmir 1990, 4).

In a previous study by Chusmir (1983, 4), it was also shown that women who chose non-traditional career paths shared the same personality and motivation traits as usually are ascribed to men. The same was found to be true in the recent study of Chusmir (1990, 4), in which men showed personalities and motivational factors that are usually characterized by women. Furthermore, Chusmir's study showed that non-traditional men felt self-confident and their masculine sexuality displayed a well-balanced gender role identity. However, what emerged was that the background as well as the personality could be unconventional. The untraditional women usually appeared to come from stable family relationships, in which there was close contact with both parents (Chusmir, 1983, 4). For the non-traditional men, growing up in a family of instability was more common, such as divorced- or a deceased parent. Furthermore, tendencies emerged that important influences often came from women (mothers and other significant women) and that there could be a lack of relationship with the father.

3.2 Predicted Changes in Gender Stereotypes and Labour Markets

Economic changes and labour market restructuring initiates research debates of greater difficulties in predicting employability and working life (Giddens, 1992; Leadbeater, 1999 cited in Mcdowell 2003, 1). Theorists describe how old structural constraints such as class and gender have begun to be challenged by the changes that are taking place. Those who are predicted to be specifically affected are “young white working-class men with few educational credentials” (Mcdowell 2003, 2). By implementing in-depth studies with two men from the target group in a British context, Mcdowell states that:

These two case studies and the wider set of interviews of which they form part also challenge claims about a crisis of masculinity or a gender war in which traditional familial values might be overturned (Mcdowell 2003, 17).

In Sweden, this change has also become prominent and is noticed in the publication by Håkansson (2017, 79 - 80). The results reveal that Swedish men are underrepresented in *high-touch jobs* (in this context, high touch jobs refer to low skilled jobs such as retail, hotel and restaurant businesses as well as in care sectors). At the same time, there has been an expansion occurring in the high-touch sector, where men have proven to be an important part of the development. Men who work in the hotel and restaurant sector, turn out to be mainly from urban areas, more specifically larger Swedish cities followed by smaller ones. Regarding the care sector, the same pattern can also be seen there, that there are more men from urban areas participating than men from rural areas. Above all, it can be concluded that the largest proportion of workers in the high-touch sector are men and women with parents born outside the Nordic countries. In addition, there is an increase among men in urban areas and men of foreign origin. What is highlighted is that what traditionally is considered as “male work” or “female work” could depend on who, in Håkansson’s (2017, 80) own words: “[...] is considered to be a typical incumbent”. The typical incumbent can change over time and this could eventually then contribute to changing the norms on the gendered labour market.

Sendén et al. (2019, 1) discuss in their Swedish study whether gender stereotypes can be considered dynamic or not. The authors take support in *Social Role Theory*, which advocates that gender stereotypes are dynamic constructs (Wood & Eagly 2011 cited in Sendén et al. 2019, 1). The results revealed a perceived increase of the agent traits, from past to present, of the female stereotype. This can be predicted to be due to the changing roles of women (Sendén et al. 2019, 16). The same change was not perceived to occur in the male stereotype concerning agentic or communal traits, as a result of changing roles (ibid., 1, 16). Agency and communion are familiar terms to describe the content of gender stereotypes. Agency is commonly associated with masculine characteristics such as “independent, assertive and dominant”, while communion often refers to feminine characteristics as “relationship-oriented, emphatic and caring” (Abele and Wojciszke, 2014 cited in Sendén et al. 2019, 2).

3.3 Summary

Research shows that there are many different factors that interact in a non-traditional educational choice. Factors such as self-efficacy, social belonging, personal influences as well as impact from education and family play an important role. Furthermore, research discusses whether gender stereotypes and labour markets are experiencing ongoing changes. It is questioned whether there are any signs of a "crisis of masculinity", how the typical incumbent in regards of “female” and “male work” can change over time and how this can affect gender norms in the labour market. Research is also presented on gender stereotypes and whether these can be considered dynamic or not.

The research described in the chapter is relevant to fulfilling the purpose and issues of the study. By gaining an understanding of what other studies have shown regarding influencing factors, the results in this study can be compared and discussed. This also applies to the external factors that can influence the choice of education through, for example, gender stereotypes and conditions in the labour market.

4. Theory

To analyse the empirical material, the study is based on three theoretical frameworks. The intention is to understand and explain the factors influencing a career choice from a gender perspective. The information presented is only excerpts from the theories that were considered relevant to fulfil the aim of the study and the questions at issue. The end of the chapter includes a summary of the theories and their use in the study.

4.1 Gottfredson's Theory of Circumscription, Compromise and Self-Creation

Gottfredson's theory (2002, 88 – 91) aims to explain the limiting (circumscribing) and compromise processes that occurs in the formation of a career choice. This process takes place from an early age and continues to develop in step with the cognitive maturation of the individual. To understand the process, Gottfredson introduces some core concepts. An essential component of the theory is *self-concept* which intends to explain how one perceives oneself in both private and public contexts (Gottfredson 2002, 88). It consists of elements such as: "[...] appearance, abilities, personality, gender, values and place in society" (Gottfredson 2002, 88). The meaning and importance of the elements are unique and can vary between individuals. In addition, the self-concept is not always articulated or accurate, nevertheless, individuals act according to them and protect them as well.

People have stereotypical images of professions, which Gottfredson (2002, 88-91) refers to as *images of occupations*. Meaning how others perceive different occupations in accordance with, for example, the personalities of the employees, their duties, working conditions, benefits and prestige. Gottfredson continues by explaining that these general images are sorted into a personal and significant "map", in other words, *a cognitive map of*

occupations. The occupations included on the map depend on their compatibility with the self-image. The stronger the compatibility, the more important it becomes for the individual. An individual may want to fulfil compatibility with all the elements present in the self-concept, but the reality tends to be different. Instead, the professions least agreeable with the core elements of the individual's self-concept, are those that are to become rejected. The theory predicts that people usually sort occupations according to three important parameters. These are (in order of precedence): (1) *sex-type* of the occupation (masculine or feminine), (2) *occupational prestige level* (the desirability or complexity of the work duties) and (3) *field of interest* (fulfilment of activity and personality preferences).

The process of *circumscription* (Gottfredson 2002, 92-95) describes how individuals navigate through different occupational alternatives. By progressively eliminating unacceptable alternatives, individuals find a *social space* (meaning the zone of acceptable alternatives available to them). This reflects a long process that the individuals have experienced to reach a final decision.

Gottfredson's (2002, 96 – 100) - *Stages of Circumscription* describes the development and interaction of the self-image and occupational aspirations. Through four phases (from early childhood to adolescence) it is explained how perceptions about gender, social class and level of ability (intelligence) are shaped.

Last, there is the *Concept of Compromise* (Gottfredson 2002, 100 - 101). This refers to a period when individuals abandon their most preferred alternatives to focus on more realistic and achievable ones. These alternatives may be less compatible but are adapted to the environment and conditions that exist (e.g. geographical location, job opportunities, labour market prospects and compromises between sex-type, prestige and field of interest).

4.2 Social Cognitive Career Theory (SCCT) by Lent, Brown & Hackett

SCCT has its origins in Albert Bandura's *Social Cognitive Theory* which reflects the interaction between the individual and the environment to explain human behaviour (Bandura 1986 cited in Lent, Hackett & Brown 2002, 258). By involving and further developing relevant aspects of Bandura's theory, SCCT has primarily come to explain career processes and particularly: “[...] interest formation, career selection and performance (Lent, Brown & Hackett 2002, 258).

The three main characteristics of SCCT is *self-efficacy*, *outcome expectations* and *personal goals* (Lent, Brown & Hackett 2002, pp. 261 – 262). The most prominent one of these three is the concept of self-efficacy. According to SCCT, self-efficacy consists of a dynamic set of self-beliefs, interacting with different kind of factors such as individuals, behaviour and the environment. It has to do with the beliefs of everyone in regards of their capacities. The beliefs in self-efficacy are recovered through four principal sources of information (or learning experiences): (1) *personal performance accomplishments*, (2) *vicarious learning*, (3) *social persuasion* and (4) *psychological and affective states* (Bandura 1997 cited in Lent, Hackett & Brown 2002, 262). How each of these sources interacts on self-efficacy can vary as it depends on several factors. The most prominent of them, however, is usually - personal performance and accomplishments. When manoeuvring tasks and performances, successful personal achievements tend to have a positive impact on self-efficacy as opposed to continual failures.

Outcome expectations describe the personal beliefs that arise because of executing certain types of behaviours (Lent, Brown & Hackett 2002, 262). While self-efficacy can be translated to “*can I do this?*”, outcomes expectations can be said to correspond to “*if I do this what will happen?*”. Outcome expectations consist of several beliefs about possible results of performing particular behaviours and this is also said to be an important factor for behaviours about motivation (Barak 1991; Vroom 1964; Ajzen 1988 cited in Lent, Hackett & Brown 2002, 262 – 263). Outcome expectations can be obtained from learning experiences such as rewards from: previous successful achievements, positive reactions

from other people, self-validating and uplifting emotions: as well-being and excitement (Lent, Hackett & Brown 2002, 263). Outcome expectations can also be a result of self-efficacy in response to the expectations that may exist in the quality of one's performances.

Personal goals reflect the persistence to take part in a: " [...] particular activity or to affect a particular future outcome" (Bandura 1986, cited in Lent, Brown & Hackett 2002, 263). Individuals can organize, maintain and find guidance in their behaviour by setting their own personal goals (ibid., 263). Thus, behaviours can be initiated by the individuals themselves and are not only a product of influencing factors in the environment such as personal history or genes. It thus emphasizes the importance of personal agency and self-empowerment.

According to SCCT, as children and adolescents we are exposed to many different activities through our interactive and social environments (Lent, Brown & Hackett 2002, 265). These activities can be such as crafts, sports, music, mathematics, etc., which can have a possible, significant value for our behaviours in accordance with career decision making. By being exposed to various activities, training, modelling as well as feedback can enable children and adults to develop skills, experience and expectations which could determine why we choose a certain occupation.

4.2 The Stereotypical Gender Contract by Hirdman

Through the *Stereotypical Gender Contract*, Hirdman (2001, 77) refers to those: "[...] thoughts / practices / conditions concerning the relationship between the sexes [...]". It refers to a discourse on *how it should be* between men and women. The stereotypical contract highlights how the responsibility, protection and support throughout history, has been assigned to man, while women have often been given a role in which she takes care of birth and is dependent on men (ibid., 88). Hirdman believes this clearly marks the position between the sexes and provides different conditions. By introducing the contract Hirdman describes the situation that reinforces and reproduces stereotypical notions of *masculinity* and *femininity* (ibid., 77). According to Hirdman comparisons are made based on the *male*

as the norm (ibid., 59 - 62). This means that the man acts as a standard bearer demanding men to relate to this consciously or not. This creates a kind of motive for what we constantly observe at different levels: *to do gender* or: "[...] to make a difference where there is no difference" (Hirdman 2001, 65). It is this separation of masculinity and femininity that constantly creates new segregation, e.g. within division of labour (ibid., 65 – 67). It also emphasizes that if women break the taboo on the division of gendered work, this can generate praise. For men who engage in "women's work", it needs to be done in certain forms so that it is not interpreted as punishment, mockery or humiliation. Hirdman explains this by saying that when men enter female-coded fields, a need often arises for these areas to change, while when a woman makes the opposite transition, it is the woman who needs to change. It states that there is a constant contempt for the feminine.

4.3 Summary

The theories by Gottfredson and Lent, Brown & Hackett serve as a basis in concern of the question of influencing factors and how these shapes an educational choice. Gottfredson's theory emphasizes how the individual limits and compromises with the own self-image and occupational aspirations as to find a suitable career choice. Lent, Brown & Hackett's theory is based on the concepts of self-efficacy, outcome expectations and personal goals. Self-efficacy explains the individual's belief in the own ability to perform particular activities. Outcome expectations reflect possible scenarios (or consequences) which the individual may need to confront because of a certain behaviour. The concept of personal goals proposes the persuasion to engage in a certain activity.

To be able to discuss educational choices from a gender perspective, the study relies on Hirdman's theory - The Stereotypical Gender Contract. Hirdman's theory represents the relationship between the sexes, that is, the order of power and structure that exists in society.

5. Method

This section presents the choice of method. A more detailed discussion of the method and its advantages and disadvantages is presented in chapter (8.2) – “Discussion of Method”. However, this section includes a presentation of the sample of respondents and how the information was collected and analysed. The chapter concludes with an explanation of the ethical considerations taken for the study.

5.1 Method of Choice

The method for the study can be recognized as having an *abductive approach*. This approach enables an alternation between theory and empirical data in order to maintain an openness to the results that emerge during the course of the study (Larsen 2018, 30). A qualitative method has been chosen since qualitative research seeks to give an understanding of the characteristics of the informants, which often refers to as *soft data* (Larsen 2018, 31). Qualitative research seeks to give an understanding of the characteristics of the informants, which often refers to as *soft data* (Larsen 2018, 31). The advantage of this kind of collected data is that it can give in-depth, personal and rich answers on the matter of the subject. It also increases validity, as it is possible to ask sequential questions to reduce misunderstandings and ambiguities (ibid., 36). For this purpose, a qualitative method was considered more appropriate to answer the study's purpose and problems. This can be contrasted with a quantitative method that instead seeks to gather *hard data*, involving more units and providing the opportunity to generalize statistically (ibid., 31 – 35).

In the choice of method, disadvantages were also considered. The apparent consequence is, above all, that the method does not allow the possibility of generalization (Larsen 2018,

37). Compiling the results also meant a more extensive work as the large amount of data collected needed to be simplified and qualified.

5.2 Selection of Respondents

The respondents were selected through a mixed strategy of *quota sampling*, *random sampling* and *snowball sampling* (Larsen 2018, 125). Social media and more specifically *Facebook groups* were a great help in reaching out to the respondents. The Facebook groups, with the aim of gathering students from the same programme, enabled for the suitable candidates to be found.

Initially, a quota sampling was used, which implies that the sample size and certain characteristics are determined in advance (Larsen 2018, 125). In this case, the respondents were chosen by sex, educational choices traditionally perceived as “masculine” or “feminine” and the duration of studies by a qualification of minimum 1 year. The delimitation made was based on several points. The choice of university students was due to interest of attaining present stories of the subject in question. The age range was not as important as long as the respondent was relevant for the studies at the time of the interview. Another criterion was that the respondents had have to studied for at least 1 year, this for the cause of reducing the risk of change of programme or other uncertainties regarding the choice of education. The gendered educational choices were based on statistics from Statistics Sweden [SCB] (2019, 36).

Once the samples were specified, a random sampling was used to identify volunteer participants, which was done through a post in different Facebook groups. The published post additionally provided the opportunity for group members to share the post to suitable candidates (snowball sampling). However, this proved not necessary as suitable candidates were found for the interviews through the Facebook posts.

For this study, a total of six interviews were conducted. These consisted of: three female students from the Computer science and Engineering Programme, two male students from

the Nursing Programme and one male student from the Preschool Teacher Education Programme. The students were aged between 22–36 and had a duration of studies by 1,5 to 6 years. The table below demonstrates an overview of the respondents:

5.2.1 Table 1 – Presentation of Respondents

Pseudonym:	Gender:	Programme:	Duration of study:
“Gene”	Female	Computer Science and Engineering Programme (Master – 5 years)	5 years
“Jemima”	Female	Computer Science and Engineering Programme (Master – 5 years)	5 years (6 years)
“Deena”	Female	Computer Science and Engineering Programme (Master – 5 years)	4 years
“Elliot”	Male	Nursing Programme (Bachelor – 3 years)	2 years
“Dustin”	Male	Nursing Programme (Bachelor – 3 years)	2 years
“Julian”	Male	Preschool Teacher Education Programme (Bachelor 3,5 years)	1,5 years

5.3 Data Collection

Data were collected using semi-structured interviews (Larsen 2018, p. 139). Meaning a flexible interview guide (see chapter 10 – “Annex”) was used, including a series of predetermined questions to cover important topics. The respondents were then free to talk about different themes or develop their own reasoning. This method is useful as it allows flexibility in the interview form and allows the possibility of additional questions, as the guide did not have to be strictly followed.

The interviews were conducted via telephone. In order to prevent loss of important information, field notes were kept during the interviews and also audio recording, which the respondents were informed about (Larsen 2018, 138).

The information collected and recorded from the interviews was carefully transcribed prior to the analysis. (Larsen 2018, 156 - 157). Each of the interviews took about 30–50 min.

5.3.1 Validity and Reliability

Validity in qualitative research is characterized by three components - *confirmability*, *credibility* and *transfer value* (Larson 2018, 129). Confirmability refers to the data's relevance to the study's problem formulation in order to meet the credibility and validity of the study's conclusions. Credibility can be traced to the concern about whether the interpretations made for the study can be considered valid and credible for the reality studied. The last point, which is transferability, intends to explain the goal concerning research findings and if these can be transferred to other groups, in addition to those who participated in the study.

These three components that constitute validity and reliability have been taken into account during the course of the study. The qualitative method allows flexibility, which is useful for corrections and adjustments to the problem formulation (Larsen 2018, 130). This means that the respondents have been encouraged to tell their own stories. It has also been possible to adjust the questions if needed and have a critical approach thanks to the method,

which has enabled better conclusions. Consideration for raising the validity has been a thorough process in which also planning of, for example, the interview guide, its questions, analysis of data, etc., has undergone a thoughtful and careful approach.

Reliability is met through precision and credibility (Larsen 2018 131 - 132). Thus, it has been important to embrace openness and transparency throughout the study and its conductance (Silverman 2011 referenced in Larsen 2018, 131). This refers to e.g. accuracy regarding transcription and coding of the material that has emerged in the interviews.

5.4 Analysis

A *content analysis* was used to analyse the qualitative data (Larsen 2018, 160 - 161). The content analysis is meant to identify patterns and tendencies as well as enabling comparisons. The information that was not considered relevant for the problem formulation was removed through a data reduction. To obtain an overview of the text material that emerged from the interview transcripts, the information was coded and categorized (Kvale & Brinkman 2014, 241). It can also be emphasized that the interview guide was partly divided into general categories prior to the analysis, to simplify the reading of the information.

5.5 Ethical Standpoint

The study follows the ethical guidelines of the Swedish Research Council (2017, 10). The guidelines consist of four requirements relating to information, consent, confidentiality and utilization (Swedish Research Council 2002, 6 – 7). Following the *requirement of information*, the respondents were informed about the purpose of the study, as well as the terms of the interview. The terms indicated that the participation was completely voluntary and that the respondents, in turn, had the opportunity to cancel their participation whenever

desired. Furthermore, the respondents were asked for consent by the *requirement of consent* (ibid., 9). According to the *requirement for confidentiality*, the respondents were informed about their anonymity, in which their data would be protected from unauthorized persons (ibid., 12). They also received information concerning the gathered data and information, in which it solely would be used for research purposes. This follows the *requirement for utilization*. In regards to audio recording the interviews, all respondents were aware of this and had given their approval before the recording began. This indicates their knowledge of the information being recorded to be transcribed and then deleted afterwards.

6. Result

This chapter presents the results of the six interviews. As the first research question in the study aims to examine the *factors* that have encouraged the students to apply for a non-traditional education, these factors are presented in the following text. The factors presented are based on the criteria of whether there has been a pattern between the respondents or if there have been any "conflicting occurrences", meaningful to analyse. The aim is to broaden the understanding of the complex processes that may be involved in the formation of an educational choice.

The second research question, which intends to analyse the factors from a *gender perspective*, is answered in the analysis (see chapter 7.2). The chapter concludes with a summary of the results.

6.1 Respondents' Background

In the interviews, respondents were given the opportunity to tell about themselves and their background. One of the nursing students, Elliot, describes his upbringing:

I grew up with my mom and her close friend... we used to live in a collective. Actually, you can say I've been raised by two moms. And then I had my father, who lived in "X", that I did not meet very often (Elliot, Nursing Programme).

Elliot had no contact with his father as a child. This was partly because his father lived abroad. Over the years, Elliot mentions that the relationship between them improved. For Elliot his grandfather was an important inspiration and at the same time the only male role model he had during his childhood.

When asked about the parents' educational background, it is revealed that none of the nursing students had parents with a college education. Instead it was found

that both nursing students, in their families, had some form of connection to the healthcare sector. Elliot's mother had an education as an assistant nurse but was not working in the profession. In the case of Dustin, the occupation within health care was familiar through his father who is working within the ambulance services.

Deena, Computer Science and Engineering student, was the only one in the study with both parents of foreign origin, her parents moved to Sweden as adults. Deena grew up in Sweden, but her parents' culture was evident throughout her upbringing, due to their language and the friends of the family who shared the same cultural background. With regards to her parent's educational background, both had a bachelor's degree and are now working in professions within the education system. Among the other two Computer Science and Engineering students, it was also found that their parents had a bachelor's degree or higher. Gene's parents have careers within law and economics. Regarding Jemima's parents, her father is an engineer and her mother a librarian.

Julian, student at the Preschool Teacher Education Programme, describes his childhood as "liberal" and "tolerant". He portrays his parents as overall supportive. However, his father, initially, had more traditional and conservative values than his mother who was described as more "progressive". Julian remembers his mother having a positive outlook on humanity which he thinks was an important influence for him during his childhood. Concerning his parents' educational backgrounds, his father was an economist while his mother was a nurse, both of whom were now retired.

The respondents were also asked about which high school programme they had participated in previous their university studies. Gene went to high school abroad, where she studied what corresponded to the "International Baccalaureate Diploma Programme" – "IB", in Sweden. Jemima attended the Natural Science Programme with a specialisation in the subjects of math and IT. When asked about her choice of direction, she answers:

It wasn't much because of the IT I chose it; I was always kind of natural science oriented. I liked math a lot but have never been so much into biology and

chemistry, so it felt like I could study natural science without having to study so much chemistry and biology... maybe (Jemima, Computer Science and Engineering).

Like Jemima, Deena also went to a Natural Science Programme at upper secondary school. Regarding the nursing students, Elliot went to an Arts Programme with a specialisation in music at High School and Dustin went to a Social Science Programme with a specialisation in behavioural science. Julian, like Dustin, had a Social Science background although with a “digital” specialisation.

6.2 Personal Motives and Past Experiences

Regarding the motives for the chosen education, there were individual differences but also similarities among the respondents. Several of the respondents described past experiences of their current field of study. Two of the female students at the Computer Science and Engineering Programme, reported on previous programming experiences. Gene primarily mentions coincidence as a cause for her educational choice. Her original plan was to study another field within Computer Science:

[...] I think it was just that I got into programming during a year, I took a year off after high school. Then I tried a bit Python and so on. It was a little exciting. I think it was like... I was looking at building computers etc., it all just... led to IT. But I didn't think before that I would study Computer Science and Engineering, I didn't even know it existed (Gene, Computer Science and Engineering).

Jemima describes an initial interest that later proved to be partly derived from her earlier programming experiences in high school. She recalls her studies in the subject as being enjoyable and easy which she reflects may have encouraged her to choose her current career path.

For one of the students, Computer Science and Engineering was completely new. Instead, curiosity and a desire to explore something new were the reasons to why the student ended up within Computer Science and Engineering:

[...] I had no previous experience of it [the programme] or programming itself. I just thought it sounded extremely exciting. It felt a bit like the future and SCI-FI and so it sounded very cool. Then I had studied a lot of natural sciences and physics in high school. I was not really thrilled with these classic subjects of natural sciences, so I want to try something new (Deena, Computer Science and Engineering).

The two nursing students also shared similarities regarding past experiences, in which both had previously worked at a retirement home. Dustin explains that the main reason for his chosen career path was because he wanted to help people. Elliot had a similar reasoning in which it was important to have a people-oriented profession that provided value for him. In addition, he also reflected over his life situation at that time. He was very committed to his sporting interests and was travelling a lot, which he realized over time did not provide him the stability and security he needed.

Julian also had previous experience of the current education. He had previously worked as an untrained caregiver at a preschool. In addition, there was various circumstances that motivated his career choice. For him, it was important to have a profession that could provide stability and good job opportunities. This because of his previous employment in an uncertain industry he mentions included “a lot of prestige and anxiety”. He also explains other causes related:

[...] I want to do something that feels meaningful and I want to work with people...I thought. And since I know I like ... I think it is important with gender... and HBTQ-related issues and where can I then as a white man, heh... [nervous laughing] I'm sorry ... or sorry... but I'm a white, heterosexual male. Where can I make a difference then? Then I thought that at preschool I can make a difference by actually breaking the norm there and then I enjoy working with children (Julian, Preschool Teacher Education Programme).

6.3 Role Models and Supportive Network

The respondents sometimes mentioned how role models and parental support were present in the decision-making of their future careers. The two nursing students

Dustin and Elliot talked about how they encountered role models through their previous experiences at the retirement home. Dustin remembers him gaining insight into the duties of a nurse, in which he became interested in the profession. He also reasoned about the fact that his father worked with health care throughout his upbringing. Dustin thought that it may have had an influential meaning for his educational choice. Elliot mentioned that his mother and grandmother were educated assistant nurses. However, it seemed that it was primarily the nurse at his first job at the retirement home who inspired him to study nursing:

[...] She who was a nurse there, I thought she was cool. I liked her. I've always kind of lacked a few role models in life and things like that. My role models have always been football players, you know, when I was a kid and now, I found myself in a position... where... I just shit, now I am going to be an adult and so here's a nurse and she's my role model now (Elliot, Nursing Programme).

Gene talks about her upbringing and how she got to inherit her parents' computers at an exceedingly early age. Already at the age of 5 and 6, she played computer games, just like her father. She says that it was probably from there that the technical interest grew, but that she went further than her father, choosing a more technical career path. For Jemima, her father was also an important influence. She expressed she had an easy time seeing herself studying a civil engineering degree, which she reflects probably was because her father had that background and that it felt natural to her.

In Deena and Julian's case, there was support in the form of close contacts. Deena had her parents and especially her mother as support that encouraged her to the current education, even though it was completely new to Deena. Julian had good support and inspiration in her partner and in a friend, who was a preschool teacher.

6.4 Summary

The choice of education can be influenced by many different factors. The result describes both traditional and non-traditional family constellations where the educational background of parents and respondents has varied. There have been families where both parents have been present but also households where some of the respondents as children only grew up with a single mother. For the most part, the upbringings portrayed in the interviews have been characterized by parents who either studied or worked. The respondents had different high school backgrounds in Social sciences, Natural sciences, International baccalaureate and Art programmes.

Furthermore, the results indicate individual and personal circumstances for the chosen education as well as shared past experiences among the respondents. It has been shown that many of the respondents had connections to previous experiences in the field of education they are currently studying, such as courses in programming and workplaces that have been relevant to their chosen career path. For some of the respondents, personal motives have also been crucial, such as the need to change the current life situation.

Several of the respondents talk about role models and support that have been important to them in the decision-making process. These role models have been both direct and indirect and have consisted of either someone in the family or significant people in the environment. In cases where direct role models are not mentioned, a present support has instead been confirmed to be important for the respondents' choice of career.

7. Analysis

To analyse the results, the study takes support in the theoretical framework and previous research of the foregoing chapters. To fulfil the purpose, the analysis has centred on two issues: *Which factors may have encouraged the students to opt for a non-traditional career? How can the students' educational choices be understood from a gender perspective?*

7.1 Which Factors May Have Encouraged the Students to Opt for A Non-traditional Career?

The results have included factors that several of the respondents had in common or factors which were "unique" and interesting for further analyse. The factors that emerged in the results and will be addressed in the analysis are *respondents' backgrounds, personal motives and past experiences* and *role models and supportive network*.

From the results it can be understood that the respondents share some similarities regarding their backgrounds. They have all chosen an academic education and they come from seemingly stable families in which their parents have either studied or worked. The differences that can be noted is that there are women and men among the respondents, they have had different upbringings and family constellations - both traditional and non-traditional (e.g. Elliot). There have also been different role models and support, as well as diverse personal motives and preferences regarding their career choices.

As Gottfredson explains, people have stereotypical views of professions (image of occupations) which are sorted into a personal cognitive map of occupations (Gottfredson 2002, 88). The map is formed early in life and continues to evolve in pace with the

cognitive maturity (ibid., 91). According to Gottfredson these maps contains those occupations that are accepted along certain parameters. These parameters, Gottfredson believes, are primarily based on: (1) whether the profession is perceived as masculine or feminine (sex type), (2) its intellectual complexity in relation to duties (occupational prestige level) and last (3) one's own interest, activity preferences and personality needs (field of work) (Gottfredson 2002, 88 – 91). Individuals tend to limit their own self-fulfilment for the cause of fulfilling expectations regarding sex type and prestige (ibid., 86).

When studying the respondents' background, it can be understood that sex-type or in some cases prestige, has generally not been limiting for either of them. The respondents seem to have grown up in environments that had a more “permissive” or “neutral” view of gender roles. There are various examples of this among the respondents. For two of the female students, fathers are mentioned as prominent persons in their lives. Gene talks about how her interest in computers grew through her father. Jemima mentions high school as a starting point for programming but also her father, who is an engineer and thus made an educational path in engineering a possible alternative for her. Elliot grew up in a collective with his mother and her close girlfriend. He further explains that he only had occasional contact with his father. Elliot may have limit himself to other personal parameters, but in his case, it did not appear to be about sex-type. The fact that he grew up in an environment with women could have had a positive impact in which traditional gender norms were not reinforced to the same extent as in others.

When Gottfredson presents the concept of a cognitive map of occupations, it implies that individuals can "accumulate" different ideas of professions from their environment (e.g. upbringing). Thus, the respondents may have had other parameters that were considered more important. Hence, Gottfredson's term about self-concept, the view of oneself, is expected to be relevant (Gottfredson 2002, 90). Self-concept contains elements such as abilities, personality, gender and values. This suggests that some elements can be considered genetically inherited while others can be shaped by the surrounding environment. Gottfredson believes that even if the self-concept is not articulated or accurate, it does not prevent individuals from acting because of it. It may still be the case that individuals need to compromise with the elements in the self-concept, however, the profession that is most in tune with one's core elements is sought (ibid., 91). This could be

applied to the respondents, since self-concept may have been decisive in their decision-making process. Each respondent can be considered to have had core elements that are more important than sex-type or prestige. The female respondents mention personal motives such as interest and curiosity. For the male respondents, the prominent personal motives were the desire for a people-oriented job, stability, security and good job prospects. Thus, it can be suggested that the profession chosen corresponded to the respondents' self-image and personal preferences, which could mean that the parameter - field of work (interest) was given a higher priority, than sex-type or prestige. However, the aspect of prestige can be discussed. None of the respondents mentions prestige related to their educational choices. This can be analysed on the basis of how professions are valued, and the meaning of a profession being coded as feminine or masculine. The gender perspective will be analysed later.

In regards of past experiences there are examples as a previous acquaintance with programming (Jemima & Gene), work experiences at a retirement home (Elliot & Dustin) and previous employment as a caregiver (Julian). According to SCCT, as children and adolescents we are exposed to many different activities through our interactive and social environments (Lent, Brown & Hackett 2002, 265). These activities can be such as crafts, sports, music, mathematics, etc. As proposed by the theory the activities can have significant value for our behaviours in accordance with career decision making. Likewise, to direct and indirect exposure to various activities, repetitive activity training, modelling, and feedback from important people, can also contribute to children and adolescents developing skills, adopting personal performance standards and establishing expectations. This can be linked to the respondents' stories about past experiences at workplaces or through courses during the upper secondary school years. It can be assumed that through affirmative experiences, the respondents have gained confidence in their own abilities (self-efficacy) and can be expected to generate positive results (outcome expectations). This may also apply to Deena who did not explicitly mention previous experience in computer science, although instead mentions her attendance at a natural science programme. In that, a theory could be that the high school background has developed skills in e.g. mathematics and logical thinking that could be useful in a Computer Science and Engineering programme. Deena may also have been assumed to have performed well and thereby

received positive affirmations. It can thus be considered that useful courses in e.g. her educational background provided a good foundation for her chosen career.

Another parameter that is claimed to be good for the belief in one's own self-efficacy is feedback from the environment. This means that parents who have been supportive or been direct role models for the respondents may have had a positive impact on their career choice. Several of the respondents also chose careers that were not foreign to them (e.g. Dustin, Elliot, Jemima, Gene). In many cases, there were links to for example healthcare and engineering in the educational background of the parents. People who do not belong to the family have also played a significant role for the respondents chosen career paths (Dustin, Elliot, Julian). These were role models that the respondents encountered through temporary employment in related areas for their chosen profession. In Deena's case, no direct role model was mentioned for the choice of profession, but her mother turned out to have been an important support for her to find the courage to try something completely new. This proposes that there are many factors in the background such as previous experiences and positive affirmations in connection with it, as well as an encouraging environment that can influence the choice of profession.

7.2 How Can the Students' Educational Choices Be Understood from A Gender Perspective?

Hirdman (2001, 77) describes with the help of her theory of *Gender Contracts*, the conditions that shape the relationship between men and women. Furthermore, it is believed that there is a power imbalance between the sexes. The man is considered the norm, which creates the notion of: "to do gender" as well a difference between the sexes. It is from this idea the interpretation of masculinity or femininity derives and which continues to be reproduced. There is also a contempt for the feminine which is reflected as subordinate. This can be seen as a consistent structure and struggle that permeates society and, above all, education and the labour market, which are central to this study.

Linda Gottfredson's (2002, 88 – 91) theory shows how we, during our upbringings, gather stereotypical notions about professions - *images of occupations*. She also suggests through the *Stages of Circumscription* how the development and interaction of one's own self-image and professional ambitions arise (ibid., 96 – 100). This happens early in life in which the perception of gender, social class, and ability (intelligence) are formed. What can be understood from this is both the importance of the individual's own agency as well as the circumstances in the environment, interacting with the career formation. The respondents would therefore make their own educational choices, but with the support of positive conditions (environments) such as families with less strict attitudes about gender roles, the opportunity to develop their own interests as children (without notions of masculinity and femininity) and with previous positive experiences that strengthened self-efficacy.

The fact that the respondents did not have to limit themselves to Gottfredson's parameter regarding sex-type does not mean that these individuals avoid being influenced by the Gender Contract that Hirdman advocates. Sweden is a country that is considered to have come a long way in the issue of gender equality, as measurements also show (Gender Equality Index 2019). Hence, the "punishment" of breaking gender norms can be assumed to be less visible than for societies or cultures where gender equality has not yet developed at the same pace. At the same time, the problem still exists, as mentioned earlier: wage differences between men and women persists, women tend to have more difficulty achieving higher positions in working life and businesses and there is a clear imbalance within different programs (Christophe & Bourrousse 2017, 4 – 7). Based on the Gender Contract, Gottfredson's parameter regarding prestige can also be discussed. The possibility is that prestige, on an individual level, may not have been limiting for the respondents. On the other hand, at a level of society, prestige, in terms of status and reputation, can have a different meaning. This can be contrasted by Hirdman's statement about the man as the norm and that the woman is perceived as subordinate. As there is a contempt for the feminine it can, as previously described, lead to women who break the taboo in male-dominated fields being praised while men who make the same transition are instead devalued (Hirdman 2001, 65 – 67). In the same context, it can be understood that female coded work, based on the Gender contract, is valued less than male coded work. This in turn affects, for example, wages, working conditions and the status of the profession. For

the male students in the study, it does not always mean that they are devalued in a "visible" way, however, the fact that they have chosen a traditional female coded profession may instead lead to them having to accept the conditions that exist there such as lower wages and status.

Thus, the educational choices can be understood in which the individuals may have grown up in environments that meant that they did not have to limit themselves to certain norms that exist in society. Nevertheless, from a gender perspective, they can still be affected by this. Therefore, it is important to continue the work of raising awareness of gender norms and how they affect individuals' career choices.

7. Summary

Based on the theoretical framework, conclusions can be drawn concerning the factors encouraging the respondents to opt for a non-traditional educational choice. One of the factors that has been crucial is the respondents' background. What emerges is that the respondents have not been limited by parameters such as sex-type or to some extent prestige as Gottfredson suggests in her theory. The fact that the respondents grew up in environments and families that did not have strict ideas about gender roles or social class is probably a positive contribution. This has also helped to shape the respondents' cognitive map of occupations as other parameters may have been more important. Thus, it can be considered that self-concept (respondents own personal motives) and its interaction with a suitable profession played a greater role. This suggests that the respondents chose a profession based on the parameter of field of work, meaning interests were prioritized in the choice of education.

Several of the respondents mentioned past experiences that could be linked to their current education. Based on SCCT, it can be assumed that these past experiences have contributed to positive affirmations that have helped to strengthen the self-efficacy of the respondents. Mentioned experiences was previous employments, courses and upper secondary school backgrounds as positive factors.

Family and significant people in the respondents' environment are also considered to have made a positive impact. This is because SCCT suggests that feedback from the environment can strengthen self-efficacy. The respondents have had both direct role models and encouraging support in decision making process.

The educational choices were discussed from a gender perspective, the conclusion is that the respondents, thanks to more permissive and progressive upbringings, in a way managed to avoid restrictions due to traditional and harmful norms. On the other hand, it is emphasized that the respondents are still affected, which is expressed in different ways.

8. Discussion

The following text discusses the different aspects of the study. The result is discussed in the first section and parallels are drawn to previous research. This is followed by a discussion of method and theory, in which strategic considerations made are represented and explained. Finally, proposals are made for further research in the field.

8.1 Discussion of Result

With this study, the desire was to shed light on encouraging factors in non-traditional educational choices as well as analysing this from a gender perspective. The results that have emerged can be related to the previous research presented in earlier chapters. The factors that can be considered central to the respondents in this study are: background, personal motives, previous experiences and a supportive network in the form of family, friends and role-models. Similarities have been found in other studies (Sax, J., & Bryant, N. 2006; Ciccocioppo et al. 2002; Chusmir 1990; Chusmir 1983). These mentioned studies show that influences of various kinds play a role in the choice of education, including the support of teachers, guidance counsellors, family, friends and partners. Regarding influences from teachers and guidance counsellors, this type of support from the educational system has not been fully investigated in this study. Nonetheless, the study illustrates how the personal network could influence a person's career choices.

Ciccocioppo et al. (2002, 1) also accentuate the academic interest and strengths during the high school years as motivators for women (ibid., 7). This can also be discussed based on Lent, Brown & Hackett's theory about SCCT and the concept of self-efficacy, which Tellhed, Bäckström & Björklund 2017 does in their article. In this study, it turns out that past experiences were relevant to several of the respondents. This has since been discussed

based on SCCT, which to some extent can support the theory. At the same time, the aspect that Tellhed, Bäckström & Björklund 2017 presents regarding the fact that women often experience more doubt about their self-efficacy than men, is something that can be discussed further. This study has not shown such tendencies that can be attributed to the respondents' answers.

Regarding the gender perspective, the results can be discussed at different levels. One aspect that has not been deepened but that can be emphasized is that there are not only negative aspects to being a "minority gender" in an education. A minority gender may receive benefits since there is a need to even out the imbalance. The analysis describes how female and male coded professions can have different consequences, especially for the male students. But it is also important to understand that the female students, too, are affected but probably with other effects. Professions that are male coded can provide benefits such as high prestige. This is because male coded work usually is valued higher than female coded work, according to Hirdman's theory. The consequences that women might instead have to face is higher demands by other and themselves. This, in turn, can lead women to have greater difficulties reaching higher positions or to receive the same salary as their male colleagues. Of course, this does not have to be the case, but can be considered a hypothesis.

8.2 Discussion of Method

For the purpose and issues of the study, the chosen method is considered well-founded. Studying non-traditional educations can involve diverse methods. At the same time, a more in-depth and individual perspective of the motivating factors behind the respondents' choice of education was desired (Larsen 2018, 16). Hence, a qualitative method was believed to be the most suited alternative. Careful considerations were made in the design of the questions and how these were asked. For example, follow-up questions were used to clarify and enable greater understanding (Kvale & Brinkman 2014, 177). Probing questions were also

important to delve and deepen the knowledge on the current topic of the study. These questions can help to ensure better validity as the risk of misunderstanding is reduced (Larsen 2018, 16). Mastering a good questioning technique and having a decent knowledge of the subject is part of what constitutes the quality of an interview (Kvale & Brinkman 2014, 216). In addition, the significance of maintaining a dynamic, responsive and sensitive interaction with the respondents while respecting the ethical guidelines was important. This starting point was essential when interviewing the respondents.

It has been considered that the lack of anonymity may make it more difficult for respondents to answer the questions honestly (Larsen 2018, 37). The *control effect* is also a risk, implying that the interviewer and the method can affect the result from the interview. Respondents may also tend to adapt their answers to content the interviewer, to conceal ignorance or to adjust themselves after what is considered "generally accepted". This has been considered by striving to be aware of one's own impression and perceptions (Larsen 2019, 144). The fact that the interviews were only conducted by telephone due to Covid-19 may have had both advantages and disadvantages. The method creates a possibility to reach a wider target group as the geographical location is not decisive (Kvale & Brinkman 2014, 190 - 191). The disadvantages that exist are the distance in the interaction, such as a lack of body language. "The visible body" can also act as an obstacle for some individuals to speak freely without shame, thus the distance can also have contributed to a certain degree of anonymity.

The interviewees had different backgrounds and different ways of telling their stories allowing them to emphasize the subjects they considered relevant. This diversity may be due to the combined method of quota sampling, random sampling and snowball sampling. At the same time, it cannot be ruled out that those who signed up may have specifically been interested in the subject. Kvale & Brinkman believe that different people may be suitable for different types of interviews, while the authors explains that there are no "ideal respondents" (2014, 207).

The transcription of the interview quotes from their original language (Swedish) into English can also be discussed. "To translate is to betray" according to Kvale & Brinkman (2014, 218). It is a difficulty to achieve absolute accuracy in a translation as e.g. tone of voice, body language and breathing are often lost (Kvale & Brinkman 2014, 218). A

translation can add an additional risk of information loss. Therefore, the translation has been carefully done in which as few changes as possible have been made. This with the intention of maintaining as much as possible of the authenticity of the respondents' statements.

8.3 Discussion of Theory

In order to be able to analyse the factors that encouraged the students to apply for a non-traditional career choice, several different career theories were considered (e.g. Bourdieu, Hodkinson & Sparks, Super). The theories that were finally chosen for the study were Gottfredson's Theory of Circumscription, Compromise and Self-Creation, Social Cognitive Career Theory by Lent, Brown & Hackett and The Stereotypical Gender Contract by Hirdman. Both Gottfredson's theory and SCCT are well-known theories that have been widely used in research concerning STEM and HEED. Gottfredson's theory was mainly motivated by its emphasis on gender and how it tends to limit individuals' career decision-making. The theory was considered appropriate to answer the purpose of the study and the questions at issue. However, it needs to be addressed that theory doesn't directly cover individuals who have chosen non-traditional career choices, but through its various concepts it has proven to be useful for the study's purpose. The same applies to SCCT, although there was a specific interest in its perspective on self-efficacy, which is often discussed in research concerning non-traditional career paths as a decisive factor for particularly women. With the support of Hirdman's theory of gender contracts, it was felt that Gottfredson's theory and SCCT could be supplemented and enable a deeper understanding of the gender perspective.

In this study, the perspective of social class is not discussed in depth. This was due to the need for a theory with a more consistent focus on the concept of class, as it is a complex subject that can be interpreted in different ways.

8.4 Proposal for Further Research

This study has provided an insight into some Swedish students' educational choices and a selection of the factors that can influence these. There are many different perspectives that would be interesting to study further. One suggestion would be to investigate the *experiences* of students in non-traditional educations. This can possibly help to increase understanding of factors that motivate students to persist in their education and any remaining gender stereotypes.

Regarding the gender perspective, it would be interesting to discuss it based on what previous research suggests, concerning the assumed changes in gender stereotypes and labour markets. This study has been limited to men and women, but other groups based on, for example, ethnicity, non-binary identities, functional variations can provide a further perspective on the issue. The cultural perspective could contribute to an increased understanding of the gender perspective within the STEM and HEED fields of education. Another suggestion would be to compare traditional societies versus more non-traditional ones to hopefully also be able to gain a greater understanding of gender stereotypes and how these may have different expressions and consequences.

9. References

André, Christophe & Bourrousse, Hugo. 2017. Fighting gender inequality in Sweden. *OECD Economics Department Working Papers (1395)*. OECD Publishing, Paris.
<https://doi.org/10.1787/37b4d789-en> (Accessed 2020-07-20).

Bordo, Susan. 2003. *Unbearable Weight: Feminism, Western Culture and the Body*. 10th ed. Berkeley: University of California Press.

Butler, Judith. 2007. *Genustrubbel: feminism och identitetens subversion*. Göteborg: Daidalos AB.

Chusmir, Leonard H. 1983. Characteristics and Predictive Dimensions of Women Who Make Nontraditional Vocational Choices. *Personnel & Guidance Journal* 62(1): 43–47.
doi:10.1111/j.2164-4918.1983.tb00118.x

Chusmir, Leonard H. 1990. Men Who Make Nontraditional Career Choices. *Journal of Counseling & Development* 69(1): 11–16. doi: 10.1002/j.1556-6676.1990.tb01446.x.

Ciccocioppo, Anna-Lisa; Stewin, Leonard; Madill, Helen M.; Montgomerie, Craig T.; Tovell, Dorothy R.; Armour, Margaret-Ann & Fitzsimmons, George W. 2002. Transitional Patterns of Adolescent Females in Non-Traditional Career Paths. *Canadian Journal of Counselling and Psychotherapy* 36(1): 25-37.
<https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ642611> (Accessed 2020-07-04)

Croft, Alyssa; Schmader, Toni & Block, Katharina. 2015. An Underexamined Inequality: Cultural and Psychological Barriers to Men's Engagement with Communal Roles. *Personality and Social Psychology Review* 19 (4): 343 – 370.
doi: 10.1177/1088868314564789.

European Institute for Gender Equality. 2019. *Gender Equality Index 2019: Sweden*.
doi:10.2839/58691.

Gottfredson, Linda S. 2002. Gottfredson's Theory of Circumscription, Compromise and Self-Creation. In Brown, Duane & Associates (eds.). *Career Choice and Development*. 4th ed. San Francisco: Jossey-Bass. 85 - 149.

Grahm, Jessica & Lykke, Nina. 2015. Ontologi och epistemologi. In Hedenus, Anna; Björk, Sofia & Shmulyar Gréen, Oksana (eds.). *Feministiskt tänkande och sociologi: teorier, begrepp och tillämpningar*. 1th ed. Lund: Studentlitteratur AB.

Hedenus, Anna & Björk, Sofia. 2015. Inledning. In Hedenus, Anna; Björk, Sofia & Shmulyar Gréen, Oksana (eds.). *Feministiskt tänkande och sociologi: teorier, begrepp och tillämpningar*. 1th ed. Lund: Studentlitteratur AB.

Hirdman, Yvonne. 2001. *Genus: om det stabila föränderliga former*. 2:5 ed. Malmö: Liber AB.

Håkansson, Peter. 2017. Marginalized Masculinities and Exclusion in the New Low-Skill Service Sector in Sweden. In Haywood, Chris & Johansson, Thomas (eds.). *Marginalized Masculinities: Contexts, Continuities and Change*. London: Routledge, 67–82.

Kvale, Steinar & Brinkmann, Svend. 2014. *Den kvalitativa forskningsintervjun*. 3th ed. Lund: Studentlitteratur AB.

Larsen, Ann Kristin. 2018. *Metod helt enkelt: en introduktion till samhällsvetenskaplig metod*. 2 uppl. Malmö: Gleerups Utbildning AB.

Lent, Robert W.; Brown, Steven D. & Hackett, Gail. 2002. Social Cognitive Career Theory. In Brown, Duane & Associates (eds.). *Career Choice and Development*. 4th ed. San Francisco: Jossey-Bass. 373 – 427.

Sax, Linda J. & Bryant, Alyssa N. 2006. The impact of college on sex-atypical career choices of men and women. *Journal of Vocational Behavior* 68(1): 52–63. doi: 10.1016/j.jvb.2005.01.004.

Sendén, Gustafson, Marie; Klysing, Amanda; Lindqvist, Anna and Emma Aurora Renström. 2019. The (Not So) Changing Man: Dynamic Gender Stereotypes in Sweden. *Frontiers in Psychology* (10): 37. doi: 10.3389/fpsyg.2019.00037

Statistics Sweden. 2019. *Educational choices after upper secondary school – gender differences among persons born in 1990*. <https://www.scb.se/en/finding-statistics/statistics-by-subject-area/education-and-research/education-of-the-population/analysis-and-statistics-concerning-education-of-the-population/pong/publications/educational-choices-after-upper-secondary-school--gender-differences-among-persons-born-in-1990.-/> (Accessed 2020-07.25).

SOU 2015:86. *Mål och myndighet: en effektiv styrning av jämställdhetspolitiken*. 2015. https://www.regeringen.se/4a80d3/contentassets/fd7240295cab45df8130384abdb600fa/mal-och-myndighet---en-effektiv-styrning-av-jamstalldhetspolitiken-sou-2015_86.pdf (Accessed 2020-07-21)

Swedish Gender Equality Agency. 2018. *Sweden's Gender Equality Policy*. <https://www.jamstalldhetsmyndigheten.se/en/about-gender-equality/swedens-gender-equality-policy> (Accessed 2020-07-21).

Swedish Higher Education Authority (UKÄ). 2019. *Gender Equality in Higher Education*. <https://english.uka.se/statistics/gender-equality-in-higher-education.html> (Accessed 2020-07-20).

The Swedish Research Council (Vetenskapsrådet). 2002. *Forskningsetiska principer inom humanistisk-samhällsvetenskaplig forskning*. Stockholm: Elanders Gotab AB. <http://www.codex.vr.se/texts/HSFR.pdf> (Accessed 2020-07-20).

Tellhed, Una; Bäckström, Martin & Björklund, Fredrik. 2017. Will I Fit in and Do Well? The Importance of Social Belongingness and Self-Efficacy for Explaining Gender Differences in Interest in STEM and HEED Majors. *Sex Roles* 77: 86–96. doi: 10.1007/s11199-016-0694-y.

Organisation for Economic Cooperation and Development. 2016. *Gender gap in education*. Paris: OECD Publishing. <https://www.oecd.org/gender/data/gender-gap-in-education.htm> (Accessed 2020-07-22).

10. Annex

10.1 Interview Guide

Bakgrund

- Hur gammal är du?
- Kan du berätta lite om dig själv? Vem är du?
- Hur skulle du beskriva din uppväxt?
- Vad arbetar dina föräldrar med?
- Är dina föräldrar födda här?
- Finns andra kulturella inslag i din bakgrund?

Studier

- Vad fick dig att välja denna utbildning du nu läser? (Inspiration, erfarenheter, intresse, ekonomiska fördelar?)
- Hade du några andra utbildningsalternativ du övervägde?
- Hur långt har du kommit på utbildningen?
- Hade du några tvivel innan du påbörjade utbildningen? Eller under utbildningens gång?
- Hur tycker du att utbildningen känns idag? Överensstämmer utbildningen med de tankar du hade innan du påbörjade den?
- Är klassen uppdelad enligt kön? Hur många män/kvinnor läser i din grupp?
- Om inte, hur många män/kvinnor läser i din grupp?
- Hur ser du på detta?
- Vad tror du anledningen kan vara till att fördelningen ser ut så?
- Tror du att vissa utbildningar bara är för män eller för kvinnor?

- Har du upplevt några hinder eller möjligheter med att vara man/kvinna på utbildningen?
- Vad har du fått för reaktioner från omgivningen gällande ditt utbildningsval?

Framtid

- Hur tänker du kring framtiden?
- Vad är dina förhoppningar?
- Vad är dina planer framöver i studierna/yrkeslivet?