

Hierarchy Enhancing vs. Hierarchy
Attenuating: Do men and women differ in
their preferences for leadership roles?

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A Thesis Submitted to Dublin City University Business School
in Partial Fulfilment of the Requirements for the Degree of
Doctor in Philosophy
January 2014

Declaration

I hereby certify that this material, which I now submit for assessment on the programme of study leading to the award of Doctor of Philosophy is entirely my own work, and that I have exercised reasonable care to ensure that the work is original, and does not to the best of my knowledge breach any law of copyright, and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

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**For my parents,
Moyra and Dom**

ACKNOWLEDGEMENTS

First, I would like to thank my wonderful supervisor, Dr. Janine Bosak, for her never ending help and guidance throughout this process. Over the past four years, during all the ups and downs, Janine has been an unwavering source of support and strength. It has been a pleasure to work with and learn from you. Thank you so much for everything.

I would also like to extend my warmest and heartfelt thanks to Professor Alice Eagly, with whom I collaborated with throughout this research. As my international collaborator, Alice has been very kind and accommodating with her time and expertise, answering all of my queries and questions, in a way that always encouraged me. Thank you so much for your guidance, your willingness to share your expertise and to provide invaluable feedback that has helped guide me and this project.

Thank you to all of the staff at DCU Business School who have provided me with support and guidance over the years.

A special word of thanks to my second reader Dr. Edel Conway for her invaluable advice and guidance on this project. Thank you also to Dr. Margaret Heffernan for giving me feedback and for recommending me for the PhD. Thank you also to Prof. Patrick Flood who encouraged my interest in the field of leadership. Thank you to Dr. Teresa Hogan for her support and her never-ending enthusiasm that has made the PhD journey easier. I would also like to thank Dr. Siobhain McGovern, Prof. Colm O’Gorman, Prof. David Collings, Dr. Claire Gubbins, Dr. Yseult Freaney, Dr. Na Fu, Dr. Gerry Conygham, Dr. Brian Harney, Dr. Deirdre O’Shea, Dr. Aurora Trif, Dr. Tony Foley, Dr. Melrona Kirrane, Rachel Keegan, Muriel

Keegan, Emily Phipps, Olive Flynn, Catherine Tierney, Debbie Trimble, Nichola O’Sullivan, Bernadette McCulloch, Mandy Casey, Clare Balfe and Ursula Baxter.

Thank you to all the participants who took part in these studies. Thank you also to the LInK Research Centre and DCU Business School for funding this project.

I would like to thank my DCU friends and fellow combatants who shared the PhD experience with me. I truly believe that without such a wonderful network of friends, I would not have finished this project. I’d especially like to thank my colleagues who have advised and assisted me with administration and collection of questionnaires. They are Dr. Jennifer Farrell, Louise Gorman, Karine Dalsin, Anushree Priyadarshini, John Brogan, Dr. Jason Healy, Jason Flynn, Tara Farrell, Dr. Na Fu, Brian Harmon, Steven Kilroy, Ashley O’Donoghue and fellow “gender girl” Danielle Greene.

There is no doubt in my mind, that this would have been a long hard journey without my close friends. Thank you to Rachel Kidney for the long chats, the PhD discussions and never failing to make me laugh. Thank you to Sarah-Jane Cullinane for the tea-breaks, lunch time chats and walks that always cheered me up. Thank you also to Lisa Van Der Werff for her invaluable advice and for being a wonderful office mate.

Also thank you to my flatmate Caoimhe Moore and my friends Aisling Miller, Aoife Holohan, Blaithe Rainsford, Ciara Lawler, Elma Bambrick, Roisin West, Sinead Curtis and Sinead Howe for your support and friendship over the years.

Finally I would like to thank my family, in particular my granny Nancy, my parents Moyra and Dominic and my siblings, David, Mark and Patricia for always being there for me and supporting me through this project.

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Hierarchy Enhancing vs. Hierarchy Attenuating: Do men and women differ in their preferences for leadership roles?

Mary Kinahan

Abstract

Building on the role congruity (Eagly & Karau, 2002) and goal congruity perspectives (Diekmann et al., 2011), the present research investigated gender differences in leadership aspirations and leadership role preferences amongst Irish university business students. Specifically, the author examined whether greater importance assigned to communal goals by women underlies the greater preference that women, compared with men, show for hierarchy-attenuating than -enhancing leadership roles. Studies 1 and 2 tested the mediating role of goals in the relationship between gender and leadership role preferences. Study 3 examined perceived goal affordance for hierarchy-attenuating and -enhancing leadership roles. Study 4 examined the effect of activating communal or agentic goals on participants' leadership role preference. Studies 1 and 2 showed that men and women did not differ in leadership aspirations. However, women more than men, preferred hierarchy-attenuating leadership roles, with perceived importance of communal goals mediating this relationship. Study 3 showed that hierarchy-attenuating leadership roles were perceived as affording communal goals more than hierarchy-enhancing leadership roles. Similarly, hierarchy-enhancing leadership roles were perceived as affording agentic goals more than hierarchy-attenuating leadership roles. Study 4 showed that participants in the communal goal condition, more than participants in the control condition, preferred hierarchy-attenuating leadership roles. There was no difference found for leadership role preference between participants in the agentic goal condition and the control condition. Overall, results suggest that women, compared with men, are more likely to prefer a leadership role which affords their communal life goals. Therefore the current research provides insight into men and women's leadership aspirations and leadership role preference and further supports and extends the goal congruity perspective in the new domain of leadership. Implications for future research include examining leadership aspirations longitudinally and further examination of the process behind women's preference for hierarchy attenuating leadership roles.

CHAPTER ONE

INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

This chapter provides an overview of the research conducted in the present study. This includes the objectives of the study and significance of the research in explaining why women are underrepresented in leadership roles. The chapter also provides an overview of the four studies that examine whether men and women differ in their leadership aspirations and their leadership role preferences and presents the hypotheses for each study. Next, the chapter outlines the major contributions of the research. Finally, the chapter provides an overview of the structure of the thesis.

1.2 BACKGROUND TO THE RESEARCH

Over the past half century, there has been a dramatic increase in women's employment worldwide, with women in Ireland participating at a labour force rate of 54.6% (Central Statistics Office, 2012). In the education domain, the majority of university students enrolled in Ireland are female (56.5%), with female students outnumbering male students in business, administration and law university degree programmes (CSO, 2012; European Commission, 2012). Despite these encouraging statistics, the number of women in senior corporate positions in Ireland is markedly lower than in the EU and USA.¹ This phenomenon of women failing to reach executive levels in organisations is often referred to as the "glass ceiling" (Morrison,

¹ Women in Ireland constitute 8.9% of corporate board members, which is lower than the European average of 11.7% (EPWN, 2010) and the Fortune 500 average of 16.1% in the United States (Catalyst, 2011).

White, & Van Velsor, 1987) which is a “transparent barrier that keeps women from rising above a certain level in corporations” (p.13).

In Ireland, women’s representation in leadership roles in the non-profit sector compares more favourably to the private sector, with women accounting for 52% of corporate board members in the non-profit sector (Board Match Ireland, 2011). This is higher than the United Kingdom average of 31% (Civil Society, 2011) and the United States average of 43% (The White House Project, 2009). Furthermore, women account for 44% of the Non-Profit Times list of 50 most powerful and influential people in the non-profit sector (NPF, 2013), but only account for 0.04% of Fortune’s list of 25 most powerful people in business (Fortune, 2013). Researchers (e.g., Claus, Sandlin, & Callahan, 2012; Themudo, 2009; Van Buren, 2004) suggest that this disparity between profit and non-profit sectors is partly due to the perception that non-profit sectors deal with “soft skills” or communal activities, such as helping others and serving the community. Moreover, the non-profit sector may be thus perceived as more likely to afford the fulfilment of these communal or altruistic activities (Weisgram, Dinella, & Fulcher, 2011; Themudo, 2009; Van Buren, 2004). Despite these encouraging statistics in the non-profit sector, women can still be underrepresented in leadership roles depending on the non-profit budget size and structure, with larger and more hierarchical non-profit organisations having fewer women leaders (Nozawa, 2010). Furthermore, women leaders in the non-profit sector encounter similar discrimination and barriers as women leaders in the for-profit sector contributing to women’s underrepresentation in leadership roles (Gibelman, 2000).

1.3 OBJECTIVES OF THE RESEARCH

The overall aim of the present research is to contribute to an explanation for women's underrepresentation in leadership roles. Specifically, the objectives of the present research are: (1) to examine whether women and men differ in their general leadership aspirations; and (2) to examine whether women and men differ in their preferences for certain leadership roles and whether any difference can be explained by gender differences in goal congruity.

How does the examination of leadership aspirations explain women's underrepresentation in leadership roles?

Building on social role theory (Eagly, 1987), theories such as the role congruity theory of prejudice towards women leaders (Eagly & Karau, 2002) and Heilman's lack of fit model (Heilman, 1983; 2001) emphasise that women and men are perceived differently in society. Specifically, these theories posit that women's characteristics and attributes are perceived as incongruent with the requirements of leadership roles resulting in negative self- and other-evaluations for women candidates and leaders that can lead to negative consequences such as prejudice and discrimination (Eagly & Karau, 2002). Furthermore, it is evident that when traditional gender role beliefs are internalised as a personal self-standard, women are motivated to self-regulate their beliefs and behaviours to remain congruent with their gender role and avoid such negative consequences (Diekmann & Eagly, 2008; Wood & Eagly, 2009). Thus, in order to avoid negative evaluations and subsequent negative consequences, women candidates and leaders often self-limit their beliefs and behaviours, such as having lower leadership aspirations (Dickerson & Taylor, 2000; Heilman, 1983; Heilman & Parks-Stamm, 2007). Consequently such self-

limiting beliefs can have a detrimental effect on women's pursuit of leadership, further contributing to women's underrepresentation in leadership roles (Eagly & Karau, 2002; Heilman, 1983, 2001).

Despite the scope and diversity of research examining women's underrepresentation in leadership, few studies (e.g., Singer, 1989) examine whether women, compared to men, actually aspire to leadership. Aspiration research (e.g., Tharenou & Terry, 1998) suggests that aspirations serve as an influential force to advance and progress to senior levels, particularly in the face of challenges and changes (e.g., Hede & Ralston, 1993). Moreover, previous research has found that adolescence and early adulthood is an important phase in career development as this is a period in young people's lives when aspirations for future careers often predict future career attainment (e.g., Schoon & Polek, 2011). Given the challenges faced by women and the influence of aspirations, the underdeveloped nature of this research avenue is surprising (e.g., Boatwright et al., 2003; Singer, 1989). Thus, from the role congruity perspective, a main objective of the present research is to examine whether women and men differ in their leadership aspirations.

How does the examination of leadership role preferences explain women's underrepresentation in leadership roles?

Building on role congruity theory (Eagly & Karau, 2002), Diekmann and colleagues (Diekmann, Clark, Johnston, Brown, & Steinberg, 2011; Diekmann & Steinberg, 2013) posit that men and women's differing preferences for certain careers stem from a combination of (a) women's greater endorsement of communal goals and (b) the perception that certain careers are more suited to afford the fulfilment of these goals. The extension of this perspective to the leadership context

provides a motivational framework to examine men's and women's preferences for certain leadership roles. Specifically, the goal congruity theory suggests that women endorse communal goals more than men and thus seek careers or occupational roles that are more likely to afford the fulfilment of these goals. Therefore, it can be argued that by seeking communal goal congruity, women will be more underrepresented in careers or roles that are perceived as hindering the fulfilment of their greater endorsed communal goals. Given that previous research (e.g., Bosak & Sczesny, 2007; McClelland, 1985; Miner, 1978; Schuh et al., 2013) has shown a relationship between agency and the pursuit of leadership, the present research examines the influence of both agentic and communal goal congruity. Thus, from goal congruity perspective, a main objective of the present research is to examine whether men and women differ in their leadership role preferences by examining (a) gender differences in agentic and communal goal endorsement and (b) differences in goal affordance stereotypes of certain leadership roles.

Furthermore, the present research conceptualises leadership within the framework of hierarchy orientation, providing a broad perspective of leadership that differentiates between different types of leadership roles. Specifically, leadership roles can be either hierarchy enhancing (HE) roles that serve the interests of the elite and powerful or hierarchy attenuating (HA) roles that serve the interests of the oppressed (Pratto, Stallworth, Sidanius, & Siers, 1997). To this end, the research proposes a goal congruity perspective on gender differences in preferences for leadership roles that (a) extends Diekmann and colleagues' (2011) goal congruity perspective on careers to the context of leadership; and (b) distinguishes leadership roles into hierarchy-enhancing versus hierarchy-attenuating roles based on the hierarchy orientation framework (Pratto et al., 1997). Thus, in doing so, the study

provides a new explanation for women’s underrepresentation in certain leadership roles by developing novel and testable hypotheses about preference of leadership roles and underlying psychological mechanisms between men and women.

Table 1.1

Definitions of key concepts

Term	Definition
Leadership Aspirations	“An individual’s desire and intention to move into a leadership position in an organisation” (Litzky & Greenhaus, 2007, p.639).
Hierarchy Enhancing (HE) Leadership roles	Leadership role which serves the interest of the privileged and elite (adapted for context of leadership from Pratto, Stallworth, Sidanius, & Siers, 1997)
Hierarchy Attenuating (HA) Leadership roles	Leadership which serves and helps the oppressed and those with low power (adapted for context of leadership from Pratto et al., 1997)
Communal Goals	Goals that “focus on maintaining interpersonal relationships and benefiting others” (Diekman & Eagly, 2008, p.3).
Agentic Goals	Goals that “focus on mastering the environment and promoting oneself” (adapted from Diekman & Eagly, 2008, p. 3).
Goal Affordance Stereotypes	Beliefs or perceptions about what activities or roles will help or hinder fulfilment of valued goals (Diekman et al., 2011, p. 4)
Gender Role Self-Concept	Internalisation of an individual’s beliefs about their gender role into their self-concept (Evans & Diekman, 2009; Wood & Eagly, 2009).
Gender Norms	Consensual and shared beliefs about the ideal attributes of men and women (Cialdini & Trost, 1998).

1.4 OVERVIEW OF THE STUDIES AND RESEARCH HYPOTHESES

Building on the role congruity (Eagly & Karau, 2002) and goal congruity perspectives (Diekmann & Steinberg, 2013), the present research consists of four studies that examine: (1) whether men and women differ in their leadership aspirations, and (2) whether men and women differ in their leadership role preferences and to examine the underlying psychological processes for their preferences. The four studies sampled undergraduate business students in an Irish university. Study 1 examines gender differences in leadership aspirations and leadership role preferences. Specifically, it aims to provide initial evidence for a goal congruity perspective of leadership role preferences by proposing that gender differences in leadership role preferences will be mediated by goal endorsement. Study 2 replicates and extends Study 1, by examining gender beliefs as an antecedent of goal endorsement. Following this, Study 3 examines whether goal affordance stereotypes differ for HA and HE leadership roles. Finally, Study 4 provides causal evidence that the activation of goals influences leadership role preferences. Together, the four studies support the role congruity perspective of leadership aspirations and the goal congruity perspective in the context of leadership. An overview of the hypotheses for each study is presented in Table 1.2.

Table 1.2*Overview of the hypotheses for Studies 1 – 4*

Hypothesis	Study
1. Men and women will differ in their leadership aspirations, with women reporting lower levels of leadership aspirations than men.	1, 2
2a. Men and women will differ in leadership role preferences with women, more than men, showing greater preference for HA (vs. HE) leadership roles.	1, 2
2b. Men and women will differ in their goal endorsement with women, more than men, reporting greater endorsement of communal goals and men, more than women, reporting greater endorsement of agentic goals.	1, 2
2c. Goal endorsement will mediate the relationship between gender and HA (vs. HE) leadership role preference.	1, 2
3a. Men and women will differ in gender role self-concept with women rating themselves as more communal and less agentic than men.	2
3b. Men and women will differ in gender norms with women perceiving norms for their gender as more communal and less agentic than men.	2
3c. Goal endorsement will mediate the relationship between gender beliefs and HA (vs. HE) leadership role preference.	2
4. HA leadership roles and HE leadership roles will differ in their goal affordance stereotypes, with HA leadership roles perceived as more likely to help fulfilment of communal goals than HE leadership roles and HE leadership roles as more likely to help fulfilment of agentic goals than HA leadership roles.	3
5. Activated communal goals will increase HA leadership role preference.	4
6. Activated agentic goals will decrease HA leadership role preference.	4

1.5 CONTRIBUTIONS OF THE RESEARCH

This research contributes significantly to the leadership literature in three main ways. First, it empirically examines men’s and women’s leadership aspirations within a role congruity framework. Second, it conceptualises leadership roles as HE

or HA. Third, it extends Diekmann and colleagues' (2011) goal congruity perspective in the new domain of leadership. In doing so, the study presents a novel perspective of leadership that provides a new explanation for women's underrepresentation in certain leadership roles. Thus, by examining whether women, compared to men actually aspire to leadership and whether women and men differ in their preferences for leadership roles, the research advances the existing literature examining women's underrepresentation in leadership roles.

1.5.1 Contributions of the research to leadership aspirations literature

Regarding leadership aspirations, the present research makes two main contributions. First, despite the vast amount of leadership literature and the nature of aspirations, research examining general leadership aspirations is very limited (e.g., Bloatwright et al., 2003; Singer, 1989, 1991). Moreover, few studies examine whether women, compared to men, actually aspire to lead (e.g., Singer, 1989). Thus, the present research addresses this gap and further contributes to the leadership aspiration literature by examining men and women's level of leadership aspirations within the framework of the role congruity theory.

Second, the present research makes an empirical contribution to the leadership aspiration literature by adapting management aspirations scales (e.g., Tharenou, 2001; Van Vianen, 1999) to provide a multi-item measure for leadership aspirations. Previous research has used single-item measures to examine gender differences in senior management or leadership aspirations (e.g., Powell & Butterfield, 1981, 2003; Singer, 1989, 1991). However, these measures have a number of limitations that can influence the interpretability of findings. Rather than focus purely on general leadership aspirations, related multi-item aspiration

measures (e.g. career aspiration scale; Gray & O'Brien, 2007) focus on a mixture of aspirations to advance, aspirations to manage others, and aspirations to pursue education throughout a career. Thus, the present research seeks to address this gap by using a multi-item leadership aspiration measure that captures the present study's definition of general leadership aspirations (for definition of key concepts, see Table 1.1).

1.5.2 Contributions of the research to the leadership role preference literature

Regarding leadership role preferences, the research makes two main contributions to the gender and leadership literatures. First, the research conceptualises leadership roles within the framework of hierarchy orientation and in doing so, presents leadership roles as being HE or HA. Specifically, hierarchy leadership role preferences stem from hierarchy job choice research that is based on social dominance theory (Pratto et al., 1997). Social dominance theory posits that society is group-based. Different social roles reflect different orientations toward intergroup relations, with one set of roles being more egalitarian orientated and the other being more hierarchical (Sidanius & Pratto, 2011). The present research adapts these different orientations within the leadership context allowing for a more comprehensive and inclusive perspective of leadership. No previous research has framed leadership in relation to hierarchy orientation (i.e., according to the people leaders serve and/or the egalitarian ethos or aims of the organisation in which leadership takes place). Thus, the present research contributes to the leadership literature by providing a new conceptualisation of leadership.

Second, by extending the goal congruity perspective to the leadership context, the research provides a new explanation for women's underrepresentation in

certain leadership roles. Previous research (e.g., Diekmann et al., 2011) that examines the goal congruity perspective has examined men's and women's interest in careers almost exclusively in the Science Technology Engineering Mathematical (STEM) career domain. Thus, by extending this research into the leadership context, this study examines the importance of goal endorsement in predicting gender differences in leadership role preferences. Furthermore, it examines whether different leadership roles can be perceived to help or hinder the fulfilment of certain goals. Although vocational research (e.g., Brown, 2002; Marini, Fan, Finley, & Beutel, 1996; Morgan, Isaac, & Sansone, 2001) has emphasised the importance of choosing careers that can afford one's endorsed goals or values, few studies (e.g., Diekmann et al., 2010; Weisgram et al., 2011) have empirically examined goal affordance stereotypes, and none have examined the goal affordance stereotypes of different leadership roles. Taken together, the research both presents leadership in a novel manner and extends the goal congruity perspective into the context of leadership, thus providing a new explanation for women's underrepresentation in certain leadership roles.

1.6 STRUCTURE OF THE THESIS

This thesis consists of nine chapters and is structured as follows: Chapter Two provides a review of the social role theory, role congruity theory and leadership aspirations literature, which will lead to the hypothesis about gender differences in leadership aspirations. Chapter Three provides a review of the literature on goal congruity and the hierarchy leadership role preference construct, which will lead to the hypotheses about gender differences in leadership role preferences and the underlying psychological processes. Chapter Four outlines the research

methodology, which includes an overview of the philosophical foundations, the research design, the psychometric properties of the measures and the data preparation and analysis strategy. Chapters Five to Eight provide a brief introduction, a description of the method and results, and a discussion of the findings for Studies 1-4. Finally Chapter Nine consists of an overall discussion of the findings and outlines the theoretical contributions and practical implications of the research. This chapter concludes with an overview of the limitations and recommendations for future research.

1.7 CONCLUSION

In summary, there are two main objectives of the present research. The first objective is to examine whether men and women differ in their leadership aspirations within the role congruity framework. The second objective is to examine whether men and women differ in their leadership role preferences and to examine the underlying psychological processes for their preferences from the goal congruity perspective. The present research contributes significantly to the leadership literature by: (a) empirically examining men's and women's leadership aspirations within a role congruity framework; (b) conceptualising leadership roles as capable of being HE or HA; and (c) extending on Diekmann and colleagues' (2011) goal congruity perspective to the context of leadership. Taken together, the research presents leadership in a novel manner and by extending the goal congruity perspective into the context of leadership provides a novel explanation for women's underrepresentation in certain leadership roles. Thus, the present research advances the existing literature examining women's underrepresentation in leadership by: (1) examining whether women, compared to men, actually aspire to leadership; (2)

examining whether women and men differ in their preferences for leadership roles and examining goal congruity as the underlying psychological process for these preferences. In the next two chapters, the literature relating to the two objectives is reviewed.

CHAPTER TWO

ROLE CONGRUITY PERSPECTIVE ON LEADERSHIP ASPIRATIONS

2.1 INTRODUCTION

This chapter provides an overview of the theoretical framework and literature which addresses the research question of whether men and women differ in their leadership aspirations. The chapter begins with an overview of the social role theory (Eagly, 1987), which provides an explanation for why men and women differ in certain characteristics and behaviours. Next, the role congruity theory (Eagly & Karau, 2002) is examined, with particular emphasis on the impact of expectations on women's leadership-related beliefs and behaviours. Then, leadership aspirations are defined and examined in relation to the broader literature of career aspirations and senior management aspirations. Finally, from a role congruity perspective, the literature relating to men and women differing in leadership aspirations is discussed.

2.2. WHY DO MEN AND WOMEN DIFFER: THE SOCIAL ROLE THEORY

Over the past century, the study of the similarities and differences between women and men has received growing attention in the field of psychology (Biernat & Deaux, 2012). As more research is conducted around this topic, different theoretical perspectives seek to explain why and how men and women differ in some aspects of their social behaviour, personality and ability (Eagly, Beall, & Sternberg, 2004; Eagly & Wood, 1999). These different perspectives mainly fall into two approaches; essentialist/biological or social constructionist/cultural. Essentialist approaches such as biological and evolutionary theories “emphasize the basic, stable

sex differences that arise from causes that are inherent in the human species such as biological-based psychological dispositions” (Wood & Eagly, 2002, p.700). Social constructionist approaches such as cultural theories “emphasize the variation in sex differences across social contexts that emerges from the meanings of male and female within particular contexts” (Wood & Eagly, 2002, p.700). In the past, these approaches have often been positioned as oppositional. Essentialist perspectives mainly argue that differences between men and women are a result of evolution or biology. In contrast, social constructionist perspectives mainly argue that differences between men and women are a result of one’s culture or society (Eagly & Wood, 2013; Rudman & Glick, 2008). In recent years, more social structural and interactionist approaches have emerged such as the social role theory (Eagly, 1987; Eagly, Wood, & Diekmann, 2000; Wood & Eagly, 2002, 2012) that emphasise the importance of considering both biological and cultural explanations for similarities and differences between women and men (see Figure 2.1 for the biosocial constructionist model of social role theory; Wood & Eagly., 2012).

For the present research, the social role theory (Eagly, 1987; Eagly et al., 2000) was chosen as the overarching theoretical framework for explaining the differences between women and men. Specifically, the social role theory encompasses biological and cultural perspectives into a comprehensive and cohesive explanation of gender differences (Eagly & Wood, 2013; Rudman & Glick, 2008). Specifically, it incorporates these perspectives by focusing on the division of labour as the underlying cause for gender differentiated behaviour. The division of labour derives from the interaction between socio-cultural forces and the inherent physical differences of the sexes. Consequently through this focus, social role theory has the flexibility and capacity to address how modern conditions and changes in society

impact gender-differentiated social behaviours, like women's changing role in society from homemaker to worker (e.g., Giele, 1978; Harrison, 1997). Moreover, by providing a broad and unified explanation for gender differences, it is unsurprising that the social role theory also forms the theoretical foundation for other theories, such as the role congruity theory (Eagly & Karau, 2002) and the goal congruity perspective (Diekmann et al., 2011). Therefore, the social role theory is a promising overarching theoretical framework as it gives a comprehensive perspective on gender differences that aligns with the present study's focus on the influence of gender role beliefs on gender-differentiated beliefs and behaviours.

2.2.1 Division of labour

According to the social role theory (Eagly, 1987) differences in men and women's behaviour result from a number of interconnected causes ranging from the proximal to the ultimate (Eagly, Wood, & Johannesen-Schmidt, 2004). In particular, the distribution of men and women into different social roles within societies (Eagly, 1987; Eagly, Wood, & Johannesen-Schmidt, 2004), referred to as the division of labour, is emphasised as the basic underlying cause for gender-differentiated behaviour (Eagly, Wood, & Diekmann, 2000). This division of labour results from the interaction between the cultural, socioeconomic, and ecological demands of one's society and the inherent physical differences of men and women, specifically women's reproductive activities and men's greater size and strength (Eagly, 1987; Eagly & Wood, 1999; Wood & Eagly, 2012). It is due to these physical differences that certain activities within a society are accomplished more efficiently by one sex than the other which can lead to intrinsic beliefs about the traits of women and men (Wood & Eagly, 2002). For example, a consistent finding across the majority of

societies is that mothers are the primary caretakers for their infants (Ivey, 2000; Ridgeway & Correll, 2004). Consequently, this finding can contribute to the assumption that because women care for children, they are and ought to be warm, kind and caring (e.g., Cuddy, Fiske, & Glicke, 2004; Williams & Best, 1990).

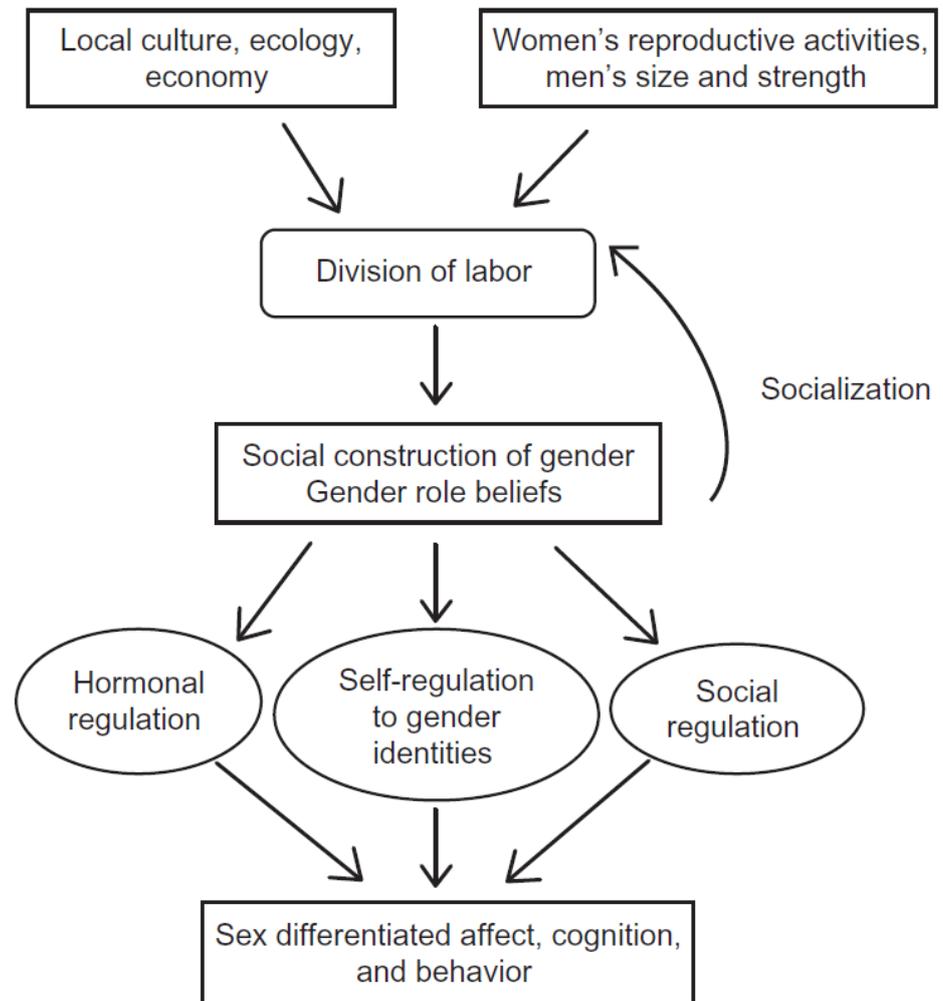


Figure 2.1. Biosocial constructionist model of social role theory (Wood & Eagly, 2012).

These beliefs that result from the division of labour set into motion the promotion of socialisation and gender role beliefs that further support and maintain a society's current division of labour. Furthermore, such beliefs also continue through social, psychological, and biological processes, to cause gender-differentiated

behaviour (see Figure 2.1; Wood & Eagly, 2012). These more proximal causes for gender-differentiated behaviour are framed by gender roles which can be defined as “shared expectations that apply to individuals on the basis of their socially identified sex” (Eagly, Wood, & Diekmann, 2000, p.127). According to the biosocial constructionist model of social role theory developed by Wood and Eagly (see Figure 2.1; Wood & Eagly, 2010, 2012), gender roles influence men’s and women’s behaviour through a combination of three proximal causes: hormonal changes; gender identity; and stereotypical expectations (Wood & Eagly, 2010).

2.2.2 Gender Roles

Specifically addressing the socio-cultural aspects of the biosocial constructionist model, gender roles influence women’s and men’s behaviour through a combination of one’s gender identity or self-concept and others’ stereotypical expectations (Deaux & LaFrance, 1998; Wood, Christensen, Hebl, & Rothgerber, 1997; Wood & Eagly, 2010). Gender roles are diffuse roles that can refer to descriptive and prescriptive/ injunctive expectations associated with men and women (Eagly & Karau, 2002). Descriptive expectations characterise the qualities that differentiate men from women, that is, what each gender is like (Cialdini & Trost, 1998). These descriptive stereotypes can therefore act as a guide for individuals to behave in a gender-typical way in any given situation, especially if the situation is ambiguous (Eagly, Wood, & Johannesen-Schmidt, 2004). In contrast, prescriptive or injunctive expectations specify the ideal behaviours for each gender, that is, what each gender ought to be like (Cialdini & Trost, 1998). Prescriptive expectations can therefore act as a motivator for individuals to behave in a gender-typical way to gain social approval (e.g., Glick & Fiske, 2001), increase their own self-worth (e.g.,

Wood et al., 1997) and avoid social sanctions (e.g., Moss-Racusin & Rudman, 2010).

2.2.2.1 How gender roles shape beliefs and behaviour

Gender roles (descriptive and prescriptive) can influence men's and women's behaviour through influencing their self-concept. Specifically, women and men internalise their beliefs about their gender roles and norms and use such beliefs as a personal self-standard to judge themselves (Bem, 1974; Deaux & LaFrance, 1998; Hannover, 2000; Wood & Eagly, 2009, Wood & Eagly, 2010; Wood, Eagly & Diekmann, 2000). Gender identity or gender role self-concept can act as a motivator for individuals to behave in a gender-typical way through self-regulation, in that, individuals regulate their behaviour to match their descriptive or/and prescriptive self-standards (Carver & Scheier, 2008; Wood & Eagly, 2009; Wood & Eagly, 2010; Wood et al., 1997). Behaviour that is evaluated as congruent or matching this self-standard typically results in positive consequences such as positive feelings and increased self-esteem, whereas deviation results in negative consequences such as negative feelings and decreased self-esteem (Diekmann & Eagly, 2008; Witt & Wood, 2010; Wood & Eagly, 2009). Preliminary evidence of this was demonstrated in a study by Wood and colleagues (Wood et al., 1997) that examined the psychological consequences of men and women regulating their behaviour in accordance with gender-typical standards. In this study, after participants' gender identities were assessed, they were asked to imagine acting in a typically masculine or feminine manner. It was found that participants with a strong gender-typical identity, in the gender-typical condition, yielded more positive feelings and brought their self-evaluations closer to their ought and ideal self-standards. However, although gender

identity or gender role self-concept has great influence on behaviour, it is important to note that people differ in the extent to which they incorporate gender roles into their self-concept depending on many biological, social and cognitive factors such as childhood socialisation and biological influences (e.g., Hines, 2009; Santrock, 1994; Witt, 1997). It is this variance across individuals and the intersection of an individual's gender identity with other identities, such as race or ethnicity that contributes to individual differences of men and women within their own sex (Wood & Eagly, 2012).

Gender roles (descriptive and prescriptive) can also influence men's and women's behaviour through other's stereotypical expectations. Research on gender stereotyping has consistently found that people believe that women and men differ in their typical characteristics and behaviour and that there is a consensus regarding stereotype content (e.g., Cejka & Eagly, 1999; Diekmann & Eagly, 2000; Kite, Deaux, & Haines, 2007; Newport 2001; Spence & Buckner, 2000; Spence & Helmreich, 1978). Specifically, beliefs about men's and women's characteristics can be easily grouped into two dimensions; agency and communion (Bakan, 1966; Eagly, 1987). Communal characteristics, that are more associated with women, are related to concern for others (Fiske, Cuddy, Glick, & Xu, 2002) and involves affection, kindness, and interpersonal sensitivity (Eagly & Diekmann, 2000). Agentic characteristics, that are more associated with men, are related to social status and power (Conway, Pizzamiglio & Mount, 1996) and involve confidence, control, and assertiveness (Eagly & Diekmann 2000). Previous studies (e.g., Eagly & Diekmann, 2000; Eagly & Karau, 2002; Glick & Fiske, 1996; Newport, 2001; Williams & Best, 1990b; Wood et al., 1997) consistently demonstrate that, in general, people desire and approve of communal qualities in women and agentic qualities in men (Eagly,

Wood, & Johannsen-Schmidt, 2004; Prentice & Carranza, 2002). Moreover, these beliefs seem to be broadly shared by men and women across societies and cultures (Fiske et al., 2002; Lueptow, Garowich-Szabo, & Lueptow, 2001; Prentice & Carranza, 2002; Williams & Best, 1982, 1990a, 1990b). Gender role beliefs therefore influence women and men to behave in a gender-typical way through a combination of social rewards and sanctions that result from conformity or deviation to self- and other-expectations (Eagly, 1987; Geis, 1993; Wood & Eagly, 2012). Violation of gender role expectations (descriptive and prescriptive) often results in backlash, namely social and economic sanctions of deviant members (Rudman, 1998) and other negative consequences, such as negative bias and prejudice (Eagly & Karau, 2002). Indeed, numerous studies have shown that women in the workplace, particularly in male-dominated domains encounter these negative consequences when they behave in gender atypical or an agentic manner (e.g., Eagly, Makhijani, & Klonsky, 1992; Heilman, Wallen, Fuchs & Tamkins, 2004; Lyness & Heilman, 2006; Rudman, Moss-Racusin, Glick, & Phelan, 2012).

From where do these widely-shared and influential beliefs and expectations about male agency and female communion stem? Gender role beliefs and expectations about the actual and ideal characteristics of men and women emerge because people presume a connection between each gender's personal characteristics and its typical role in a society (Eagly et al., 2004) through a cognitive process called correspondent inference (Gilbert, 1998; Gilbert & Malone, 1995). The process of correspondent inference leads social perceivers to conclude that women and men possess different attributes, reflective of the activities that they typically perform in their society. Namely, the assumption is made that individuals' behaviours tend to reflect their inner disposition (Eagly & Steffen, 1984) and commit the fundamental

attribution error of assuming that individuals are what they do (Ross 1977; Eagly & Wood, 2010). From this correspondent inference, characteristics are generalised from the individual to entire groups of people like men and women (Prentice & Miller, 2006). For example, women's greater occupancy of domestic or female roles (e.g., teacher or nurse), leads perceivers to infer that women are particularly communal, whereas men's greater occupancy of provider or male-orientated roles leads perceivers to infer that men are particularly agentic (Cejka & Eagly, 1999). In their classic study, Eagly and Steffan (1984) conducted a series of experiments examining the origins of these beliefs. They found that beliefs about male agency and female communion did not stem from women occupying low status or authority roles but rather from women's greater occupancy of domestic roles, like being a homemaker and from men's greater occupancy of occupational roles, like being an employee. These findings are further supported by international and national statistics (CSO, 2011; ILO, 2012), which has found that men are mainly concentrated in occupations that value agentic characteristics, such as manufacturing and construction while women are mainly concentrated in occupations that value communal characteristics, such as education and health/social work. Therefore, due to correspondent inference, beliefs about the characteristics of men and women are shaped and shared, forming gender role beliefs that both influence men and women by fostering gender-differentiated gender-typical behaviour (Eagly, Wood, & Diekmann, 2000).

In summary, the social role theory posits that gender-differentiated behaviour emerges as a result of a division of labour between women and men. This division occurs due to the interaction between women's and men's inherent physical differences and their society's demands, resulting in women and men occupying

different social roles. From this occupancy of different roles, assumptions are made about men's and women's traits which become shared and form gender role beliefs. Gender role beliefs further foster gender-differentiated behaviour through pressuring women and men to conform to self- and other-expectations to avoid negative social consequences. Extending social role theory, role congruity theory of prejudice towards women leaders (Eagly & Karau, 2002) specifically examines the impact of violating these expectations and the negative consequences for women leaders. In the following section, role congruity theory and related lack of fit model (Heilman, 1983; 2001) shall be discussed, with particular emphasis on the impact of expectations on women's leadership-related beliefs and behaviours

2.3 ROLE CONGRUITY THEORY OF PREJUDICE TOWARDS WOMEN LEADERS

For the past half century, a number of efforts have been made to explain women's underrepresentation in leadership roles. These range from "pipeline problem" or "deficit" explanations that emphasise the lack of qualified women in the business world, to biologically and evolutionary explanations that suggest women are not predisposed to leadership (e.g., Browne, 2006; Buss, 1995; Feuer, 1988; Forbes, Piercy, & Hayes, 1988; Pinker 2002). In recent years, researchers have focused on explanations that incorporate both social/cultural and biological explanations to develop a more comprehensive understanding of the phenomenon. Building on social role theory (Eagly, 1987), theories such as the role congruity theory of prejudice towards women leaders (Eagly & Karau, 2002), incorporate social role theory's interactionist/social structural perspective (Wood & Eagly, 2013). In doing so, the role congruity theory has the capacity and flexibility to

provide a strong explanation for women's underrepresentation in leadership. Specifically, the role congruity theory focuses on the content and influence of gender role beliefs and stereotypes on men's and women's work- and leadership-related beliefs and behaviours. According to the role congruity theory (Eagly & Karau, 2002), women's underrepresentation in leadership results from prejudice towards women leaders. This prejudice and other negative consequences occur because women leaders are perceived as violating their communal female gender role in the pursuit of leadership.

Related to the role congruity theory, Heilman's (1983) lack of fit model examines gender bias in work settings, by suggesting that performance expectations of success or failure are determined by the fit between the perception of an individual's attributes and the perception of the job's requirements (Heilman, 1983, 2001). Perceptions of a good fit result in expectations of success, while perceptions of a poor fit result in expectations of failure that can then cause positive or negative self- and other-evaluations (Heilman, 1983, 2001). An important feature of both the role congruity theory (Eagly & Karau, 2002) and the lack of fit model (Heilman 1983, 2001) is that this perceived incongruence or lack of fit is not considered as stable but can vary depending on a number of factors. For example, the perceived incongruence between women and leadership can depend on the perceived masculinity of the leadership role (e.g., Schein, 2001), motherhood status (e.g., Heilman & Okimoto, 2008) or beliefs about women's increase in agency (Diekmann & Eagly, 2000; Twenge, 1997). Indeed, both the role congruity theory (Eagly & Karau, 2002) and the lack of fit model (Heilman, 1983) suggest that perceived incongruence or lack of fit and its consequences are malleable, with greater perceived incongruity increasing the likelihood that women leaders shall face

prejudice. Thus, unlike more essentialist explanations, the role congruity theory and lack of fit model have the flexibility and capability of explaining variations in gender-differentiated leadership-related beliefs and behaviour across different contexts and situations.

2.3.1 Incongruity of female gender role and leadership role

According to the social role theory, gender role beliefs shape women's and men's behaviour through rewarding and sanctioning behaviour. This rewarding or sanctioning of behaviour is in accordance with gender-typical descriptive and prescriptive expectations (Eagly, 1987; Eagly, Diekmann & Wood, 2000), that is female-communal and male-agentic expectations (Burgess & Borgida, 1999; Heilman, 2001; Wiggins, 1992). Such stereotypical expectations of what women are like (descriptive) and what women should be like (prescriptive) become truly problematic for women when an occupational role, such as leadership is incongruent with these expectations, often resulting in prejudice (Eagly & Karau, 2002; Heilman, 2001; Lyness & Heilman, 2006). In the vast domain of leadership research, numerous studies from various theoretical perspectives (e.g., Atwater, Brett, Waldan, DiMare & Hayden, 2004; DeRue & Ashford, 2010; Eagly & Karau, 2002; Heilman, Block, Martell, & Simons, 1989; Kark & Van Dijk, 2007; Lord & Maher, 1991; Powell, Butterfield, & Parent, 2002; Schein, 2001) have consistently found that leadership is mostly associated with masculine or agentic characteristics and that these agentic characteristics are often required in order to be perceived as a successful leader (e.g., Fullager, Sumer, Sverke & Slicke, 2003; Martell, Parker, Emrich, & Crawford, 1998; Powell & Butterfield, 1979; Schein, 1973, 1975, 2001). Moreover, in Schein's pioneering "Think Manager-Think Male" research (Schein,

1973, 1975, 2001), it was found that people held different beliefs about men, women and leaders. Specifically, characteristics ascribed to men corresponded to characteristics ascribed to a successful middle manager more so than characteristics ascribed to women (Schein, 1973, 1975). Thus, successful leaders are often perceived as requiring agentic characteristics, which are more congruent or aligned with the agentic male gender role than the communal female gender role.

Building on social role theory, the role congruity theory (Eagly & Karau, 2002) proposes that the perceived incongruence between the communal female gender role and the agentic leadership role, results in prejudice towards women leaders. For example, Eagly and colleagues (1992) conducted a meta-analysis of 61 experiments which examined participants' evaluations of men and women leaders. In these experiments the attributes of leaders were held constant, except for the gender of the leader which varied (Eagly et al., 1992). The analysis found that women leaders were devalued more than their male counterparts, especially in masculine dominated leadership roles (Eagly & Karau 2002). In addition, research by Heilman and colleagues (Heilman, Block & Martell, 1995; Heilman et al., 1989) found that women managers were perceived as more agentic and less communal than women in general. However, despite being depicted as managers, women managers were still perceived as more different from successful middle managers than men. Thus, such perceptions about gender roles, their "spill over" into occupational settings (Gutek & Morasch, 1982) and the incongruence between female gender role and leadership role can often have an impact on women's evaluation as candidates for leadership roles and, once women become leaders, their actual leadership behaviour (Eagly & Karau, 2002; Heilman, 2001; Heilman & Eagly, 2008; Rudman & Glick, 2001).

Furthermore, expounding on role congruity theory, Diekmann and Eagly (2008) suggest that such incongruence can also influence the motivations of men and women. More specifically, role congruity theory (Eagly & Diekmann, 2008; Evans & Diekmann, 2009) suggests that men and women internalise their gender role beliefs and thus, are motivated to achieve role congruity, that is, to align their behaviour to the demands of their gender roles in order to avoid negative consequences and be intrinsically rewarded (e.g., Witt & Wood, 2010; Wood et al., 1997). Thus, women are motivated to avoid the negative consequences of perceived incongruence between their female gender role and the leadership role. Related to this, Heilman's lack of fit model (1983; Heilman & Parks-Stamm, 2007) suggests that self-perceptions of poor fit negatively impact individual's self-evaluations, possibly resulting in self-limiting behaviour, which is particularly relevant for the present research. Thus, complementing the role congruity theory (Eagly & Diekmann, 2008; Eagly & Karau, 2002), the present research shall also draw on the lack of fit model and literature (Heilman 1983; Heilman & Parks-Stamm, 2007), especially in discussing the influence of self-perceived incongruence on women's leadership-related beliefs and behaviours.

2.3.1.1 The consequences of incongruence: Two types of prejudice

According to role congruity theory, there are two types of prejudice that correspond with women's violation of the descriptive and prescriptive aspects of their gender roles (Eagly & Karau, 2002). The descriptive type of prejudice results from the presumed incongruence between female gender role and masculine leadership role, that is, women are communal and leaders are agentic. Thus, female applicants for leadership positions are, therefore, more at risk of being less

favourably evaluated than their male counterparts as they are perceived as lacking the required agentic characteristics and less likely to succeed in such roles (Eagly & Karau, 2002; Eagly et al., 1992; Foschi, 2000; Heilman, 1983; Heilman & Parks-Stamm, 2007). Indeed, studies on employee selection and promotion, have consistently demonstrated that in masculine-typed domains, male applicants are more likely to be hired and perceived to succeed at tasks than equally qualified female applicants (Alimo-Metcalfe, 1994; Davison & Burke, 2000; Heilman & Haynes, 2005). For example, Lyness and Heilman (2006) studied performance evaluations and promotions for men and women in the roles of line and staff managers. They found that women in more masculine-typed line manager positions received lower performance ratings than women in staff manager positions or men in line or staff manager positions. Furthermore, they found that women who were actually promoted had higher performance ratings than their male counterparts suggesting a higher and stricter standard of promotion for women (Lyness & Heilman, 2006). Previous research examining this shifting standards model (e.g. Biernat & Fuegen, 2001; Biernat & Kobrynowicz, 1997) suggest that this stricter standard results from gender stereotypes on task competence leading to different standards being set for men and for women, with women being set a lower minimum-competency standard but a higher ability standard (Biernat & Fuegen, 2001; Biernat & Kobrynowicz, 1997). For instance, in a series of hiring simulations, Biernat and Fuegen (2001) found that although women were more likely than men to make the short list, they were less likely to be hired for the job. Taken together, these findings suggest that this type of prejudice and the resulting negative selection and promotion expectations may contribute further to women's underrepresentation

through gender bias and discrimination in traditional male domains (Eagly & Karau, 2002; Heilman, 2001; Heilman & Parks-Stamm, 2007).

As mentioned previously, the perceived incongruence or lack of fit between women and leaders is not stable, thus it would seem reasonable that women who aim to advance to leadership roles could narrow the incongruence or lack of fit between their perceived characteristics and the requirements of leadership by adopting more agentic characteristics and behaviour. For example, Heilman and colleagues (Heilman et al., 1995) found that when women managers were depicted as successful, they were perceived to be as agentic as their male counterparts. However, despite being ascribed the same level of agency, the same women were also regarded as more hostile and less rational than their male counterparts. This demonstrates the second type of prejudice, that results from women's violation of the prescriptive aspect of their female gender role, in other words, when women leaders violate their communal female gender roles. Such violations result in negative consequences such as being less liked and less influential (e.g., Butler & Geis, 1990), being evaluated less favourably as a leader (e.g., Eagly et al., 1992), and being perceived as less qualified than equivalent job applicants (e.g., Davison & Burke, 2000). Furthermore, it results in agentic women leaders being punished for self-promotion (e.g., Rudman, 1998), for assertively negotiating for themselves rather than others (e.g., Amanatullah & Tinsely, 2012) and for being highly successful in traditional male domains (e.g., Heilman et al., 2004). Additionally, women not only face negative consequences for acting in a gender atypical way, but also for not acting sufficiently in a gender-typical way to counter the implied communality deficit of being a woman in a traditional male domain (Heilman & Okimoto, 2007). Various studies have demonstrated that women who do not behave in a sufficiently communal way

can be evaluated more negatively than their male counterparts for the same behaviour (e.g., Heilman & Chen, 2005; Heilman & Okimoto, 2007; Vinkenbergh, van Engen, Eagly, & Johannesen-Schmidt, 2011). Therefore, women leaders face a double bind or lose-lose situation (Eagly & Carli, 2007), in that, if they fulfil the requirements of their leadership role, women leaders violate their female gender role resulting in being perceived as competent but disliked. However, if women leaders comply with their female gender role, they fail to fulfil the requirements of their leadership role resulting in being perceived as incompetent but liked. Violation in either case results in negative evaluations that can negatively impact women's career progress (Eagly & Karau, 2002; Heilman & Parks-Stamm, 2007; Heilman et al., 2004; Lyness & Judiesch, 1999; Lyness & Thompson, 1997; Rudman & Glick, 2001; Rudman et al., 2012). Thus, women leaders face the difficult task of negotiating this double bind, possibly through balancing both agentic and communal behaviours (Eagly & Carli, 2007; Heilman & Okimoto, 2007; Johnson, Murphy, Zewdie & Reichard, 2008; O'Neill & O'Reilly, 2011; Vinkenburg et al., 2011).

2.3.1.2 The consequences of incongruence: the effect of self-evaluation on women's beliefs and behaviours.

Negotiating this double bind results in prejudice, discrimination and negative evaluations by others but can also result in negative self-evaluations that can affect one's beliefs and behaviour (Eagly & Diekmann, 2008; Eagly & Karau, 2002; Heilman, 1983, 2001). From the social role perspective (Eagly et al., 2000; Wood & Eagly, 2009), gender roles, derived from the division of labour, can influence men's and women's beliefs and behaviours. Specifically, gender role beliefs are internalised by men and women, forming a personal self-standard that, through self-

regulatory and expectancy confirmation processes, influences men's and women's beliefs and behaviours (Eagly et al., 2000; Geis, 1993). Thus, women and men incorporate descriptive and prescriptive expectations about their gender role into their self-concept, affecting how they perceive themselves and how they behave (Heilman, 1983; Wood & Eagly, 2009, 2010). Moreover, lack of fit (Heilman, 1983) and role congruity perspectives (Diekmann & Eagly, 2008) suggest that men's and women's behaviour might be influenced both by their own beliefs about the consequences of their behaviour and by the consequences of others' expectations or evaluations of their behaviour. Thus, these perspectives (Diekmann & Eagly, 2008; Evans & Diekmann, 2009; Heilman, 1983; Heilman & Parks-Stamm, 2007) argue that men and women are motivated to align or be congruent with their gender roles (Diekmann & Eagly, 2008; Evans & Diekmann, 2009) in order to avoid negative evaluations and consequences (Eagly & Karau, 2002; Heilman, 2001) and be intrinsically rewarded for conforming to their gender role expectations, further reinforcing internalised gender beliefs (Didonato & Berenbaum, 2001; Witt & Wood, 2010; Wood et al., 1997; Wood & Eagly, 2009).

Complementing the role congruity perspective, lack of fit model (Heilman, 1983; Heilman & Parks-Stamm, 2007) suggests that as a result of seeking congruence with their gender role and complying with self-and other-expectations, women shall engage in self-limiting beliefs and behaviours to order to lessen or avoid negative self- and other-evaluations (Dickerson & Taylor, 2000; Diekmann & Eagly, 2008; Eagly & Karau, 2002; Heilman, 1983). Thus, as a result of the perceived incongruence between women's communal gender role and the perceived agentic requirements of the leadership role (for review see Koenig et al., 2011), women shall negatively evaluate themselves as capable of leadership, possibly

leading to self-limiting beliefs and behaviours. These self-limiting beliefs and behaviours may include women undervaluing their work contribution (e.g., Haynes & Heilman, 2013) or lacking confidence in their ability to perform challenging roles affecting their beliefs about pursuing leadership (e.g., Davis, Spencer, & Steele, 2005; Dickerson & Taylor, 2000; Simon & Hoyt, 2012). Consequently, these self-limiting beliefs and behaviours could further hinder women's career progress (Bosak & Sczensy, 2007; Heilman, 1983; Heilman & Kram, 1978; Van Vianen & Fischer, 2000) by making women feel less attracted to leadership roles (e.g. Lips, 2000).

In Heilman's lack of fit model (Heilman, 1983), women's self-limiting behaviour is examined in terms of pre- and post-entry to work. The present research suggests that Heilman's (1983) pre- and post-entry categorisation of self-limiting behaviour corresponds with Eagly and Karau's (2002) two prejudice types. That is, different self-limiting beliefs and behaviours result from women's self-perceived violation of descriptive and prescriptive aspects of their gender role. Thus, Heilman's (1983) pre-entry self-limiting behaviour corresponds with a descriptive type of negative self-evaluation or prejudice (Eagly & Karau, 2002). Specifically, it is suggested that this descriptive type of negative self-evaluation results from women's presumed incongruence between their communal gender role and agentic leadership role. Indeed, previous research (e.g. Spence & Buckner, 2000) has shown that women typically perceive themselves as less agentic and more communal than men. Therefore, possible female applicants for leadership positions might perceive themselves as lacking the required agentic characteristics for leadership and as a consequence have less confidence in their abilities to perform male-typed tasks that contribute to leadership (e.g., Mayo & Christenfeld, 1999). Consequently, women's lower confidence in their abilities and suitability for leadership roles might

negatively impact their advancement as women self-limit themselves by seeking to avoid situations that would result in negative evaluations and consequences. (Dickerson & Taylor, 2000; Eagly & Karau, 2002; Heilman, 1983; Heilman & Parks-Stamm, 2007). For example, an experiment by Bosak and Sczesny (2007) examined men's and women's self-ascribed fit to leadership. Participants in the study were first asked to rate their perceived level of agency. Then participants viewed an advertisement for a leadership position and indicated their suitability for this position. It was found that women judged themselves as less suitable for the leadership role than men due to their lower self-ascribed agency. That is, women perceived their characteristics (low agency) as incongruent with the requirements of leadership roles (high agency), arguably resulting in self-limiting beliefs in their suitability for the leadership role. Thus, the present research suggests that as a result of women's self-perceived incongruence or lack of fit and the internalisation of the descriptive aspect of their gender role, women shall perceive themselves as less capable and less confident to pursue leadership roles. Consequently, women shall then self-limit themselves in order to avoid situations that evaluate their leadership abilities possibly leading women to self-select themselves out of leadership opportunities and promotions.

According to lack of fit model, women's self-limiting beliefs and behaviour also continue post-entry to work, that is, once women become leaders, they continue to self-limit their beliefs and behaviours. The present research suggests that Heilman's (1983) post-entry self-limiting behaviour corresponds with a prescriptive type of negative self-evaluation or prejudice (Eagly & Karau, 2002). This prescriptive type of negative self-evaluation results from women violating the prescriptive aspect of their internalised gender role beliefs in the pursuit of

leadership. Taken together with women's perceptions of the negative consequences that result from other's expectations, women candidates and women leaders shall self-limit or self-censor themselves in order to avoid these negative consequences. For example, women might inhibit behaviours that are critical for promotion to leadership or evaluation as leaders, such as self-advocacy (e.g. Battle & Heilman, 2006) or self-promotion (e.g., Moss-Racusin & Rudman, 2010). Moreover, women might also self-censor their own success by devaluing their contribution to work (e.g., Haynes & Heilman, 2013) or putting their success down to luck (e.g., Swim & Sanna, 1996) further hindering women's career progress (Eagly & Karau, 2002; Heilman, 1983, 2001). Thus, as a result of women's self-perceived incongruence and the internalisation of the prescriptive aspect of their gender role in combination with women's perceptions of other's expectations, it is possible that women shall self-limit or self-censor their beliefs and behaviours in order to avoid or lessen the negative consequences of violating their female gender role.

In summary, the role congruity theory and lack of fit model posits that women candidates and women leaders face prejudice and discrimination due to the perceived incongruence between the communal characteristics of the female gender role and the perceived agentic requirements of the leadership role. Moreover, drawing on role congruity and lack of fit theories, the present research suggests that women candidates and women leaders are motivated to align with their female gender role and avoid negative self- and other-evaluations and consequences by engaging in self-limiting beliefs and behaviours such as lower leadership aspirations.

2.4 LEADERSHIP ASPIRATIONS

Since ancient times to the present, leadership has been a topic of interest to philosophers, psychologists and researchers. Over the years, different theories and perspectives have emerged to explain why, where and how individuals become leaders, with explanations ranging from individuals being born leaders to leaders being shaped by their situation or environment (for review, see Friedrich, 2010). Despite the vast and diverse literature on leadership, limited research exists that examines an individual's motivational drive to advance toward leadership, in other words, their aspirations for leadership. In the following, the section will first briefly discuss related motivational research and its limitations for use in the present research. Then this section shall examine literature on career aspirations, in particular managerial aspirations, which will lead to the definition and conceptualisation of leadership aspirations as used in the present research.

The concept that leaders or managers possibly possess certain motives, desires or needs for leadership is not a new idea in the realm of leadership and management literature (McClelland, 1985; Miner, 1977). Previous research that has examined motivations to lead or be a leader (e.g., Chan & Drasgow, 2001; McClelland, 1985; Miner, 1977) has focused on different desires/needs or motives driving individuals, rather than a general drive to advance into leadership. For example, based on McClelland's three need theory (1985), McClelland and Boyatzis (1982) discovered the leadership motive pattern (LMP); a common pattern among managers/leaders of desires or motives that McClelland believed was predictive of leadership effectiveness. According to this pattern, effective leaders had to have a high need for power and low need for affiliation. Another approach was Miner's motivation to manage (Berman & Miner, 1985; Miner, 1965; Miner et al., 1974),

which was based on Miner's hierarchy motivational role theory (Miner, 1977). According to the hierarchical motivational role theory, individuals who reach the highest levels of large bureaucratic business organisations will have higher levels of motivation to manage, as measured by Miner Sentence Completion Scale (Berman & Miner, 1985). The motives found to be congruent with hierarchical systems make up the subscales (Authority figures, Competitive Games, Competitive Situations, Standing out from the crowd, and Routine Admin Functions) of the MSCS – H and their sum defines motivation to manage (Butler et al, 1983).

More recently, Chan and Drasgow (2001) proposed a broad theoretical framework for understanding the role of individual differences in the study of leadership behaviour. Consequently, as part of the framework, they developed a new construct called motivation to lead (MTL; Chan & Drasgow, 2001). This model measures the multi-dimensional MTL construct along three correlated factors or combinations; Affective-Identity MTL, Non-Calculative MTL and Social-Normative MTL. Affective Identity MTL (AI) refers to individuals who like to lead others. Non-Calculative (NC) refers to individuals who only lead if they are not calculative of the costs of leading relative to the benefits. Social Normative (SN) refers to individuals who lead out of a sense of duty or responsibility. In later research (Amit et al, 2007), this model was expanded to include two more motivational dimensions; Patriotic MTL (desire to serve country) and Ideological (desire to serve and spread ideological beliefs) in examining Israel military forces. Hence, the majority of motivation to manage/lead research has focused on different motives and desires that drive an individual to lead, rather than their general motivational drive, that is, their leadership aspirations.

Beyond the distinction between specific desires/needs to lead and general motivational drive, there are certain limitations that make these approaches less suitable for the present research. One main limitation is that some of the theories and constructs in this domain (e.g., Chan & Drasgow, 2001; McClelland, 1985; Miner, 1977) conceptualise leadership in a masculine manner, without consideration or inclusion of more modern models of leadership (e.g., transformational leadership, servant leadership) that involve mentoring, teaching and co-operation. Indeed, Eagly and colleagues (1994) suggested that gender differences in motivations to manage or lead might result from the perception of leadership as only involving masculine typed tasks and behaviour. Consequently, this may cause women to be less motivated to either meet the masculine definition of leadership or fear censure for violating their gender stereotypes. For example, in a study by Eagly and colleagues (1994) examining gender differences in motivation to manage, as measured by Miner's MSCS, it was found that men scored higher than women on the overall motivation to manage score. However, Eagly and colleagues (1994) emphasised that most of the subscales of the motivation to manage measure highlighted male-stereotypic agentic qualities, whereas only two subscales highlighted certain female-stereotypic qualities. Moreover, Bartol and Martin (1987) argue that some of the items used on the scales such as "athletic contest" or "shooting a rifle" might produce gender differences because they require that participants respond to activities that are more typically male than female but are not required by the managerial role.

Other limitations relate more to specific models and constructs, like McClelland's leadership motive pattern (LMP) which has been criticised over concerns of the validity and reliability of the findings (Entwistle, 1972; Lilienfield,

Wood & Garb, 2000) or Chan and Drasgow's motivation to lead model (MTL; Chan & Drasgow, 2001) that does not consider gender as an antecedent of MTL. Thus, the present research draws on aspirations literature as aspirations typically focus on an individual's motivational drive to advance rather than specific desires or needs for this drive. Moreover, if measures like motivation to manage or motivation to lead were used, the scores on specific desires or motives would have to be aggregated. Specifically, such aggregation might not properly capture leadership aspirations and could possibly result in additional complications for the present research. Furthermore, for aspiration research, leadership does not need to be defined by a set of desires or needs that might not encompass young people's ideas of leadership but rather allows a more open interpretation of leadership and thereby prevents the possible negative impact of a masculine definition of leadership on women's leadership aspirations (e.g., Eagly et al., 1994). Thus, the present research draws on career and more specifically management aspirations literature to define and frame leadership aspirations.

Career or occupational aspirations refer to an "individual's desires for future employment" (Powell & Butterfield, 2003, p. 88) and often represent individuals' ideal or dream occupations (Farmer & Chung, 1995) or their desire to achieve a particular vocation (Gray & O'Brien, 2007). Numerous theories and models have focused on women's career development (e.g., Astin, 1984; Brown & Lent, 1996; Eccles, 1994; Farmer, 1985; Gottfredson, 1981, 1996; Lent, Brown, & Hackett, 2000), with career development theories in general focusing specifically on different constructs in their explanation of men's and women's career choices. For example, Astin's need-based sociopsychological model (1984) focuses on work motivation and the influence of socialisation and structural opportunities in shaping men and

women's career choices. Hackett and Betz's career model (1981) draws on Bandura's self-efficacy theory (1978, 1986) and thus focuses on career self-efficacy and its direct influence on career aspirations, career choice and finally, career behaviour. Farmer (1985) also drawing on Bandura's self-efficacy theory, emphasises gender as an influential factor, and posits that psychological, sociological and environmental factors interact with three dimensions of career motivation (aspiration, mastery motivation, and career commitment) to influence women's career choice. More recent career development theories (e.g. Lent, Brown, & Hackett, 1994, 2000, 2002) aim to incorporate these previous theories and include many different variables, in order to provide a more comprehensive picture of women's vocational experience and career development. Thus, from the perspective of the career development research, career aspirations when included, often are examined in relation to other constructs, rather than specifically examined and focused on in detail (e.g., Hackett & Betz, 1981).

One of the main exceptions is Gottfredson's (1981, 1996) developmental theory of conscription and compromise, which suggests that children's career aspirations are shaped and narrowed according to their self-concept (circumscription) and the inaccessibility of certain careers (compromise) (Booth, 2005). Gottfredson (1981, 1996, 2005) conceptualised the self-concept or self-image as incorporating gender, gender beliefs, interest, values, abilities and socio economic status/social class that develops as a child matures to adulthood. In particular, Gottfredson (1981) places special emphasis on the early influence of the gendered self-concept on career aspirations. Specifically, according to this theory, the narrowing and shaping of young women's career aspirations first begins with circumscription. Circumscription occurs when women evaluate the extent to which

careers match their self-concept (gender, gender identity, values, etc.) with incongruent roles being disregarded as future career possibilities. Further narrowing and shaping of career aspirations arises from compromise. Compromise occurs as a result of acceptable careers being perceived as inaccessible or in other words, compromised (Booth, 2005; Gottfredson, 1981). Thus, individuals let go of their most preferred acceptable careers for those that are less preferred but are more accessible, which consequently shapes young women's career aspirations towards more gender typical but accessible careers (Gottfredson, 1981, 1996; Lee & Rojewski, 2009). In recent years, however, Gottfredson's theory has been criticised on a number of issues relating to methodology and validation concerns like difficulties separating and measuring the model's constructs (Hesketh, Elmslie, & Kaldor, 1990), and in regards to the reliability of her developmental timeline (Henderson, Hesketh, & Tuffin, 1988). Gottfredson's theory has also been criticised for not sufficiently addressing adult's career development. However, Gottfredson (2002, 2006) emphasises that the focus of her theory is on children and their career development. It should also be noted that Gottfredson's career aspirations focus on aspirations in a specific career, rather than examining the motivational drive to advance, which is the focus of the present research. Despite these limitations, Gottfredson's developmental theory (1981) was pioneering in its attempt to address the reason for underrepresentation of women in gender atypical positions through the examination of career aspirations and laid the foundations for subsequent work on women's career development (e.g., Astin, 1984; Hesketh et al., 1990; Pryor & Taylor, 1989).

Although career aspirations generally refer to an individual's desire or intention to achieve advancement in a specific vocation, managerial aspirations more

generally focus on an individual's desire or intention to advance to management (Powell & Butterfield, 2003). As a result, managerial aspirations have been conceptualised in many different ways, ranging from senior management aspirations (e.g., Sloan, 1993) to intention to manage (e.g., van Vianen & Keizwer, 1996) and have been largely measured using single items (e.g., Powell & Butterfield, 1981, 2003; Wentling, 1996; for exceptions, see Tharenou & Terry, 1998; van Vianen, 1999). Whilst Gottfredson's developmental theory specifically addressed career aspirations, most management aspiration research draws on broader but more comprehensive career development theories (Farmer, 1985; Lent et al., 2000) that are mainly based on Bandura's social learning theory (1977) or social cognitive theory (1986). For example, Van Vianen's (1999) ambition for a managerial position model is derived from the social cognitive career theory (SCCT; Lent et al., 2000), in that, self-efficacy beliefs, outcome expectancies and personal goals are determinants for managerial ambition. Although self-efficacy is a central premise of SCCT model, outcome expectancies are also a fundamental part of the model (Lent et al., 2000). These outcome expectancies examine normative beliefs and their influence on one's behaviour intentions (van Vianen, 1999). Thus, it can be argued that van Vianen's (1999) concept of outcome expectancies, specifically the normative beliefs, broadly align with the social role theory (Eagly, 1987) and role congruity theory's (Eagly & Karau, 2002) supposition about the influence of gender role beliefs on men and women's behaviour. Specifically, outcome expectancies of being a leader for women might be negative due to violation of their normative gender beliefs. Other managerial aspiration research, such as Tharenou's (1990, 1996, 2001) managerial advancement research, namely examines the influence of masculinity, male hierarchies and managerial aspirations on women's managerial advancement

(Tharenou, 2001). Tharenou (2001) further suggests that managerial aspirations predict an individual's early managerial advancement as individuals with high aspirations are motivated to advance into management (Tharenou 1990, 2001).

According to Tharenou and Terry (1998) aspirations are a dual-faceted construct that consist of both attitudinal and behaviour components. The attitudinal component is known as "desired aspirations" which produces the effort and persistence towards attaining a goal (Lewin, 1956; Tharenou, 2001; Tharenou & Terry, 1998). The behavioural component is known as "enacted aspirations" which reflects the extent to which individuals engaged in behaviours to help gain or advance to a management position (Litzky & Greenhaus, 2007; Tharenou & Terry, 1998). In a study by Litzky and Greenhaus (2007) examining gender differences in aspirations to senior management, it was found that men and women differed in their desired aspirations for promotion to senior management, with women less likely to aspire than men. However, in the same research, no gender differences were found for enacted aspirations, with Litzky and Greenhaus (2007) suggesting that the measure itself was to explain for this inconsistency. Litzky and Greenhaus (2007) argue further that the behaviours deemed important for promotion to senior management positions such as networking and critical thinking skills, are also important for career development, not just promotion to senior management (Litzky & Greenhaus, 2007). Considering this limitation of the enacted aspirations component and the aim of the present research to examine whether men and women differ in their leadership aspirations, desired aspirations were deemed more appropriate for capturing the positive possibilities and future aspirations of young students.

The operationalisation of leadership aspirations in the present research is drawn from Tharnou and Terry's managerial aspiration scale (1998; Tharenou, 2001) and van Vianen's (1999) ambition for a management position scale. van Vianen and Keizer (1996) posited that managerial intention is an "intention to fulfil a managerial job" (p.103), whereas Litzky and Greenhaus (2007) adapting Tharenou and Terry's conceptualisation of aspirations, defined senior management aspirations as "an individual's desire and intention to move into a senior position in an organisation" (p.639). Together these definitions suggest that leadership aspirations are attitudinal or motivational driven. Therefore, leadership aspirations should be defined and conceptualised in line with Tharenou and Terry's (1998) conceptualisation of desired aspirations as an individual's desire and intention to move into a leadership position in an organisation. This aspect of perceived opportunity or possibility is an important element in the development of aspirations (Gottfredson, 1981; Kanter, 1977; Tharenou, 1996) as such perceptions of one's possible future serve as an important motivational force in career achievement and persistence (Farmer, 1985) but also in self-regulation and self-evaluation (e.g., Hoyle & Sherill, 2006; Knox, Funk, Elliot, & Bush, 1998; Oyserman, Bybee, & Terry, 2006). However, although both possible future selves and aspirations constructs entail setting goals for oneself and projecting oneself into the future (Killeen, Lopez-Zafra, & Eagly, 2006), aspirations generally focus more on positive and desired possibilities of the future, whereas possible future selves can be desired or feared.

In summary, building on the literature on careers and aspirations, the present research aims to capture the leadership aspirations of men and women business students, prior to entering the workforce, where there is a greater sense of opportunity and possibility for their futures. Furthermore, the present research

further contributes to leadership aspiration research through examining men's and women's leadership aspirations from the perspective of the role congruity theory. Thus, the possible influence of the perceived incongruence between the female gender role and the leadership role on women's leadership aspirations shall be discussed in the following section.

2.5 ROLE CONGRUITY PERSPECTIVE ON LEADERSHIP ASPIRATIONS

According to role congruity theory (Eagly & Karau, 2002) and lack of fit model (Heilman, 1983) women candidates and women leaders face prejudice because of the perceived incongruity between the communal characteristics of the female gender role and the agentic requirements of the leadership role. Drawing on role congruity and lack of fit theories, the present research suggests that women self-limit their leadership related beliefs and behaviours to align with their female gender role and thereby avoid negative self- and other-evaluations and consequences. Despite many studies examining women's underrepresentation in leadership, few examine whether men and women differ in their leadership aspirations (e.g., Singer, 1989, Singer 1991) and none empirically examine gender differences in leadership aspirations within role congruity framework. Thus, from role congruity perspective, the literature relating to men and women differing in leadership aspirations shall be discussed.

As mentioned previously, men and women often internalise their gender roles into their self-concept to serve as important self-standard (Wood & Eagly, 2010) with women typically seeing themselves as less agentic and more communal than men (e.g. Spence & Buckner, 2000). Numerous studies (e.g., Bosak & Sczensny, 2007; Powell & Butterfield, 2003, 2013; Schuh et al., 2013) have emphasised the

importance of women's agency in pursuing and aspiring to leadership. Nevertheless, despite evidence that women are beginning to see themselves as more agentic (e.g., Sczesny, 2003; Twenge, 1997, 2001), gender-typical role beliefs still influence men's and women's beliefs and behaviours, especially in regards to leadership. For example, related research examining gender differences in possible future selves has shown that women are less likely to be career-oriented than men in their distant possible selves (Brown & Diekmann, 2010), are less likely to see their possible selves as being powerful or high in status (Lips, 2000) and imagine that becoming a leader is less likely to happen (Killeen, Lopez-Zafra, & Eagly, 2006). Similarly, studies on stereotype threat (e.g., Davies, Steele, & Spencer, 2005) and backlash avoidance (e.g., Moss-Racusin & Rudman, 2010) have found that due to perceived incongruence between women and leaders, women can limit themselves and their behaviour to avoid negative consequences. For example, Davis and colleagues (2005) found that women who experienced stereotype threat expressed less interest in assuming a leadership role, possibly to avoid confirming negative stereotypes about women and leadership. Similarly, women who fear backlash that results from gender atypical behaviour seek ways in which to avoid or lessen the impact of this backlash through self-regulating their behaviour (Moss-Racusin & Rudman, 2010). For example, Rudman and Fairchild (2004) found that women who feared backlash were more likely to conceal their success on masculine knowledge tasks and conform to gender norms than counterparts that did not fear backlash (e.g. Rudman & Fairchild, 2004). Similarly, Moss-Racusin and Rudman (2010) found that undergraduate female students inhibited activation of their goal focused locomotive regulatory mode (i.e. ability to strive toward a goal without inhibitions) in order to avoid backlash, which subsequently interfered with their self-promotion success.

In the domain of leadership aspirations research, previous research (Singer, 1989) that examined men and women's leadership aspirations, has found a significant difference between men's and women's leadership aspirations, with men showing stronger leadership aspirations than women. Singer (1989) sought to explain leadership aspirations using expectancy values, self-efficacy and attribution perspectives. However, related research that examined women only samples further support the influence of gender roles and role incongruence on women's lower leadership aspirations. For example, Boatright and colleague's (2003) found that college women's leadership aspirations were influenced by a number of factors, such as connectedness to others, fear of negative evaluation and gender role orientation. In particular, gender role orientation contributed greatly to the variance in leadership aspirations, in that, the more college women considered themselves to fit the traditional female stereotype, the less they reported leadership aspirations (Boatright et al., 2003). Moreover, research by Hoyt and colleagues (Hoyt & Blascovich, 2007; Hoyt, Johnson, Murphy, & Skinnell, 2010; Hoyt & Simon, 2011; Simon & Hoyt, 2013) further supports the influence of role incongruence as stereotypes have been found to have harmful effects for women's self-perceptions, well-being and leadership-related beliefs and behaviours. For example, Simon and Hoyt (2013) found that media images depicting counter- and stereotypical women role models affected women's gender role beliefs and responses to a leadership situation. Specifically, women exposed to the counter-stereotypical condition reported less gender typical gender beliefs, less negative self-perceptions and greater leadership aspirations than women exposed to the stereotypical condition.

The influence of gender roles and role incongruence is further evident in the related research field of senior management aspirations. For instance, Powell and

Butterfield (1981, 2003) have consistently found that men more than women aspire to top management, despite modern social changes. Furthermore, in their examination of both US MBA students and undergraduate business students (Powell & Butterfield, 1981, 2003), female undergraduate students exhibited lower aspirations to top management than their male counterparts, partly due to their less masculine gender identity. Furthermore, in an examination of women's senior management aspirations, Litzky and Greenhaus (2007) found that women had lower aspirations than their male counterparts, partly due to the smaller degree of congruence that women perceived between their characteristics and the requirements of senior management positions. Together these findings suggest that women will be less inclined to aspire to leadership positions than men, possibly due to perceptions of incongruity between their female gender role and resulting negative consequences for stereotype-incongruent career choices and behaviours. Therefore, the present research proposes the following hypothesis:

Hypothesis 1: Men and women will differ in leadership aspirations, with women reporting lower levels of leadership aspirations than men.

2.6 CONCLUSION

This chapter has provided an overview of the social role theory (Diekmann & Eagly, 2008), that provides a interactionist/social structural explanation for why men and women differ in certain characteristics and behaviours. Next, the chapter examines the role congruity theory, which extends on social role theory. Specifically, the role congruity theory and the lack of fit model were discussed in relation to the influence and consequences of self- and other-expectations on women's self-limiting

beliefs and behaviour. This chapter then defined leadership aspirations within the career and senior management aspiration literature. Finally, from the role congruity perspective, the evidence that men and women differ in their leadership aspirations was discussed. In sum, the present chapter posits that women will be less inclined to aspire to leadership positions than men, possibly because of the perceived incongruence between their female gender role and the leadership role and to avoid subsequent negative consequences. In the next chapter, literature pertaining to the goal congruity perspective and leadership role preferences shall be discussed.

CHAPTER THREE

GOAL CONGRUITY PERSPECTIVE ON LEADERSHIP ROLE PREFERENCES

3.1 INTRODUCTION

This chapter provides an overview of the theoretical framework and literature which addresses the research question of whether men and women differ in their leadership role preferences. Specifically from the goal congruity perspective, the present research suggests that women shall prefer hierarchy-attenuating (HA) leadership roles more than men. The chapter begins with an examination of the goal congruity perspective (Diekmann et al., 2011; Diekmann & Steinberg, 2013), which extends on the role congruity account of motivation (Diekmann & Eagly, 2008; Eagly & Karau, 2002) by examining men's and women's differing goals and preferences for certain careers. Next, the chapter defines and examines hierarchy leadership role preference in relation to hierarchy job choice and social dominance literature (Pratto et al., 1997). Finally, from goal congruity perspective, the chapter discusses the literature relating to gender differences in leadership role preferences.

3.2 GOAL CONGRUITY PERSPECTIVE

In recent years, with women's increased occupational opportunities and choices, many researchers have sought to explain why women and men differ in their career preferences (e.g., Astin, 1984; Brown & Lent, 1996; Eccles, 1994; Farmer, 1985; Gottfredson, 1981, 1996; Lent et al., 2000). Building on social role and role congruity theories (Diekmann & Eagly, 2008; Eagly, 1987; Eagly & Karau, 2002), Diekmann and colleagues recently proposed a motivational framework, called the

goal congruity perspective, in order to explain gender differences in career preferences (Diekman et al., 2011; Diekman & Steinberg, 2013). The goal congruity perspective (Diekman et al., 2011) extends on social role and role congruity theories by shifting the focus from being “primarily on social roles as the *cause* of gender-differentiated behaviour to encompass the processes that lead to the *consequence* of gender-differentiated social roles” (p. 903). Specifically, this perspective examines how gender roles produce gender-differentiated goals that in turn influence men’s and women’s career preferences. Although the goal congruity perspective (Diekman & Steinberg, 2013) was developed specifically to explain women’s underrepresentation in STEM careers, the present research argues that it also provides an appropriate motivational framework for explaining gender differences in preferences for other careers and occupational roles, such as leadership role preferences.

According to the goal congruity perspective (Diekman et al., 2011; Diekman & Steinberg, 2013), a combination of two distinct social cognitions result in the formation of attitudes to goal pursuit options that predicts certain career-related attitudes or preferences. The first of these social cognitions is that men and women differ in their endorsement of certain goals. The second of these cognitions is that individuals hold certain beliefs about whether activities or roles help or hinder fulfilment of these goals. These beliefs are referred to as goal affordance stereotypes. In combination, both goal endorsement and goal affordance stereotypes influence men’s and women’s attitudes toward certain careers and occupational roles (Diekman et al., 2011). As noted in Chapter Two, women and men often internalise their gender role beliefs into their self-concept, resulting in a personal self-standard to judge themselves (Wood & Eagly, 2009, 2010). Consequently, women and men

shall be motivated to align their goals to be congruent with their personal self-standard in order to avoid negative consequences (Diekman & Eagly, 2008; Evans & Diekman, 2009). In doing so, women and men shall value and endorse different goals and shall seek to maximise attainment of these goals by pursuing careers that are perceived to best afford their fulfilment (Diekman & Steinberg, 2013; Eccles, 1994, 2007). Thus, men and women seek to match between their greater endorsed or valued goals and goal affordance stereotypes in order to achieve goal congruity (Diekman et al., 2011; Diekman & Steinberg, 2013).

The distinct feature of the goal congruity perspective, in comparison to related career theories (e.g., Morgan et al., 2001; Sansone & Harackiewicz, 1996), is its focus on communal goal congruity in the formation of women's STEM career preferences (Diekman et al., 2011; Diekman & Steinberg, 2013). Communal goals are goals that embody the communal orientation, that is, concern for others (e.g., helping others, serving humanity) whereas, agentic goals are goals that embody the agentic orientation, that is, status and power (e.g., power, self-recognition; Diekman & Eagly, 2008). This particular focus on communal goal congruity stems from previous research (e.g., Ceci & Williams, 2010; Cheryan, 2012) that has suggested that the key to explaining women's disinterest in STEM careers is to understand women's motivations, interests, goals, and lifestyle choices (Diekman & Steinberg, 2013). Moreover, Diekman and colleagues (Diekman et al., 2011) have also argued that there has been excessive attention given to agentic explanations, rather than communal explanations for women's disinterest in STEM careers. Diekman and colleagues (2011) do acknowledge that agentic explanations, such as lower self-efficacy, contribute to women's disinterest in certain careers. However, they emphasise that whereas gender differences in agency have narrowed in recent years,

gender differences in communion have remained stable (Eagly & Diekman, 2003; Twenge, 1997). Therefore, Diekman and colleagues (Diekman & Steinberg, 2013) suggest that communion might be a more differentiating factor than agency in influencing gender differences in career interest and attitudes.

Given the traditional agentic perception of leadership (e.g., Koenig, Eagly, Mitchell, & Ristikari, 2011), the present research suggests that agentic goal congruity also needs to be considered. Specifically, whereas STEM careers are perceived as less likely to afford fulfilment of agentic goals (e.g., Diekman et al., 2011; Diekman et al., 2010), leadership is typically defined in agentic terms often emphasising power, competition, and authority (e.g., Duehr & Bono, 2006; Eagly & Sczesny, 2009; Garcia-Retamaro & López-Zafra, 2006). Furthermore, research has demonstrated that agentic goals or motives like power and achievement contribute to the pursuit of leadership (e.g., Bosak & Sczesny, 2007; McClelland, 1985; Miner, 1978; Schuh et al., 2013). For example, Schuh and colleagues (2013) conducted a study that examined gender differences in leadership role occupancy. It was found that men's greater leadership role occupancy was partly attributed to their higher levels of power motivation. Thus, as the present research builds on the goal congruity perspective in the context of leadership, the present research shall examine the role of both agentic and communal goal congruity in men's and women's preferences for leadership roles. This shall be discussed later in this chapter. In the following section, leadership role preference shall be defined and examined in relation to Pratto and colleagues' hierarchy job choice research (Pratto et al., 1997).

3.3. LEADERSHIP ROLE PREFERENCES

Since the 20th Century, leadership has become a central topic of research for occupational, psychological and sociological researchers. From its inception as a field of study, numerous theories and explanations have been formed to explain the nature of leadership. These theories and explanations have ranged from “great man” explanations that suggest leadership is an innate trait to “transformational” approaches to leadership that emphasise working with followers and motivating them to achieve group goals (for review, see Friedrich, 2010; Haslam, Reicher, & Platow, 2011). In recent years, the leadership literature has grown even more diverse, incorporating modern perspectives of leadership that incorporate more communal type characteristics and activities, such as mentoring, helping and serving followers (e.g., Barbuto & Wheeler, 2006; Bass, 1985; Eagly & Johannesen-Schmidt, 2003; Fry, 2003; Graham, 1991). Given this, it is essential to provide a unifying framework that considers a broader and more inclusive perspective beyond traditional masculine leadership (Koenig et al., 2011). Moreover, considering a broader perspective on leadership is particularly important for providing a better understanding of women’s underrepresentation in leadership. Specifically, previous research (e.g., Eagly et al., 1994) has highlighted that by portraying leadership in a masculine or agentic manner, leadership research might inadvertently negatively influence women’s responses. Thus, the present research conceptualises and operationalises leadership within the framework of hierarchy orientation. By conceptualising leadership in this manner, the present research aims to present a perspective on leadership that includes but also differentiates between different types of leadership roles. Specifically, by extending on previous research on hierarchy job choice (e.g., Pratto & Espinoza, 2001; Pratto et al., 1997), leadership is presented as not just serving the

elite and powerful (i.e., hierarchy enhancing), but as being capable of serving the oppressed and less powerful in a society (i.e., hierarchy attenuating). It is this focus on whom is served by leadership in society that is the main characteristic that differentiates the hierarchy leadership roles.

According to social dominance theory (SDT), human society is organised as a group-based hierarchy. Specifically, dominant groups have a disproportionate share of positive resources, such as wealth, and healthcare while more oppressed groups have a disproportionate share of negative resources, such as poor housing and poor health (Sidanius & Pratto, 2011). Pratto and colleagues (Pratto, Sidanius, & Levin, 2006) suggest that this group-based social hierarchy is produced by the effects of discrimination across multiple levels in society such as institutions, social roles and individuals. Specifically, different institutions or social roles reflect different orientations toward intergroup relations, with one set of institutions or social roles being more egalitarian orientated and the other being more hierarchical (Sidanius & Pratto, 2011). Hierarchy enhancing (HE) institutions or roles typically serve the interests and defend the privileges of the dominant or elite groups, whereas hierarchy-attenuating (HA) institutions or roles typically serve and help oppressed groups, such as minorities or children (Pratto et al., 2006). Pratto and colleagues (1997; Pratto & Espinoza, 2001) developed the hierarchy job choice measure as a means of examining social roles, specifically occupational roles within the hierarchy orientation framework. Specifically, Pratto and colleagues (1997; Pratto & Espinoza, 2001) operationalised the hierarchy job choice measure in order to examine the gender gap in HE and HA occupational role attainment.

According to the social dominance theory (SDO), at a personal level individuals also have a social dominance orientation that is “a general attitudinal

orientation toward intergroup relations, reflecting whether one generally prefers such relations to be equal versus hierarchal” (Pratto, Sidanius, Stallworth, & Malle, 1994, p.742). Specifically, individuals are orientated towards either supporting social equality or supporting inequality between different social groups (Sidanius & Pratto, 2011). Thus, Sidanius and Pratto posit that an individual’s social dominance orientation can influence whether an individual is likely to engage in HA or HE activities or roles (Pratto et al., 1997; Sidanius & Pratto, 2011). Numerous studies have shown that men and women differ in both their SDO and in their preference for HE or HA activities or roles (Pratto et al., 1997; Sidanius & Pratto, 1999; Sidanius, Pratto, Sinclair, & van Laar, 1996). For example, in Pratto and colleagues’ (1997) examination of the gender gap in occupational role attainment, it was found that men chose and were chosen for HE occupational roles more than women, while women chose and were chosen for HA occupational roles more than men. From an interactionist perspective, Sidanius and Pratto (1999) suggest that these gender differences are partly determined by men’s desire to justify their dominant position and are partly genetically determined (Caricati, 2007). However, Pratto and colleagues (Pratto & Espinoza, 2001; Pratto et al., 1997) suggest that this gender gap in occupational roles may occur because of two possible reasons; gender differences in values, and influence of gender stereotypes.

First, Pratto and colleagues (1997) suggest that gender segregation of occupational roles stem from men and women having different basic values concerning group equality. Consequently, as a result of endorsing these different values, men and women shall seek hierarchy roles that match these basic values. Indeed, previous research (e.g., Brown, 2002; Schwartz & Rubdel, 2005) has consistently found that women, compared to men, value collective social values

which place group concerns higher than that of the individual. Thus, in accordance with previous values and goal research (e.g., Brown 2002; Diekman et al., 2010; Schwartz & Rubel, 2005), Pratto and colleagues (1997) found that hierarchy attenuating work values (i.e., altruism and equality) were rated as more important by women than men. Moreover, these findings and Pratto and colleagues' suppositions about gender segregation (1997) are consistent with vocational theorists (e.g., Brown, 2002; Diekman & Steinberg, 2013; Morgan et al., 2001) that posit that women endorse different values or goals than men, and that in choosing a career or occupation, women prefer careers or occupations that are congruent with these values or goals. From the goal congruity perspective, this supposition shall be discussed in more detail later in this chapter.

Second, Pratto and colleagues (1997) mention the possibility that gender segregation of occupational roles might also result from the influence of gender stereotypes. As mentioned previously in Chapter Two, the internalisation of gender beliefs as a self-standard can influence men and women to self-regulate their behaviour, often resulting in gender-differentiated behaviour (Wood & Eagly, 2010). Recent research (e.g., De Oliveira, Guimond, & Dambrun, 2012) that has examined the normative beliefs of HE and HA organisations further supports this reason for gender segregation. Specifically, De Oliveira and colleagues (2012) investigated the varying effects of power on legitimising conditions (e.g., group dominance, social inequalities) as a function of HE or HA normative environment. They found that powerful individuals or leaders in HE or HA organisations differed significantly in these legitimising cognitions, with leaders in HA organisations being more egalitarian and less racist than their HE counterparts. Moreover, previous research (Dambrun, Guimond, & Duarte, 2002; Gatto, Dambrun, Kerbrat, & De Oliveira,

2010; Sidanius, Liu, Pratto & Shaw, 1994; Poteat, Espelage, & Green, 2007; Van Laar, Sidanius, & Rabinowitz, 1999) has examined the influence of HE and HA normative environments on individual's anti-egalitarian beliefs and intolerance to disadvantaged groups, with some researchers (Guimond et al., 2003; Guimond, 2000) suggesting that the influence of HE and HA environments results from a group socialisation process (De Oliveira et al., 2012). However, perhaps it could also be possible that, similar to the men and women seeking congruency between their values and occupational roles, individuals are attracted to HE or HA normative environments depending on their own normative beliefs. That is, individuals will seek congruence between their normative beliefs and that of their work environment. Thus, it can be argued that men and women are motivated to seek congruence between their own gender role beliefs and leadership roles. Specifically, as HA roles typically reflect egalitarian and communal normative beliefs that correspond more closely to women's gender role beliefs, women shall prefer HA leadership roles. Therefore, the present research proposes the following hypothesis:

Hypothesis 2a: Men and women will differ in leadership role preferences with women, more than men, showing greater preference for HA (vs. HE) leadership roles.

3.4 GOAL CONGRUITY PERSPECTIVE ON LEADERSHIP ROLE PREFERENCES

The goal congruity perspective posits that men and women's differing preference for certain careers result from a combination of two cognitions: goal endorsement and goal affordance stereotypes (Diekmann et al., 2011). Specifically, it

is suggests that, as a result of internalised gender role beliefs, men and women differ in their goal endorsements. Consequently, men and women shall pursue careers that are perceived to best afford fulfilment of their greater endorsed goals in order to achieve goal congruity (Diekman & Steinberg, 2013). In particular, Diekman and colleagues (Diekman et al., 2011, 2010; Diekman & Steinberg, 2013) emphasise the influence of communal goal congruity as the differentiating factor influencing gender differences in career interest and preferences. However, given previous research on agency and leadership (e.g., Koenig et al., 2011; Schuh et al., 2013), the present research shall consider the role of both agentic and communal goal congruity. In the following section, from the goal congruity perspective, gender differences in leadership role preferences are discussed, specifically in relation to gender differences in goal endorsement and goal affordance stereotypes.

3.4.1 Gender differences in goal endorsements

Life goals are defined as major goals that “involve a person’s aspirations to shape their life context and establish general life structures, such as having a career, family, a certain kind of lifestyle and so on” (Roberts & Robin, 2000, p.1285). As noted previously in Chapter Two, gender differences emerge both from the division of labour between the sexes, that is, the typical roles held by men and women in society (Diekman & Eagly, 2008) and from the expectations that individuals should have the characteristics that equip them for these roles (Eagly, 1987; Eagly, Wood, & Johannesen-Schmidt, 2004). Specifically Diekman and Eagly (2008) posit that these roles also foster different opportunities to pursue goals, with individuals more likely to seek and attain goals associated and afforded by these roles. As noted in Chapter Two, women are perceived and perceive themselves as more communal and

less agentic than men and internalise such beliefs into their self-concept to use as a personal self-standard (Eagly & Diekmann, 2003; Heilman, 1983; Prentice & Carranza, 2002; Wood et al., 1997; Wood & Eagly, 2009). Thus, women and men are motivated to align their goals to be congruent with their internalised gender role beliefs to avoid negative evaluations and social sanctions (Diekmann & Eagly, 2008; Eagly & Karau, 2002), that can influence their career preference (Diekmann & Steinberg, 2013).

In support of role congruity and goal congruity perspectives (Eagly & Diekmann, 2008; Diekmann & Steinberg, 2013; Eagly, et al., 2000; Heilman, 1983), previous research has shown that men and women differ in their endorsement of agentic and communal goals (e.g. Evans & Diekmann, 2009; Diekmann et al., 2010; Pöhlmann, 2001). The most prominent of these studies was conducted by Pöhlmann (2001), which examined gender differences in agentic and communal goals. It was found that both men and women considered agency and communal goals important. However, the majority of women (60.2%) rated communal goals as more important than agency goals and the majority of men (61.6%) rated agency goals as more important than communal goals (Pöhlmann, 2001). Diekmann and colleagues (2011, 2010) have also consistently found that men and women differ in their communal goal endorsements, with women, more than men, rating communal goals such as helping others, serving humanity, and serving community as important. Similarly Robert and Robins (2000) found that men and women reported different life goals. Specifically, women, more than men, endorsed social goals like helping others in need or working to promote the welfare of others. In contrast, men, more than women, endorsed economic goals like having a high standard of living and wealth, or owning your own business (Robert & Robins, 2000). Robert and Robins (2000)

suggested that these findings show that men place greater value on “getting ahead” while women place greater value on “getting along”.

These findings are consistent with related research examining gender differences in life and work values. For instance, within Schwartz’s (1992) framework, ten values are presented in a circular structure that portrays the total set of values, but can also be viewed as two bipolar dimensions. The first bipolar dimension concerns self-enhancement values and self-transcendence values. Self-enhancement values (power and achievement) encourage and legitimise pursuit of one’s own interest and align with the agency dimension. Self-transcendence values (universalism and benevolence) emphasise concern for the welfare of others (Schwartz & Rubel, 2005) and align with the communal dimension. By examining gender within these two bipolar dimensions, Schwartz and Rubel (2005) have found that, at the broad level of goals, women tend to endorse benevolence and universalism more than men, while men tend to endorse power and achievement, self-direction and stimulation more than women. Similarly, Lyons and colleagues (Lyons, Duxbury, & Higgins, 2005), using the Rokeach Value Survey (Rokeach, 1973), found clear gender differences, with men being more orientated toward self-enhancement values and women being more oriented toward both conservative and self-transcendence values (Caricati, 2007; Schwartz, Melech, Burgess, & Harris, 2001). Therefore, given the previous findings in the literature, it can be argued that there is a consistent pattern, with women endorsing communal goals and related constructs such as benevolent and universal values more highly than men and men endorsing agentic goals and related constructs such as power and achievement values more highly than women. Thus, the present research proposes the following hypothesis:

Hypothesis 2b: Men and women will differ in their goal endorsement with women reporting greater endorsement of communal goals than men and men reporting greater endorsement of agentic goals than women.

According to Pratto and colleagues (1997), HE and HA roles are generally gender segregated, with men overrepresented in HE roles and women overrepresented in HA roles. One possible explanation for this gender segregation is that men and women have different egalitarian values that influence their preference for HE or HA roles. Specifically, consistent with previous vocational research (e.g., Brown, 2002; Morgan et al., 2001; Sansone & Harackiewicz, 1996), Pratto and colleagues suggest that gender differences in preferences for HE and HA roles result from gender differences in values or goals, which in turn leads men and women to seek hierarchy roles that best afford fulfilment of these values or goals (Diekmann & Steinberg, 2013; Morgan et al., 2001; Pratto et al., 1997). For example, in an examination of men's and women's career interest, Morgan and colleagues (2001) found that endorsement of interpersonal goals predicted preference for education and social service careers whereas endorsement of status goals predicted preference for math and science careers. Evans and Diekmann (2009) also found that because men and women endorsed different goals that predicted gender-stereotypic career interest. Specifically, women's greater endorsed care-giving goals predicted women's greater interest in feminine-stereotypic careers like being a social worker. While men's greater endorsed status goals predicted men's greater interest in masculine-stereotypic careers and disinterest in feminine-stereotypic careers. Similarly, in a study by Diekmann and colleagues (2010) specifically examining the influence of agentic and communal goals, it was found that women's communal goal

endorsement inhibited their interest in STEM careers, but facilitated their interest in feminine-stereotypic careers. It was found that men's agentic goal endorsement facilitated their interest in male-stereotypic careers.

For the present research, leadership is conceptualised within the hierarchy orientation framework as being either HE or HA. As noted previously HE institutions and roles are typically perceived as embodying hierarchical or anti-egalitarian norms and values, whereas HA institutions and roles are typically perceived as embodying egalitarian norms and values. Thus, it can be argued that because of women's greater endorsement of communal goals, women will prefer leadership roles that match or are congruent with their valued communal goals (Brown, 2002; Morgan et al., 2001). HA leadership roles serve the oppressed and are perceived to exemplify a concern for others that is reflective of communion (Abele & Wojciszke, 2007; Bakan, 1966). Thus, HA leadership roles should be more congruent with women's greater endorsed communal goals. HE leadership roles serve the elite and powerful and are perceived to exemplify status and power that is reflective of agency (Abele & Wojciszke, 2007; Bakan, 1966). Thus, HE leadership roles should be more incongruent with women's greater endorsed communal goals and more congruent with men's greater endorsed agency goals. Therefore, given that previous research has shown that women have more egalitarian values and are more likely to endorse communal goals than men (e.g., Brown, 2002; Diekmann et al., 2010; 2011), communal goal congruity will be a powerful determinant for whether a woman prefers a certain leadership role. For example, leadership research has shown that young women viewed leadership as more positive in a female congruent industry than in a male congruent industry (Killeen, López-Zafra, & Eagly, 2006), were less likely to prefer masculine organisational cultures (e.g., van Vianen &

Fischer, 2002) and faced less gender discrimination and bias when pursuing a leadership position in a female congruent environment (e.g., Garcia-Retamero & López-Zafra, 2006). Therefore, consistent with previous research (e.g., Diekmann et al., 2011; Diekmann & Steinberg, 2013; Morgan et al., 2001) that emphasises the importance of goal endorsement in influencing men's and women's career preferences, the present research proposes the following hypothesis:

Hypothesis 2c: Goal endorsement will mediate the relationship between gender and HA (vs. HE) leadership role preference.

Consistent with previous research (e.g., Evans & Diekmann, 2009) and the social role perspective (Eagly et al., 2000; Wood & Eagly, 2009, 2012), the present research examines gender role beliefs that consist of an individual's gender role self-concept and stereotypical expectations (i.e., gender norms). Gender role self-concept refers to the internalisation of an individual's beliefs about their gender role into their self-concept. As mentioned previously in Chapter Two, as a result of this internalisation, men and women are motivated to align their behaviour to be congruent with their gender role self-concept in order to avoid social sanctions and be intrinsically rewarded (Witt & Wood, 2010; Wood et al., 1997; Wood & Eagly, 2009). Gender norms refer to consensual and shared beliefs about the ideal attributes of men and women (Cialdini & Trost, 1998). Specifically, for the present research, gender norms are conceptualised as men's and women's beliefs about the ideal attributes of their own gender. Men and women internalise these gender norms using them as an ideal standard to judge themselves. Thus, men and women are motivated to be as congruent as possible with their gender norms, in order to be intrinsically

rewarded (Eagly & Karau, 2002; Spence & Helmreich, 1978; Williams & Best, 1990b; Wood et al., 1997; Wood & Eagly, 2009). Thus, taken together, gender role self-concept and gender norms form gender role beliefs that consequently have been found to influence beliefs and behaviours (Diekmann & Eagly, 2000; Eagly et al., 2000).

As mentioned in Chapter Two, research on the content of gender role beliefs, (i.e., gender role self-concepts and gender norms) has consistently found that women are and ought to be more communal than men and men are and ought to be more agentic than women (Eagly & Diekmann, 2003; Eagly et al., 2004; Fiske et al., 2002; Lueptow et al., 2001; Prentice & Carranza, 2002; Williams & Best, 1982, 1990a, 1990b; Wood et al., 1997; Wood & Eagly, 2009). According to the role congruity account of motivation (Diekmann & Eagly, 2008) and goal congruity perspective (Diekmann et al., 2011; Diekmann & Steinberg, 2013) internalisation of gender role beliefs by men and women result in gender differences in goal orientation and endorsement. Specifically, women and men are motivated to align their goals to be congruent with their internalised gender role beliefs in order to avoid negative evaluations and social sanctions (Diekmann & Eagly, 2008; Eagly & Karau, 2002). Consequently, by seeking this congruency, women and men will differ in their goal endorsements, possibly influencing their career interests and preferences (Diekmann et al., 2011; Diekmann & Steinberg, 2013). For example, Evans and Diekmann (2009) examined the relationship of men's and women's internalised gender beliefs and goals on career interest. It was found that internalisation of gender-typical role beliefs resulted in men and women endorsing gender-typical goals more highly, which led to interest in occupations that were perceived to best afford the pursuit of

these goals (Evans & Diekman, 2009). Thus, given this previous research, the present research proposes the following hypotheses:

Hypothesis 3a: Men and women will differ in gender role self-concept with women rating themselves as more communal and less agentic than men.

Hypothesis 3b: Men and women will differ in gender norms with women perceiving norms for their gender as more communal and less agentic than men.

Hypothesis 3c: Goal endorsement will mediate the relationship between gender beliefs and HA (vs. HE) leadership role preference.

3.4.2 Goal affordance stereotypes

Goal affordance stereotypes refer to beliefs about whether certain activities or roles help or hinder the pursuit and/or fulfilment of certain goals (Diekman et al., 2011; Diekman & Steinberg, 2013) and is a central premise for the goal congruity account of men's and women's differing career preferences (Diekman et al., 2011; Diekman & Steinberg, 2013). According to the goal congruity perspective, men and women's attitudes toward certain careers partly result from the perception of whether these careers afford the fulfilment of their valued goals. Moreover, these perceptions influence men and women's career or role preferences as men and women are motivated to seek congruence between their greater endorsed goals and careers that afford their fulfilment (Brown, 2002; Diekman et al., 2011; Holland, 1985; Marini, Fan, Finely, & Beutel, 1996; Morgan et al., 2001; Wiesgram et al., 2011). For example, Morgan and colleagues (Morgan et al., 2001) examined whether the mismatch or incongruence between college students' work goals and perceived goal

affordance of certain careers, like STEM careers, impacted men and women's interest in these careers. It was found that women, more than men, reported interpersonal goals as more important and that mathematical/physical science careers were perceived by both men and women as less likely to afford these goals. In contrast, it was found that men, more than women, reported high pay and status goals as more important and that mathematical/physical science careers were perceived by men and women as affording these goals. This subsequently predicted interest in mathematical/science careers. Similarly, Diekmann and colleagues (2010) examined the goal affordance stereotypes for STEM careers (e.g., engineer), non-STEM masculine careers (e.g., lawyer) and non-STEM feminine careers (e.g., social worker). They found that participants perceived non-STEM feminine careers as more likely to afford communal goals than STEM and non-STEM masculine careers. Moreover, it was found that women were less likely to be interested in STEM and non-STEM masculine careers because of their greater endorsement of communal goals and the perception that these careers impeded fulfilment of these communal goals.

Similarly, in the related domain of values, several researchers (Brown, 1996; Brown 2002; Marini et al., 1996) have suggested that a "matching" process occurs when men and women are making career choices, in that they seek a match between their values and the perceived affordance of those values (Morgan et al., 2001; Weisgram et al., 2011). For example, Marini and colleagues examined high school seniors' career preferences and values from 1976 to 1991. They found that female students placed the most importance on careers that offered altruistic or social rewards as these careers were perceived to help fulfilment of their work values that emphasised that work should be "worthwhile to society" or "gives you an

opportunity to be directly helpful to others” (Brown, 2002; Davey, 2001; Marini et al., 1996). Furthermore, Weisgram and colleagues (2011) have found that matching or congruence between men and women’s endorsed values and perceived occupational value affordance plays an important part in career decisions. Specifically, it was found that when male and female students were asked an open question on their future chosen career and the perceived value affordance of this career, each value endorsement predicted the perception of affordance for that same value in their chosen career (Weisgram et al., 2011).

For the present research, leadership roles are conceptualised within the framework of hierarchy orientation as being HE or HA. Previous research has shown that different norms are associated with HE or HA environments with individuals in HE environments found to be more anti-egalitarian than individuals in HA environments (Dambrun et al., 2002; Poteat et al., 2007; Sidanius et al., 1994). Furthermore, De Oliveira and colleagues have also found that HE roles are perceived as more likely to enhance hierarchy and inequalities, whereas HA roles are perceived as more likely to attenuate hierarchy and inequalities (De Oliveira et al., 2012). Therefore, HE roles typically serve the elite and powerful groups in society and by doing so, are perceived to embody anti-egalitarian and hierarchical values (Dambrun et al., 2002). Given that HE roles focus on hierarchical values such as power and status, HE roles should be perceived as more likely to afford the fulfilment of agentic goals. In contrast to HE roles, HA roles typically serve oppressed and less powerful groups in society and by doing are perceived to embody egalitarian values (Dambrun et al., 2002). Given that HA roles focus on egalitarian values such as helping others, HA roles should be perceived as more likely to afford the fulfilment of communal goals. Hence, the present research proposes the following hypothesis:

Hypothesis 4: HA leadership roles and HE leadership roles will differ in their goal affordance stereotypes, with HA leadership roles perceived as more likely to help fulfilment of communal goals than HE leadership roles and HE leadership roles as more likely to help fulfilment of agentic goals than HA leadership roles.

From the goal congruity perspective, the present research proposes that men and women will differ in their leadership role preferences due to gender differences in communal and agentic goal endorsement and the different goal affordance stereotypes of HE and HA leadership roles. In order to test the hypothesis that greater endorsement of certain goals causes increased or decreased preference for HA (vs. HE) leadership roles, an experiment was conducted that situationally activated communal and agentic goals. Numerous studies (e.g., Chartrand & Bargh, 1996; Custers & Aarts, 2007; Diekmann et al., 2011; Moskowitz, 2002) have shown that goals can be situationally activated by the environment. Moreover, by activating these goals, previous research has demonstrated that individuals can be motivated to pursue and fulfil the activated goal (e.g., Custers & Aarts, 2007; Diekmann et al., 2011; Förster, Liberman, & Higgins, 2005; Moskowitz, 2002; Shah, Kruglanski, & Friedman, 2003). Thus, in the final study, the causal influence of communal and agentic goals on men and women's leadership role preference was examined in a priming experiment which proposed the following hypotheses:

Hypothesis 5: Activated communal goals will increase HA (vs. HE) leadership role preference.

Hypothesis 6: Activated agentic goals will decrease HA (vs. HE) leadership role preference.

In sum, the present research argues that men and women's differences in goal endorsement will predict their leadership role preferences. In addition, HE and HA leadership roles shall be perceived as affording different goals, with HA leadership roles perceived to afford the pursuit and fulfilment of communal goals and HE leadership roles perceived to afford the pursuit and fulfilment of agentic goals. Taken together, goal endorsement and goal fulfilment afforded by leadership roles shall shape men's and women's preferences for leadership roles. Specifically, women will prefer HA (vs. HE) leadership roles more than men as these roles will be perceived as affording the fulfilment of women's greater endorsed communal goals.

3.5 CONCLUSION

This chapter has provided an overview of the the goal congruity perspective (Diekman et al., 2011; Diekman & Steinberg, 2013) which provides the theoretical framework for why men and women differ in their leadership role preferences. Following this, hierarchy leadership role preference was defined and examined within previous hierarchy job choice and social dominance literature. Finally, from the goal congruity perspective, the influence of goal endorsement and goal affordance stereotypes on men's and women's leadership role preferences were discussed. In the forthcoming chapter, the methodology of the research is discussed.

CHAPTER FOUR

METHODOLOGY

4.1 INTRODUCTION

This chapter discusses the methodology used to address the research hypotheses in the present research. The chapter begins by identifying the philosophical foundation of the research. Next, the chapter discusses the research design, specifically examining survey and experimental methods. Following this, the research sample is discussed. Next, the chapter presents the psychometric properties of the measures. Finally, the chapter discusses data preparation and the data analysis strategy used in the present research.

4.2 PHILOSOPHICAL FOUNDATIONS

In recent years, the topic of women and leadership has grown to become a subject of growing debate in the disciplines of psychology, management and sociology (Moran, 1992). Research examining gender differences in leadership (e.g. Butz & Lewis, 1996; Eagly et al., 1992), have typically been based within the disciplines of social and occupational psychology which are both firmly embedded in a positivist research paradigm (Johnson & Cassell, 2001). Although rarely explicitly articulated, this positivist perspective is often reflected in the methods researchers employ to develop and test their theories (e.g., Diekmann et al., 2010; Rudman et al., 2012).

According to Weaver and Olson (2006), research paradigms are “patterns of beliefs and practices that regulate inquiry within a discipline by providing lenses,

frames and processes through which investigation is accomplished” (p.460) and can be characterised through its ontology, epistemology and methodology (Guba, 1990; Saunders, Lewis & Thornhill, 2007). Positivism is defined as “an approach to science which assumes that scientific activity produces (and should aim to produce) knowledge about objectively present and knowable features of the world” (Haslam & McGarty, 2003, p. 361). The term “positivism” was coined by the French philosopher August Comte, who developed this perspective as a means of examining social phenomena within the framework of empiricism (Benton & Craib, 2001). Comte argued that reason and rigorous experimentation were the best means of understanding society and human behaviour. In the following, the positivist research paradigm shall be discussed, specifically in relation to the ontological (i.e., what is reality?), epistemological (i.e., how we come to know reality?), and methodological (i.e., how do we attain knowledge of reality?) principles that guided the current research.

Ontology is concerned with the nature of reality, specifically “what is reality?” (Bem & De Jong, 2006; Easterby-Smith, Thorpe & Lowe, 2002). Within the positivist framework, the ontological perspective posits that reality operates in a systematic and lawful manner such that it is external, objective, and separate from human existence (Easterby-Smith et al., 2002; Saunders et al., 2007). Thus, similar to the physical and natural sciences, positivism assumes that the researcher and the research object are independent and distant from each other (Creswell, 1994; Guba & Lincoln, 1994; Remenyi, Williams, Money, & Schwartz, 1998). Within this approach, research must be undertaken in a value free way to remain objective (Saunders et al., 2007) with suitable precautions taken to control for bias (Creswell, 1994). For example, in the present research, participants’ were administered

anonymous self-report questionnaires. Following instructions and reassurances about the anonymity and confidentiality of the research, the researcher did not interfere or interact with respondents until collection of the questionnaires in order to avoid interviewer bias (Walliman, 2001).

Epistemology is concerned with what constitutes acceptable knowledge about the world, that is, the nature of knowledge (Sanunders et al., 2007). Specifically epistemological perspectives refer to the different ways that psychologists approach how, and what we can say about the world (Eatough, 2012). From a positivist framework, knowledge about the world is “out there” to be discovered and should be examined through use of the scientific method (Benton & Craib, 2001). The scientific method can be defined as “a procedure for acquiring and testing knowledge through systematic observation or experimentation” (Haslam & McGarty, 2003, p.15). The main aim of this approach is to reduce or refine ideas about the world into specific hypotheses that can be empirically tested (Guba & Lincoln, 1994; Creswell, 2003). This process is known as the hypothetico-deductive method which involves the following four steps. The first step is the deduction of a hypothesis or series of hypotheses based on knowledge of a particular field aimed at explaining relationships between variables. The second is operationalisation of the key constructs for measurement and designing the study with clear and structured methodology to facilitate replication (Gill & Johnson, 2002; Mathewman, Rose & Hetherington, 2009). The third step is evaluation of the hypotheses by analysing the data to confirm or reject the hypothesis. Finally, the fourth step is communication of the research results (Breakwell, Smith & Wright, 2012; Carlson, Martin & Buskist, 2004; Mathewman et al., 2009). Thus, by proposing and testing hypotheses about human beliefs and behaviours, the positivist approach requires a structured

methodology that is best suited to gathering data for statistical analysis and reporting (Saunders et al., 2007).

Methodology refers to the how research is undertaken. This includes the theoretical and philosophical assumptions upon which the study is based and the implications of these assumptions for methods adopted (Sanders et al., 2007). The positivist tradition posits that social phenomena should be operationalised in an objective and quantifiable manner that employs highly structured methodological tools in the form of surveys or experiments (Breakwell et al., 2012; Carlson et al., 2004). Previous research in the social and organisational psychology fields has typically used self-report survey and experimental methods to examine men's and women's self-perceptions. Given the perceptual nature of goals, values, attitudes, and affect responses, self-report measures are often deemed one of the most appropriate methods to access these psychological constructs (Howard, 1994; Schmitt, 1994; Spector, 1994). However, despite the widespread use of self-report data in empirical studies (McDonald, 2008; Robins, Tracy, & Sherman, 2007), there are certain disadvantages which shall be discussed later in the chapter.

Given the positivist tradition of the literature and the research objectives of the present study, the current research has been guided by ontological, epistemological and methodological principals of the positivist research paradigm. From a positivist perspective, this study proposes a number of theory driven hypotheses regarding gender differences in leadership aspirations and the role of goal congruity in explaining gender differences in leadership role preferences. The research design and the quantitative techniques used for data collection shall be discussed in more detail in the next section.

4.3 RESEARCH DESIGN

Consistent with the positivist approach, the present research adopts both a correlational and experimental research design. The research design is the embodiment and operationalisation of the above mentioned research paradigm and includes the selection of specific quantitative methods and techniques, such as correlational and experimental methods (Mathewman et al., 2009). Research that uses correlational designs aim to determine whether relationships exist between the key variables; research that uses experimental designs aim to establish the causal direction of the relationships between these variables (Bordens & Abbott, 2008). For the present research, in Studies 1-3, the survey design was considered an appropriate research design to measure gender differences in leadership aspirations and leadership role preferences and to determine the underlying psychological processes. Specifically survey research is a quantitative method that gathers standardised information about the key variables in order to study the relationships between men and women's leadership aspirations, leadership role preferences and the underlying psychological processes (Fowler, 2002). In Study 4, an experimental design was used to determine the causal direction of these relationships.

4.3.1 Survey Design

Although surveys are not tied to any particular philosophical perspective or methodology (Breakwell et al., 2012), the cross-sectional survey design is considered as an appropriate design for the positivist framework and its associated quantitative methods (Creswell, 1994, 2003). A cross-sectional design, also known as a social survey design, entails the collection of data on more than one case and at a single point in time in order to collect quantitative or qualitative data. Survey

research entails collection of such data predominately by questionnaire to establish patterns of association between two or more variables, i.e. correlation (Bryman & Bell, 2007).

According to Haslam and McGarty (2003), there are many different survey methods, each representing different interests, approaches, and objectives of researchers. For the present research, the survey method chosen was a self-completion questionnaire (SCQ) design. This SCQ design was used primarily for cost and methodological reasons. The SCQ has a number of advantages and is a “widely used and useful instrument” in research due to a number of advantages (Walliman, 2001, p.236). One of the main advantages is that SCQ provides relatively inexpensive, quick, efficient, and accurate means of administrating and collecting data from a specific sample of the population (Bryman & Bell, 2007; Saunders et al., 2007). Moreover, Dillman (2007) suggests that a well structured and standardised questionnaire can provide generalisation of results from a group of respondents to a larger population, which is not possible for other methods like focus groups, small group experiments, and content analysis (Babbie, 2007; Dillman, 2007). Another advantage is that questionnaires do not permit interviewer bias which allows participants to feel more confident in reporting, as SCQs are less intrusive and more anonymous than other methods (Tourangeau & Smith, 1996). Another advantage of SCQs and correlational research more generally, is that it provides the ability to identify potential causal relationships that can later be tested experimentally (Borden & Abbott, 2008).

Although the SCQ appears to be the most appropriate method for the present research, this method does have its disadvantages. One of the main disadvantages for the SCQ concerns response rates, with SCQs often resulting in lower response rates

than other methods. This low response rate is mainly a limitation of postal SCQs (Bryman & Bell, 2007). The current studies, however, administered SCQs to the target population within the presence of the researcher, which has been shown to result in a higher response rate (Lucas, 1997). Another disadvantage of SCQs and correlational research more generally, is that causal inferences cannot be clearly drawn from correlational data due to two issues: 1.) Existence of a third-variable and 2.) directionality of relationships between focal variables (Borden & Abbott, 2008). The third-variable problem refers to one of the main issues that affect validity, specifically internally validity, which is the systematic influence of a “third” or confounding variable (Breakwell et al., 2012). A confounding variable refers to an extraneous variable that unintentionally or accidentally manipulates or is associated with the variables in the study (Haslam & McGarty, 2003). The effect of such variables can be minimised by careful attention to the design and administration of the study, such as surveying participants in similar conditions and settings (Breakwell et al., 2012) and randomisation (Saunders et al., 2007). The directionality problem refers to the difficulty of establishing the existence of direct causal relationships between the main variables without manipulation of the independent variable that is assumed to impact the dependent variable (Borden & Abbott, 2008). Another disadvantage of SCQ and self-report measures more generally, is common method bias which can result from variables being measured with the same method, such as SCQ (Spector, 2006). To address this issue, the present study adopts a number of steps to address common method bias which is discussed in the following section.

4.3.1.1 Common Method Variance

Common method variance (CMV) is the “variance that is attributable to the measurement method rather than to the constructs the measures represent” (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003, p.589) and can be a source of measurement error for self-report research (Podsakoff et al., 2003). Specifically, common or mono-method effect is believed to artificially inflate or deflate relationships between the variables (Spector, 2006). This issue, however, can be addressed and diminished through procedural and statistical methods (Podsakoff et al., 2003). In their editorial article, Chang, Van Witteloostuijn, and Eden (2010) outline four main approaches for handling common method issues in business research. The first approach is the inclusion of data from other sources like objective data or other’s ratings. The second approach is implementing a number of procedural remedies relating to the design and administration of the questionnaire such as counterbalancing the order of questions and using different scales (Harrison, McLaughlin, & Coalter, 1996). The third approach is to make it less likely for participants to be guided in their responses using a complicated regression model that includes non-linear and difficult to visualise relationships. The final approach is implementing a number of statistical tests to detect common method issues, such as Harman’s post-hoc single-factor analysis (Chang et al., 2010; Podsakoff et al., 2003).

For the present research, all data was acquired through self-report questionnaires that can be more susceptible to common method bias. To counter the effect of common method, order of measures and scales were counterbalanced in the questionnaires and emphasis was placed on the anonymous and confidential nature of the research (Chang et al., 2010). Furthermore, the extent of common method bias was also assessed. There are a number of different methods to assess common

method bias, with Harman's single factor test being the most widely used (Podsakoff et al., 2003). The basic assumption of the Harman's single factor test is that if substantial common method bias exists, one general factor will either emerge or account for the majority of the total variance. A Principal Component Analysis (PCA) was conducted for each study. For Study 1, results indicated that the first factor accounted for only 19.67% of the total variance. For Study 2, results indicated that the first factor accounted for only 9.02% of the total variance. For Study 3, results indicated the first factor accounted for only 16.37% of the total variance. Therefore, the results of these tests coupled with the procedural remedies outlined above provide some evidence to suggest that common method bias is not a major issue.

4.3.2 Experimental Design

Although surveys are useful for identifying relationships between key variables (i.e., correlation), they are not useful for establishing the direction of cause and effect between these variables (i.e., causation; Bryman & Bell, 2007). The main strength of the experimental method over other methods is its ability to identify and describe causal relationships, due to its two defining characteristics; manipulation of independent variables and control over extraneous variables (Borden & Abbott, 2008). Thus, an experiment can be defined as a study in which one or more independent variables are systematically manipulated while all other variables are controlled so the influence of the manipulated independent variable on the relevant dependent or outcome variables can be assessed to establish causation (Haslam & McGarty, 2003).

Despite its strength in identifying causal relationships, the experimental method has certain limitations that can impact the results (Bordens & Abbott, 2008). For example, one of the main issues that affect reliability in experiments is lack of power which results from too small a sample size (Breakwell et al., 2012). This issue is best considered during the planning stages of the experimental study (Tabachnick & Fidell, 2007), as failure to consider power at this stage can result in failure to achieve significant results. Estimated sample size can be determined from conducting power analysis or/and reviewing similar studies on the topic (Tabachnick & Fidell, 2007).

For Study 4, a 2 (gender: male, female) x 3 (goal condition: agency, communion, control) factorial design was used for the priming experiment. Priming is an experimental technique, in which participant's sensitivity to certain stimuli is increased due to prior exposure which can possibly influence their decision making process (Jacoby, 1983). As per previous research (Diekman et al., 2011; Moskowitz, 2002), participants were primed with a writing task. The task entailed writing about a time participants failed to achieve either communal goals (i.e., communal condition), or agentic goals (i.e., agentic condition). The control condition involved writing about the natural features of their county. Following the writing tasks, participants completed a questionnaire (for Study 4 measures, see Appendix B). The experiment was conducted prior to the commencement of participants' tutorial classes. The sample size was determined through review of similar experimental studies (e.g. Diekman et al., 2011) and power analysis (see below section 4.3.2.1). As previously mentioned threats to internal validity, such as confounding variables, can be an issue in survey and experimental research. During the development of the experiment, a pilot study was conducted to determine the inclusion of the most appropriate agentic and communal goal items in the priming writing task to prevent possible gender bias

(see section 4.5.7). The possible systematic influence of confounding variables was also reduced through random assignment of the writing task. Questionnaire measures were also counterbalanced to prevent possible order effects (for Study 4 questionnaire measures, see Appendix B).

4.3.2.1 A Priori Power Analysis for Study 4

Statistical power is the probability of identifying a relationship or effect between variables (Tabachnick & Fidell, 2007). Prior to data collection, a rough estimation of needed sample size was calculated for the correlational studies (Study 1 – 3). Following data collection, post-hoc power analyses were also conducted (see section 4.6.4). As Study 4 was an experiment, a priori analysis was conducted prior to data collection to determine the sample size needed for statistical power. This test was conducted using G*Power 3.1.5 software (Faul, Erdfelder, Lang & Buchner, 2007; Faul, Erdfelder, Buchner & Lang, 2009). In order to conduct a power analysis for an ANOVA, four pieces of information are required: Level of significance ($\alpha = .05$); Power ($1 - \beta = .80$); number of cells/groups; and effect size (as per Faul et al., 2009; Hair, Black, Babinm & Anderson, 2009). For Study 4, consistent with previous experimental research (e.g., Diekman et al., 2011), the author expected medium ($\eta^2 = .25$) to large ($\eta^2 = .40$) effect sizes (Cohen, 1992). The results from the power analysis demonstrated that a sample size of $N \geq 216$ would achieve sufficient power to detect medium and large effects (see Table F4, Appendix F). Thus, the present study's sample size ($N = 221$) had sufficient power to detect a medium and large effect.

4.3.3 Data collection Procedure

Prior to the commencement of data collection, ethical approval was sought and granted from Dublin City University's Research Ethics Committee (for letters of ethical approval, see Appendix C). Access was obtained to undergraduate business school students by directly contacting lecturers in the business school. Data collection for all studies occurred before the commencement of participants' lectures within the class room setting, in the presence of the researcher. In person administration of the pen and paper questionnaires was preferred to online or postal administration as research has shown that the presence of the researcher increases response rates and questionnaire completion (Lucas, 1997). In person administration also allows the researcher to assist participants who may be having difficulties with the questionnaire (Bryman & Bell, 2007). In addition, for Study 3, following lower than expected class attendance, a follow-up email containing an online version of the survey was also sent to absent students, with low response ($N = 10$). Prior to administration of the questionnaire, the researcher assured participants that "there were no right or wrong answers" to reduce social desirability, increase honesty, and to lessen common method variance (Podsakoff et al., 2003). The researcher verbally summarised the cover letter (for cover letters, see Appendix A), emphasising the confidentiality of results, participant anonymity and the voluntary nature of the study. In particular, the researcher stressed that the questionnaires were separate from students' curriculum and non-involvement had no repercussions for their studies or grades. Following completion, participants were thanked for their participation.

4.4 Research Sample

Data was collected from business school students from Dublin City University in Ireland. The majority of the students were first year undergraduates studying business studies, accounting and finance or other business related subjects. The present research examines gender differences in leadership aspirations, that is, career aspirations in regard to leadership roles more generally. In the domain of career aspirations, adolescence and early adulthood is a momentous phase, with young peoples' hopes and aspirations for future careers having important consequences for later career development and attainment (Schoon & Polek, 2011). Indeed, previous research (e.g., Clausen, 1993; Mello, 2008; Schoon & Parsons, 2002; Schoon & Polek, 2011) has shown that young people's aspirations and expectations about their future careers can often predict their career attainment in adulthood. Specifically, young people with high occupational aspirations are more likely to enter a professional career in adulthood (Schoon & Polek, 2011). Thus, in the present study, business students were sampled to examine whether men and women differ in their leadership aspirations and preferences for certain leadership roles, in the hopes of providing possible insight into women's underrepresentation in leadership roles. Furthermore, by sampling this specific population at this time in their lives, the present research should be able to examine gender differences in leadership aspirations and leadership role preferences with less organisational influences such as perceived barriers to promotion that have been shown to negatively influence women's aspirations (e.g., Litzky & Greenhaus, 2007).

4.5 PSYCHOMETRIC PROPERTIES OF MEASUREMENT INSTRUMENTS

Factor analysis was carried out on all suitable multi-item measurement instruments using principal component analysis (PCA) with varimax rotation to analyse the underlying structure of each measure. Before proceeding with PCA, Kaiser-Myer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity were conducted. A KMO value above 0.6 and significance value of $p < .05$ for Bartlett's test of sphericity are considered acceptable (Tabachnick & Fidel, 2007). Item loadings of +/- .30 on a factor are considered to meet the minimal acceptable level for inclusion (Hair et al., 2009). Finally, the internal consistency reliability of each measure using the Cronbach's alpha co-efficient was assessed. Generally, a Cronbach alpha coefficient is considered acceptable if above .60 and good if above .70 (Kline, 1999; Pallant, 2005).

4.5.1 Gender Role Self-Concept

Gender role self concept was assessed using items adapted from Diekmann and Eagly's (2000) list of agentic and communal characteristics. Six items represented agentic characteristics and seven items represented communal characteristics. The agentic gender role self-concept scale included the items "courageous", "dominant", "daring", "adventurous", "competitive", and "aggressive". The communal gender role self-concept scale included the items "sympathetic", "affectionate", "sensitive", "gentle", "kind", "emotional", and "supportive". In the present research, an additional item "emotional" was included due to its relevance to the leadership literature. For example, often top management and executives in leadership roles are thought to require "emotional toughness" (Heilman, 2002, p.659), with women, in the past, often being perceived as being too emotional to be good leaders (Eagly &

Carli, 2007). In Study 2, the instructions read as follows: “Please take a minute to think about yourself and your attributes. How characteristic are each of the following attributes for you?” Participants rated themselves on each characteristic using a 5-point rating scale ranging from 1 (*not characteristic*) to 5 (*characteristic*).

A PCA extraction using varimax rotation was conducted to assess the underlying structure of the gender role self-concept measure. The scree plot indicated a four factor solution while parallel analysis suggested the presence of three factors. However, the three factor solution produced numerous cross-loadings for the items “emotional”, “sympathetic” and “competitive” and was inconsistent with prior research (Diekmann & Eagly, 2000). The dimensions of agency and communion are well established as being among the most influential pairings of psychological distinctions (Trapnell & Paulhus, 2012) and best conceptualise both the gender stereotype and gender self-concept (e.g., Abele, 2003; Abele & Wojciszke, 2007; Moskowitz, Suh, & Desaulniers, 1994; Wood & Eagly, 2002). Thus, in line with previous research (Eagly & Diekmann, 2000), the present research specified a two factor solution, with communal items loading on factor one and agentic items loading on factor two (see Table 4.1). For the two factor solution, the majority of items loaded on the appropriate factor. The first factor representing communal gender role self-concept explained 21.64% of the total variance and the second factor representing agentic gender role self-concept explained 16.7% of the total variance. The items loading under factor one were averaged to produce a mean score for communal gender role self-concept. The items loading under factor two were averaged to produce a mean score for agentic gender role self-concept. The Cronbach alpha for communal gender role self-concept was $\alpha = .73$ and for agentic gender role self-concept was $\alpha = .63$.

Table 4.1*Factor Loading for Gender Role Self-Concept Measure for Study 2*

Items	Factor 1	Factor 2
Sympathetic	.723	
Affectionate	.712	
Sensitive	.651	
Gentle	.625	
Kind	.571	
Emotional	.529	
Supportive	.443	
Courageous		.675
Dominant		.596
Daring		.579
Adventurous		.577
Competitive		.549
Aggression		.549
Eigen value	2.813	2.171
% of variance	21.64	16.70

4.5.2 Gender Norms

Gender norms were assessed using the same items selected for gender role self-concept. In Study 2, participants rated their ideal same-sex target on 13 stereotypically agentic and communal characteristics. For female participants, the instructions read as follows: “Please take a minute to think about the Ideal Woman. How characteristic will each of the following attributes be for the Ideal Woman?” For male participants, the instructions read as follows: “Please take a minute to think about the Ideal Man. How characteristic will each of the following attributes be for the Ideal Man?” Participants rated their ideal same-sex target on each characteristic using a 5-point rating scale ranging from 1 (*not characteristic*) to 5 (*characteristic*).

A PCA extraction using varimax rotation was conducted to assess the underlying structure of the gender norm measure. Although the scree plot indicated a three factor solution, parallel analysis indicated a two factor solution which is

supported by previous literature concerning gender norms and related constructs (e.g., Abele & Wojciszke, 2007; Diekmann & Goodfriend, 2006; Eagly & Karau, 2002; Prentice & Carranza, 2002). For the two factor solution, the majority of items loaded on the appropriate factor. The first factor explained 27.81% of the total variance and the second factor explained 20.26% of the total variance. The items loading under factor one were averaged to produce a mean score for communal gender norms. The items loading under factor two were averaged to produce a mean score for agentic gender norms. The Cronbach alpha for communal gender norms was $\alpha = .82$ and for agentic gender norms, $\alpha = .73$ was respectively.

Table 4.2

Factor Loading for Gender Norms Measure for Study 2

Items	Factor 1	Factor 2
Sympathetic	.806	
Gentle	.757	
Sensitive	.736	
Kind	.720	
Affectionate	.676	
Supportive	.672	
Emotional	.459	
Courageous		.716
Adventurous		.694
Competitive		.685
Daring		.684
Dominant		.654
Aggression		.495
Eigen value	3.615	2.634
% of variance	27.81	20.26

4.5.3 Goal Endorsement

Goal endorsements were assessed using items adapted from Diekmann and colleagues' (2010) list of agentic and communal goals. The agentic goal scale

included the items “recognition”, “self-promotion”, “status”, “demonstrating skill or competence”, “career success”, “competing with others”, “focus on the self”, “achievement”, “succeeding in life”, “power”, “financial rewards”, “independence”, “self-direction” and “individualism”. The communal goal scale included the items “helping others”, “caring for others”, “attending to others’ needs”, “connection with others”, “serving humanity”, “working with people”, “serving the community” and “spiritual rewards”. For the present research, “career success” and “succeeding in life” replaced the vaguer term “success”. Also “competing with others” replaced the broader term “competition”. Finally the item “becoming a parent” was included in the list of goals. For Study 1 and Study 2, participants rated the importance of various goals. The instructions read as follows: “Please rate how important the following kinds of goals are to you personally”. For the present research, the scale was adapted from a 7-point rating scale to a 5-point rating scale, ranging from 1 (*very unimportant*) to 5 (*very important*) to remain consistent with other measures in the study.

A PCA extraction using varimax rotation was conducted to assess the underlying structure of the goal endorsement measure. The scree plot indicated a four factor solution while parallel analysis suggested the presence of three factors. However, the three factor solution produced theoretically ambiguous factor loadings that were inconsistent with prior research (e.g. Diekmann et al., 2010; Diekmann et al., 2011). Moreover, the dimensions of agency and communion are well established in the domain of goals and related constructs (e.g., Abe, Holland, Lutz & Richards, 1965; Pöhlmann, 2001; Roberts & Robin, 2000; Trapnell & Paulhus, 2012). Thus, as per previous research (Diekmann et al., 2010), a two factor solution was chosen that produced factor loadings representing agentic and communal goals (see Table 4.3).

For the two factor solution, the majority of items loaded on the appropriate factor, with one item “Mastery” removed due to low factor loading.

For Study 1, the first factor explained 18.45% of the total variance and the second factor explained 17.50% of the total variance. The 14 items loading under factor one were averaged to produce a mean score for agentic goal endorsement. The 8 items loading under factor two were averaged to produce a mean score for communal goal endorsement. Reliability analyses indicated that removal of “becoming a parent” from communal goals would improve the reliability of the instrument. The Cronbach alpha for agentic goal endorsement was $\alpha = .82$ and for communal goal endorsement was $\alpha = .79$.

For Study 2, the first factor explained 17.81% of the total variance and the second factor explained 16.81% of the total variance. In Study 2, one item “self-direction” was removed due to low factor loading. The items loading under factor one were averaged to produce a mean score for communal goal endorsement. The items loading under factor two were averaged to produce a mean score for agentic goal endorsement. The Cronbach alpha for agentic goal endorsement was $\alpha = .78$ and for communal goal endorsement was $\alpha = .79$.

Table 4.3*Factor Loading for Goal Endorsement Measure for Study 1 and Study 2*

Items	Study 1		Study 2	
	Factor 1	Factor 2	Factor 1	Factor 2
Recognition	.630			.622
Self-promotion	.621			.525
Independence	.578			.449
Individualism	.568			.300
Achievement	.564			.478
Career Success	.558			.600
Demonstrating skill or competence	.552			.577
Status	.549			.647
Focus on the self	.545			.361
Succeeding in life	.545			.597
Competing with others	.535			.511
Self-direction	.464			
Power	.464			.640
Financial Rewards	.415			.537
Helping others		.802	.822	
Caring for others		.756	.768	
Attending to others' needs		.716	.756	
Serving humanity		.607	.650	
Serving the community		.595	.624	
Connection with others		.588	.612	
Working with people		.567	.632	
Spiritual reward		.503	.437	
Becoming a parent		.371	.388	
Eigen value	4.244	4.024	4.097	3.866
% of variance	18.45	17.50	17.81	16.81

Note: Factor loadings for Study 2 are not in order of size.

4.5.4 Goal Affordance Stereotypes

Goal affordance stereotypes were assessed using 10 items adapted from Diekmann and colleagues' (2010) and Study 1 and Study 2 agentic and communal items (see Table 4.4). Goal items which consistently loaded highly across Study 1 and Study 2 were chosen for the shortened agentic and communal goal scale. However, for agentic items, the factor loadings of certain items were inconsistent across Study 1

and Study 2; therefore, the original loading order of Diekmann and colleagues' (2010) goal items was also consulted when considering item inclusion.

For Study 3, participants rated the extent to which each leadership role helped or hindered fulfilment of their agentic and communal goals. The instructions read as follows: "Please read each job advertisement carefully. Then indicate the extent to which you believe each job helps or hinders fulfilling the following goals?". In response to this, participants rated their perceptions of each item using a 5-point rating scale ranging from 1 (*hinders a lot*) to 5 (*helps a lot*).

A PCA extraction using varimax rotation was conducted to assess the underlying structure of the goal affordance stereotypes for each leadership role (for factor loadings, see Appendix G). The scree plot and parallel analysis suggested two factor solution for each leadership role, with the majority of items loading on the appropriate factor. Furthermore, in accordance with previous research (Diekmann et al., 2010) and the findings of Study 1 and Study 2, goal items were assigned according to the dimensions of agency and communion. The agentic goal affordance scale included the items "recognition", "status", "career", "achievement", "succeeding in life" and "power". The communal goal affordance scale included the items "helping others", "caring for others", "attending to others' needs", and "serving humanity". Measures of agentic and communal goal affordance were computed by averaging within each leadership role preference (HE vs. HA) and produced scales with acceptable consistency reliability. The Cronbach alpha for agentic goal affordances for HE leadership roles were $\alpha = .86$ and for HA leadership roles were $\alpha = .87$. The Cronbach alpha for communal goal affordances for HE leadership roles were $\alpha = .89$ and for HA leadership roles were $\alpha = .80$.

4.5.5 Leadership Aspirations

General leadership aspirations were assessed using adapted items from Van Vianen's (1999) ambition for a managerial position scale, Litzky and Greenhaus's (2007) senior management desired aspirations scale, and Terry and Tharenou's (1998; Tharenou, 2001) managerial desired aspirations scale. In the present research, 14 items were drawn from this previous research to reflect this construct and were tailored towards the leadership context of this study. The instructions read as follows: "Please read each statement carefully. Then indicate the extent to which you agree or disagree with each of the statements using the following scale". Participants rated themselves on each item (for list of items, see Table 4.4), such as "If a leadership position was offered to me in the future, I would accept such a position" using a 5-point rating scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

A PCA extraction using varimax rotation was conducted to assess the underlying structure of the general leadership aspirations measure. The scree plot and parallel analysis suggested two factors. However, the two factor solution produced ambiguous factor loadings, with many cross-loadings. The following four items, "I would prefer to leave leadership to someone else", "I told my family and friends that I hope to become a leader", "It would bother me if I never became a leader", and "For me the hassles of being in a leadership position would outweigh the benefits" were removed due to significant cross-loadings. Following this procedure, a single factor solution emerged which is consistent with previous studies using related aspiration measures (e.g., Litzky & Greenhaus, 2007; Tharenou, 2001; Van Vianen, 1999). For Study 1 and 2, the single factor explained 55.50% and 57.34% of the total variance, respectively. For both studies, the remaining 10 items were averaged to

produce a mean score for general leadership aspirations. The Cronbach alpha for Study 1 was $\alpha = .91$ and for Study 2 was $\alpha = .91$.

Table 4.4

Factor Loading for Leadership Aspirations Measure for Study 1 and Study 2

Items	Study 1	Study 2
	Factor 1	Factor 1
I want to fulfill a leadership position in the near future.	.819	.611
I believe leadership would be an attractive challenge to me.	.814	.637
I do not wish to become a leader in the near future. (R)	.802	.671
I would like to be in a leadership position in the future, for greater influence in the department/organisation.	.753	.605
I would like to move into a leadership position in the next ten years.	.745	.607
If a leadership position was offered to me in the future, I would accept such a position.	.735	.636
I intend to apply for a leadership position in the future.	.725	.578
I have no ambition to advance to a leadership position. (R)	.715	.652
It would not bother me if I never hold a leadership position. (R)	.704	.402
I would not wish to advance to a position of more responsibility.	.615	.337
Eigen value	5.550	5.734
% of variance	55.50	57.34

Note: Factor loadings for Study 2 are not in order of size.

4.5.6 Hierarchy Leadership Role Preference

Hierarchy leadership role preference was assessed using adapted job titles and description vignettes from Pratto and colleagues' hierarchy job choice measure (Pratto et al., 1997; Pratto & Espinoza, 2001). For the present research, vignettes tailored towards leadership roles were retained and additional vignettes were developed and based on Pratto and colleagues' original vignettes. Participants

indicated their leadership role preference by choosing between HE or HA leadership role descriptions within a number of job titles. The instructions read as follows:

Below are advertisements for a variety of jobs. In each section two organisations are offering positions at the same salary and workload. For each field, assume that you are qualified for each job and indicate which job you would prefer to work for by ticking the box. You can only tick one box per position.

The hierarchy aspect for each description was determined by the clients who would be served by the job role, the ethos of the organisation, or both. Descriptions were considered hierarchy enhancing if the job role and/or organisation served the disproportionately high status and powerful. Descriptions were defined as hierarchy attenuating if the job role and/or organisation served the disproportionately disadvantaged in terms of wealth, status, and/or power (Pratto et al., 1997). In addition, a test was conducted in which undergraduate business students ($N = 91$) rated each of the vignettes on the prestige of each leadership role, the competence required for a person performing each leadership role, and the degree to which a leadership role was HE or HA. Participants did not report any significant difference in the prestige or competence required between the paired leadership roles. However, consistent with the present research's conceptualisation of leadership, participants reported a significant difference in the degree to which the paired leadership roles were HE or HA in the expected direction (for results, see Appendix E).

Similar to previous studies (e.g. Pratto et al., 1997; Pratto & Espinoza, 2001), leadership role preference was presented in a forced-choice format. Although this approach is limited by the psychometric challenges posed by ipsative data (Clemens, 1966; Meade, 2004), it possesses many advantages such as deterring faking of

responses and social desirability bias (Bartram, 2007; Christiansen, Burns & Montgomery, 2005) and has been used frequently in vocational literature (e.g. Hesketh et al., 1990; Holt, 1989; Leung & Plake, 1990). For statistical analyses, participants' preferences for HA (vs. HE) leadership roles were totalled out of the total number of vignettes. For Study 1, the Cronbach alpha for the four² leadership role vignettes was $\alpha = .60$. In Study 2, the number of vignettes was increased to better optimise the instrument and provide higher scale reliability (for items, see Appendix B). For Study 2, the Cronbach alpha for the 10 leadership role vignettes was $\alpha = .81$.

4.5.7 Priming Writing Task

Goals were activated using a priming procedure, that is, a writing task³ adapted from Diekmann et al. (2011). Participants in the communal goal condition wrote about a time they failed to act communally. The instructions read as follows:

Please think about a time when you wanted to act communally - that is, you wanted to care for others, help others or attend to others' needs - but you were unable to do so. What was this situation, and what did it feel like? In the space below, please write about this time in as much detail as you can for the next 7 minutes.

Participants in the agentic goal condition wrote about a time they failed to act agentially. The instructions read as follows:

² One item (Senior Human Resource Manager) was excluded to improve the overall reliability of the scale in Study 1.

³ Communal and Agentic goals used in the prime were pre-tested. N = 39. Participants were asked to rate agentic and communal goals on 5 point likert scale for masculine (1) to feminine (5); for negative (1) to positive (5); for undesirable (1) to desirable (5); and for bad (1) to good (5). Items were chosen based on loading in previous studies and most neutral mean ratings on these scales.

Please think about a time when you wanted to act agentially - that is, you wanted to achieve something, earn status or gain recognition - but you were unable to do so. What was this situation, and what did it feel like? In the space below, please write about this time in as much detail as you can for the next 7 minutes.

The neutral writing task asked participants to describe the natural features of their county. Immediately following the writing task, participants completed a questionnaire containing the leadership role preference measure (for Study 4 measures, see Appendix B).

4.6 DATA PREPARATION

4.6.1 Descriptive Statistics

Descriptive statistics were generated for all key study variables in order to describe the characteristics of the samples and check for any violation of the assumptions underlying the statistical techniques conducted (Pallant, 2005). The means, medians and standard deviations for each item were calculated and examined. The distribution of the variables was visually inspected using histograms with normality plots (Pallant, 2005). Multicollinearity was assessed through observation of the bivariate correlation matrix (for correlation matrices, see Appendix D), which indicated that multicollinearity was not a problem as none of the key variables in each analysis correlated above $r = .70$ (Pallant, 2005). This was further verified by the collinearity diagnostic indices tolerance and variance inflation factor values. Descriptive statistics, such as frequencies were also used to check for minor data entry errors.

4.6.2 Outliers

Outliers are extreme or strange scores that differ greatly from the majority of other scores, resulting in distortion of statistical analysis (Pallant, 2005). Univariate outliers are cases with an extreme value or score on one variable, while multivariate outliers are cases with an unusual combination of scores on two or more variables (Tabachnick & Fidell, 2007). Outliers can result in both type I and type II errors and can lead to findings that cannot be generalised to other studies (Tabachnick & Fidell, 2007). A type I error is rejection of a null hypothesis when it is true, that is, when researchers conclude that an effect or relationship exists, when it does not (Haslam & McGarty, 2003). A type II error is retention of a null hypothesis when it is false, that is, when researchers conclude that an effect or relationship does not exist when it does (Haslam & McGarty, 2003). According to Tabachnick & Fidell, (2007), there are four possible reasons for the presence of an outlier. The first reason is incorrect data entry. The second reason is failure to make sure missing-value indicators are read as real data. The third reason is that the outlier is not a member of the sample population. The fourth reason is that the case is from the intended population but deviates in scores from the normal distribution (Tabachnick & Fidell, 2007).

For the present research, descriptive statistics were conducted to remedy errors in data entry. The means, trimmed means, medians and visual examination of boxplots were used to locate and determine univariate outliers for individual items and variables (Pallant, 2005). This process identified various outliers for each of the studies, which in each case were examined further to assess retention or deletion. If the outliers represented real responses, the 5% trimmed mean and mean values for the variable were examined. Similar scores between the trimmed mean and mean values indicated that values did not differ greatly, and subsequently should not pose

a problem for statistical analysis (Pallant, 2005). In addition, among continuous variables, cases standardised scores (z scores) were examined, with cases in excess of 3.29 noted as potential outliers. According to Tabachnick and Fidell (2007), extremeness of the standardised score can depend on the size of the sample, with a few excess Z scores expected for a large sample. Following these analyses, remaining cases with outliers were visually examined. Outliers were retained depending on combination of their box plot scores, 5% trimmed mean comparison, Z scores and visual examination of case responses. In Study 1, one case showed excessive outliers with extreme box plot scores and excess Z scores across numerous variables. Following visual examination of the case, identical low responses were found for all items across the questionnaire, this case was deleted.

For multivariate statistical tests, such as regression analysis, identification and examination of multivariate outliers is essential (Hair et al., 2009). Two popular approaches for identifying these outliers is the use of Mahalanobis distance and Cook's distance, which generate statistics for each case that is comparable to a threshold value (Tabachnick & Fidell, 2007). Prior to regression analysis, Mahalanobis distance and Cook's distance for the appropriate variables were assessed. Scores on both the Mahalanobis distance and Cook's distance were taken into consideration for deciding on retention or deletion of cases with multivariate outliers. In Study 1, one case showed excessive scores for Mahalanobis distance in comparison to the χ^2 value and to other case scores. Visual examination of the case showed identical extreme responses for all items across the questionnaire, thus the case was deleted.

4.6.3 Missing Data

A common issue in data analysis is the presence of missing values, which can impact statistical power and possibly result in biased estimates (Roth, Switzer, & Switzer, 1999). For survey research in particular, missing data is a common problem (Kim & Curry, 1977). However, the problem of missing data does not just concern the amount of missing values, but also the patterns of missing data (Tabachnick & Fidell, 2007). There are three forms of missing data: Missing completely at random' (MCAR), missing at Random (MAR) and Missing Not at Random (MNAR). MCAR means that missing values are completely random, with no discernible pattern or relationship with other variables in the data set. MAR means that participants with missing values only differ by chance from those with scores on an item or variable (Tsikriktsis, 2005). MNAR means that there is a relationship between variables with missing data and those without; as a consequence, the nature of the pattern needs to be understood before interpretation of the results (Tsikriktsis, 2005).

For the present research Missing Value Analysis (MVA) was conducted using SPSS version 19. The analysis serves to highlight patterns within missing data on items with more than 5% missing values (Pallant, 2005; Tabachnick & Fidell, 2007). As part of the MVA, separate variance t-tests examine if missing patterns are related to any other variables, with Little's MCAR test establishing whether the data was missing completely at random (MCAR; Little & Rubin, 2002). For Study 1 ($\chi^2 = 205.08$, $df = 205$, $p = .485$) and Study 2 ($\chi^2 = 312.435$, $df = 287$, $p = .145$), the analysis produced insignificant results, indicating that data was MCAR. For Study 3, due to the excess number of items ($N = 200$) relative to the sample size ($N = 102$), SPSS Little's MCAR EM algorithm failed to converge, therefore items were summated for a scale score. The analysis produced insignificant results ($\chi^2 = 568.76$,

$df = 570, p = .507$), indicating that data was MCAR. For study 4, the analysis also produced insignificant results ($\chi^2 = 12.34, df = 18, p = .829$). These findings are not surprising considering the low percentage of missing data ($< 8\%$) across the studies (Bennett, 2001; Cohen & Cohen, 1983). Due to the nature of the missing data across the studies, any threat to generalisability was unlikely; therefore, pairwise deletion was used for handling missing data, allowing retention of the maximum amount of data (Pigott, 2001).

4.6.4 Data Analysis Strategy

The relationship between the key variables was investigated using Pearson product-moment correlation coefficient (for correlational matrices, see Appendix D). Analyses of Variance (ANOVAs) were conducted to compare the variance between the different groups across all the studies. An F ratio represents the variance between the groups, divided by the variance within the groups (Pallant, 2005). A large F ratio indicates that there is more variability between the groups, caused by the independent variable, than there is within each group, referred to as the error term (Pallant, 2005). However, ANOVAs can only establish that there is significant difference between groups, not which groups differ from each other. Thus, planned comparison and post-hoc tests can be conducted when there are more than two groups. For Study 4, planned comparison or a priori comparison was used to test the specific hypotheses concerning the differences between the experimental condition groups. While planned comparisons have to be considered with caution for a large number of comparisons, the small number of comparisons for Study 4 meant there was low risk of type I error (Pallant, 2005).

According to van Voorhis and Morgan (2007), a general rule of thumb in calculating sample size per cell in an ANOVA is to have approximately 30 participants per cell/group. For Study 3, prior to data collection, sample size was estimated. Post-hoc power analyses was also conducted to determine the statistical power achieved by the sample size ($N = 102$). The power analysis was calculated using G*Power 3.1.5 software (Faul et al., 2009; Faul et al., 2007). Given that a medium to large effect was found in Study 3, the results from the power analysis indicated that the sample size ($N = 102$) had sufficient power (see Table F3, Appendix F).

Regression analyses was employed to test the mediation hypotheses in Study 1 and Study 2. Similar to ANOVAs, regression analysis make a number of assumptions about the data, and is sensitive to these violations (Tabachnick & Fidell, 2007). One of the main issues for regression is sample size (Pallant, 2005). Tabachnick and Fidell, (2007) provide a rough estimation of needed sample size, $N \geq 50 + 8m$ (where m is the number of IVs) for testing multiple correlation and $N \geq 104 + m$ for testing individual predictors. Moreover, a post-hoc power analyses for Study 1 (see Table F1) and Study 2 (see Table F2) were also conducted using G*power 3.1.5 software. In order to conduct a power analysis for regressions, four pieces of information are required: Level of significance ($\alpha = .05$); sample size; effect size (as per Faul et al., 2009); and number of predictors (Hair et al., 2009). The results from the power analyses indicate that sample size for Study 1 and Study 2 achieved sufficient power to detect medium and large effect sizes. Therefore, according to these criteria, an appropriate sample size was used. During regression analysis, assumptions tests such as Mahalanobis Distance and Cook's Distance were also inspected.

The main test for the mediation models followed the four conditions discussed in Baron and Kenny (1986). The four conditions used to assess mediation in Baron and Kenny (1986) were the following:

1. The independent variable should be directly related to the dependent variable ($X \rightarrow Y$) also known as total effect.
2. The independent variable should be related to the mediator ($X \rightarrow M$).
3. The mediator should be related to the dependent variable ($M \rightarrow Y$).
4. The direct relationship between the independent variable and dependent variable should become non-significant (full mediation) or weaker (partial mediation) when accounting for the effect of the mediator ($XM \rightarrow Y$).

According to Baron and Kenny (1986) a variable can be confirmed as a mediator if it follows the above four steps (Tabachnick & Fidell, 2007). For the four step method, several regressions were conducted with significance of coefficients noted at each step. The purpose of steps 1-3 is to establish the existence of zero-order relationships among the variables (Mackinnon, Fairchild & Fritz, 2007; Tabachnick & Fidell, 2007). If one or more of these relationships are not significant, researchers usually conclude mediation is not possible or likely. If these relationships are significant, occurrence of partial or full mediation can be assessed (Baron & Kenny, 1986). This approach however has certain limitations, namely that the indirect effect of the independent variable on the dependent variable is not tested. Sobel (1982) proposed a method for testing this by testing the difference between the total effect and the direct effect (Tabachnick & Fidell, 2007). Many researchers (e.g. Wood et al., 2008) have argued that Sobel test is an essential supplement to Baron and Kenny's (1986) approach. However, the Sobel test also has some limitations,

specifically it has been found to be too conservative as it assumes the sampling distribution of the indirect effect is normal (Preacher & Hayes, 2008; Zhao, Lynch & Chen, 2010). The sampling distribution however tends to be asymmetric with nonzero skewness and kurtosis (Bollen & Stine, 1990; Hayes, 2009).

The main alternative to the Sobel test (Sobel, 1982) is bootstrapping which is believed to be a more powerful test of the indirect effect (Mackinnon et al., 2002; Preacher & Hayes, 2004; Shrout & Bolger, 2002). Bootstrapping is a process in which statistics such as regression weights are generated over a large number of replications, with samples drawn with replacement from a data set (Tabachnick & Fidell, 2007). After the datasets are created, the indices are computed in each bootstrap sample (Preacher & Hayes, 2004). The bootstrap test provides a point estimate of the indirect effect, standard error and 95% confidence intervals (Preacher & Hayes, 2004). In this analysis, the indirect effect is significant if the 95% bias corrected and accelerated confidence intervals for the indirect effect do not include zero (Preacher & Hayes, 2004). The main advantage of the bootstrap method over the Sobel is that its inferences are based on an estimate of the indirect effect itself and makes no assumptions about its sample distribution (Hayes, 2009; Preacher & Hayes, 2008). For the present research, direct and indirect effects of mediation were assessed using both Baron and Kenny's (1986) mediation method with the Sobel test (1982) and Preacher and Hayes' (2008) bootstrapping method using Preacher and Hayes' (2008) INDIRECT programme.

For Study 2, Structural Equation Modelling (SEM) was used to test the hypothesis about the relationships between gender beliefs, gender, goals, and HA (vs. HE) leadership role preference. SEM refers to a collection of statistical techniques that allow the examination of more complicated models that involve

multiple regressions of factors (Tabachnick & Fidell, 2007). Specifically, SEM can examine relationships between measured variables (e.g. agentic goals) and latent variables (e.g. gender beliefs), that are defined by two or more measured variables. Similar to regression analysis however, SEM is sensitive to certain issues, such as need for large sample sizes (Kline, 2005; Tabachnick & Fidell, 2007). Schumacker and Lomax (2004) recommend a large sample size not only to maintain power, obtain stable parameter estimates and standard errors but also because of the measured variables that define latent variables. For estimating adequate sample size for power calculations, a priori analysis was conducted using Soper's online calculator for SEM. The calculator computes sample size based on the number of latent and observed variables in the model, the anticipated effect size (Cohen, 1992), and desired probability (.05) and power level (.80). Given the sample size (N = 282) in Study 2, SEM was deemed suitable and was conducted using AMOS GRAPHICS 19.

4.7 CONCLUSION

This chapter discussed the philosophical foundations and methodology used to address the research hypotheses. First, positivism was established as the underlying philosophical framework for the research. Next, the chapter discussed the research design, specifically survey and experimental designs. The suitability of the research sample was then discussed. Following this, the chapter examined the psychometric properties of the measurements. Finally data preparation and data analysis strategy was discussed, examining possible issues such as outliers. The specific method and measures used for each study will be discussed in the next chapters (Chapters 5-8).

CHAPTER FIVE

STUDY 1

5.1 INTRODUCTION

The purpose of Study 1 was twofold: First, it examined whether men and women differed in their general leadership aspirations. Second, it examined whether men and women differed in their preferences for specific leadership roles and whether this difference could be explained by gender differences in goal endorsement.

Consistent with previous leadership aspiration research (e.g., Blockwright et al., 2003; Singer, 1989) and the role congruity theory (Diekmann & Eagly, 2008; Eagly & Karau, 2002), the present research expected to find gender differences in general leadership aspirations, with women having lower leadership aspirations than men. The role congruity theory and the lack of fit model (Heilman, 1983, 2001) posit that female leaders are at particular risk of prejudice because of the perceived incongruence between the communal qualities associated with women and the agentic qualities associated with leaders; thus, women having internalised the traditional female gender role will be less inclined to aspire to leadership positions (e.g., Davies et al., 2005; Simon & Hoyt, 2012). Specifically, the present study proposed the following:

Hypothesis 1: Men and women will differ in their leadership aspirations, with women reporting lower levels of leadership aspirations than men.

According to the goal congruity perspective (Diekmann et al., 2011), men's and women's differing interest in certain careers is a result of two distinct social cognitions. First, women and men endorse different life goals with women valuing communal goals more than men (see Pohlmann, 2001; Robert & Robins, 2000). Second, individuals perceive certain occupations or activities as either helping or hindering fulfilment of their endorsed goals, referred to as goal affordance stereotypes. Combination of these two cognitions results in the formation of attitudes toward goal pursuit options and subsequently influences interest in certain careers and roles (Diekmann et al., 2011). Although leadership is typically viewed as hierarchy enhancing (Pratto et al., 1994), the current study presents leadership as either HA or HE. The present research hypothesises that women will show greater preference for HA (vs. HE) leadership roles than men because of women's greater communal goal endorsement. Specifically, the present study proposed the following:

Hypothesis 2 a: Men and women will differ in leadership role preferences with women, more than men, showing greater preference for HA (vs. HE) leadership roles.

Hypothesis 2 b: Men and women will differ in goal endorsement with women, more than men, reporting greater endorsement of communal goals and men, more than women, reporting greater endorsement of agentic goals.

Hypothesis 2 c: Goal endorsement will mediate the relationship between gender and leadership role preference.

5.2 METHOD

5.2.1 Participants and Procedure.

Participants consisted of 234 business undergraduate students (108 men, 126 women), whose ages ranged from 17 to 37 years with a mean age of 19.51 years ($SD = 2.74$). The majority of the sample identified their nationality as Irish (84.6%). The sample included students studying Business Studies (32.2%), Accounting and Finance (24.5%), European Business Studies (13.3%), International Business with Languages (12.4%), and other business or economic related courses (17.7%). The majority of the participants had some type of work experience (61.5%), specifically internships (2.8%) summer work (39.9%), part-time work (45.5%) or full-time work (11.9%). Two participants had been excluded from this sample due to outlier analyses that revealed extreme and consistently low scores across all variables.

Before the commencement of their “Introduction to Economics” lecture at a business school in an Irish university, participants were presented with both the self-report questionnaire and a cover letter that included brief information about the study and informed consent. Participants who chose to participate took approximately 15 minutes to complete the questionnaire. Upon completion, the surveyor collected all questionnaires and thanked the participants.

5.2.2 Measures

Participant demographics. Participants reported their sex, age, nationality, study programme, and study year. Participants reported whether they had work experience and if so, specified the type of experience.

Goal Endorsement. Participants rated how important various goals were to them personally. Items were adapted from Diekmann and colleagues' (2010) list of communal and agentic life goals. Specifically, the instructions read as follows: "Please rate how important the following kinds of goals are to you personally". Participants rated themselves on each item using a 5-point rating scale ranging from 1 (*very unimportant*) to 5 (*very important*). A principal component analysis (PCA) with varimax rotation was conducted. As previously noted in Chapter Four, a two factor solution was chosen, with agentic goals loading on the first factor and communal goals loading on the second factor. All retained items loaded at least .30 on their respective factors. The agentic goal endorsement scale included the items "recognition", "self-promotion", "status", "demonstrating skill or competence", "career success", "competing with others", "focus on the self", "achievement", "succeeding in life", "power", "financial success", "independence", "self-direction" and "individualism". The communal goal endorsement scale included the items "helping others", "caring for others", "attending to others' needs", "connection with others", "serving humanity", "working with people", "serving the community" and "spiritual rewards". The scales produced acceptable consistency reliability, for agentic goals, $\alpha = .82$ and for communal goals, $\alpha = .81$, respectively.

General Leadership Aspirations. Participants rated their agreement or disagreement with 14 items adapted from van Vianen's (1999) managerial ambition scale and Tharenou's (2001) managerial aspiration scale. Specifically, the instructions read as follows: "Please read each statement carefully. Then indicate the extent to which you agree or disagree with each of the statements, using the following scale". Participants rated themselves on each item, such as "If a leadership

position was offered to me in the future, I would accept such a position” using a 5-point rating scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A PCA with varimax rotation was conducted. Following removal of four items with cross-loadings, a single factor solution emerged. The scale produced acceptable consistency reliability, $\alpha = .91$.

Hierarchy Leadership Role Preference. Participants indicated their leadership role preference by examining five job titles and choosing between each of the job descriptions representing either HE or HA leadership roles for that title. Job titles and description vignettes were adapted from Pratto and colleagues’ (Pratto et al., 1997; Pratto & Espinoza, 2001) hierarchy job choice vignettes. Suitable vignettes were retained with other vignettes developed and tailored towards the leadership context of the present study. Specifically, the instructions read as follows:

Below are advertisements for a variety of jobs. In each section two organisations are offering positions at the same salary and workload. For each field, assume that you are qualified for each job and indicate which job you would prefer to work for by ticking the box. You can only tick one box per position.

Descriptions were considered to be hierarchy enhancing if the job or organisation served the disproportionately high status and powerful. Descriptions were considered to be hierarchy attenuating if the job or organisation served the disproportionately disadvantaged in terms of wealth, status, or power (Pratto et al., 1997). Paired job descriptions were similar in prestige and in competence required (for results, see Appendix E). As noted in Chapter Four, hierarchy leadership role preference was presented in a forced-choice format, resulting in high intercorrelation

between HE and HA leadership roles ($r = -.984, p < .000$). Thus, for statistical analyses, participants' preferences for HA (vs. HE) leadership roles were totalled out of the total number of vignettes. The four leadership role vignettes produced acceptable consistency reliability, $\alpha = .60$, with one vignette "Senior Human Resource Manager" excluded to improve overall reliability.

5.3 RESULTS

To examine whether men and women differed in their leadership aspirations (see Hypothesis 1), a one-way analysis of variance (ANOVA) with gender as the between-subjects factor and leadership aspirations as the dependent variable was conducted. The main effect for gender was non-significant, $F(1, 229) = 1.52, p = .220, \eta^2 = .01$. Men ($M = 3.84, SD = 0.73$) and women ($M = 3.72, SD = 0.74$) scored similarly in their leadership aspirations; therefore Hypothesis 1 was not supported.

To examine whether men and women differed in their preference for HA (vs. HE) leadership roles (see Hypothesis 2a), a one-way ANOVA with gender as the between-subject factor and HA leadership roles as the dependent variable was conducted. The main effect for gender was significant, $F(1, 223) = 8.22, p = .005, \eta^2 = .04$, with women ($M = 1.82, SD = 1.29$) preferring HA leadership roles more than men ($M = 1.32, SD = 1.28$); therefore, Hypothesis 2a was supported.

To examine whether men and women differed in their endorsement rating of goals (see Hypothesis 2b), a 2 x 2 mixed ANOVA with goal endorsement as the within-subjects factor and gender as the between-subject factor was conducted. The main effect for goals was significant $F(1, 221) = 63.40, p < .000, \eta^2 = .22$, with participants overall rating agentic goals ($M = 3.85, SD = 0.48$) as more important than communal goals ($M = 3.46, SD = 0.63$). In addition, the main effect for gender

was significant, $F(1, 231) = 10.68, p = .001, \eta^2 = .04$, with women overall rating goals ($M = 3.74, SD = 0.41$) as more important than men ($M = 3.57, SD = 0.38$). To examine differences in goal endorsement for each gender, repeated-measures ANOVAs with goal endorsement as the within-subject variable were conducted. For women, the main effect for goal endorsement was significant, $F(1, 124) = 14.45, p < .000, \eta^2 = .10$, with women endorsing agentic goals ($M = 3.85, SD = 0.48$) more than communal goals ($M = 3.62, SD = 0.57$). For men, the main effect for goal endorsement was also significant, $F(1, 107) = 47.30, p < .000, \eta^2 = .31$, with men endorsing agentic goals ($M = 3.85, SD = 0.49$) more than communal goals ($M = 3.28, SD = 0.65$). As predicted, there was a significant Gender x Goal interaction, $F(1, 231) = 12.11, p = .001, \eta^2 = .05$ (see Figure 5.1). For agentic goals, there was a non-significant main effect for gender, $F(1, 231) = .005, p = .945, \eta^2 = .000$. Men ($M = 3.85, SD = 0.49$) and women ($M = 3.85, SD = 0.48$) scored similarly in the rating of their agentic goals. For communal goals, there was a significant main effect for gender, $F(1, 231) = 18.53, p < .000, \eta^2 = .074$, with women ($M = 3.62, SD = 0.57$) rating communal goals as more important than men ($M = 3.28, SD = 0.65$); therefore, Hypothesis 2b was partly supported.

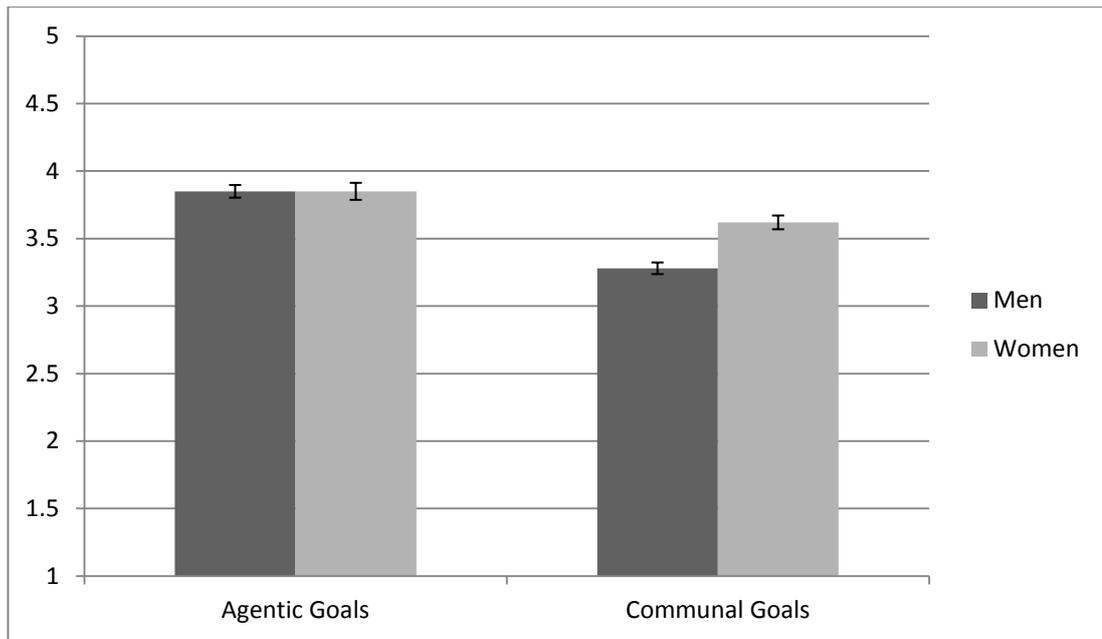


Figure 5.1. Mean scores for participant gender and goal endorsement (with standard error). Ratings of goals were made on a scale ranging from 1 (*very unimportant*) to 5 (*very important*).

To examine whether goal endorsement mediated the relationship between gender and leadership role preference (see Hypothesis 2c), mediation analyses were performed using regression (Baron & Kenny, 1986) and the bootstrapping technique (Preacher & Hayes, 2004). Regression analyses were conducted as per Baron and Kenny's (1986) four-step mediation test. However, as mentioned previously in Chapter 4, this approach has certain limitations, namely, that the indirect effect of the independent variable on dependent variable is not tested (Wood et al., 2008). Therefore, the Sobel test (1982) was also conducted and reported to supplement the Baron and Kenny approach (1986). However, this test also has certain limitations, namely, that it is too conservative (Preacher & Hayes, 2008; Zhao et al., 2010). Thus, to supplement the Baron and Kenny (1986) mediation test and Sobel test (1982), bootstrapping was conducted as it is believed to be a more powerful test of the indirect effect (Mackinnon et al., 2002; Shrout & Bolger, 2002; Zhao et al., 2010). Therefore, for the present research, direct and indirect effects of mediation

were assessed using both Baron and Kenny's (1986) mediation method with the Sobel test (1982) and Preacher and Hayes (2008) bootstrapping method. In this study, mediation analyses using regression were not performed to examine agentic goals as it did not meet the first criteria for mediation (Baron & Kenny, 1986). However, recent research suggests that this first criteria is not required to examine for an indirect effect (Kenny, Kashy, & Bolger, 1998; Shrout & Bolger, 2002). Thus, the bootstrapping technique was also used to examine the indirect effect of gender through agentic goal endorsement on HA (vs. HE) leadership role preference.

Table 5.1 presents the results of the regression analysis of gender and communal goals on HA (vs. HE) leadership role preference. The results of the regression analysis found that gender predicted HA leadership role preference (see Hypothesis 2a) and that the effect of gender was no longer significant when communal goal endorsement was included in the analysis; thus, communal goals fully mediated the relationship between gender and HA leadership roles, Sobel $z = 2.63, p = .008$.

Table 5.1*Impact of Gender and Communal Goals on HA Leadership Role Preference*

Var.	Hierarchy Attenuating	
	Step 1	Step 2
Gender	.493** (.189)	.198 (.076)
Communal Goals		.858*** (.414)
R^2	.036**	.194***
Adj. R^2	.031	.187
F	8.22**	26.67***
ΔR^2	.036	.159
ΔF	8.22	43.58
Z Sobel		2.63**

Note: Unstandardised regression coefficients are shown in table, with standardised coefficients in parentheses. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

In addition, non-parametric bootstrapping analysis (see Preacher & Hayes, 2004; Preacher, Rucker & Hayes, 2007) was used to test the significance of the indirect effect. For communal goal endorsement, the results indicated that whilst the total effect of gender was significant (TE = .49, SE = .17, $p = .005$), the direct effect was not (DE = .19, SE = .16, $p = .238$). The results also show that gender had an indirect effect through communal goal endorsement on HA (vs. HE) leadership role preference (IE = .30, SE = .08, lower 95% CI = .15, upper 95% CI = .47). For agentic goal endorsement, the results indicated that total effect of gender (TE = .49, SE = .17, $p = .005$), and the direct effect were significant (DE = .48, SE = .17, $p = .005$). The results also show that gender did not have an indirect effect through agentic goal endorsement on HA (vs. HE) leadership role preference (IE = .02, SE =

.04, lower 95% CI = -.05, upper 95% CI = .10). Thus, the mediation and bootstrapping results indicate that communal goal endorsement fully mediate the relationship between gender and HA (vs. HE) leadership role preference and gender had an indirect effect through communal goal endorsement on HA leadership role preference. The results also indicate that agentic goals did not mediate the relationship between gender and HA (vs. HE) leadership role preference and gender did not have an indirect effect through agentic goal endorsement on HA leadership role preference. Therefore, Hypothesis 2c was partly supported.

5.4 DISCUSSION

Study 1 examined whether women and men differed in their general leadership aspirations. The study also examined gender differences in preferences for specific leadership roles. The results provide initial evidence that although men and women do not differ in their general leadership aspirations; they do differ in the type of leadership roles that they aspire to because of their differential endorsement of communal goals.

For leadership aspirations, the results indicate that counter to previous related research (e.g., Litzky & Greenhaus, 2007; Singer, 1989), men and women do not differ in their leadership aspirations; therefore, Hypothesis 1 was not supported. There are a number of possible explanations for these results. The first possible explanation relates to men's and women's gender identity or gender role self-concept. In recent years, research has shown that women nowadays are perceiving themselves as more agentic than women in the past (e.g., Sczesny 2003; Tinklin, Croxford, Ducklin, & Frame, 2005; Twenge, 1997, 2001). Moreover, previous related research (e.g., Litzky & Greenhaus, 2007; Powell & Buttefield, 2003) has

emphasised both masculine gender identity and perceived congruence between self and senior management characteristics as influential factors in shaping an individual's senior management aspirations. Thus, if young women currently perceive less incongruence between their female gender role and the agentic leadership role, perhaps this might result in men and women having similar levels of leadership aspirations.

The second possible explanation relates to the sample used in the present research. As noted in Chapter Two, women leaders often face negative evaluations for violating their female gender role, resulting in negative consequences such as prejudice and discrimination (Eagly & Karau, 2002; Heilman, 2001). In contrast to previous related research (e.g., Litzky & Greenhaus, 2007; van Vianen & Fisher, 2002), the present research sample included young undergraduate business students with limited work experience. Thus, it might be the use of this particular sample that contributed to the non-significant findings. Specifically, unlike women leaders, young female students have limited experience of the barriers that exist for women leaders (e.g., Powell & Butterfield, 2003). Thus, young female students have not experienced the negative evaluations which can result in self-limiting beliefs and behaviour (Dickerson & Taylor, 2003).

The third possible explanation relates to the concept of aspirations itself. Specifically, aspirations generally embody the positive and ideal rather than realistic vision of one's future (e.g., Killeen, Lopez-Zafra, & Eagly, 2006). In the present research, leadership aspiration is a desired aspiration which embodies an individual's intention to advance to leadership position in the future (Tharenou & Terry, 1998). In contrast to possible future selves (Markus & Nurius, 1986), leadership aspirations incorporate a perspective that is more positive or desired. For example, in a study by

Killeen and colleagues (2006), it was found that although male students envisioned leadership as more possible than female students, both male and female students envisioned leadership as positive. Thus, the non-significant findings might result from aspirations invoking a positive and ideal vision of the future. Therefore, it is possible that the non-significant findings for Hypothesis 1 might stem from a combination of young women perceiving themselves as more agentic, lacking experience of the barriers faced by women leaders, and envisioning leadership as positive and thereby resulting in young women being overly optimistic in terms of their future careers in leadership.

For leadership role preferences, the results found that women, more than men, preferred HA leadership roles and endorsed communal goals, with communal goals fully mediating the relationship between gender and leadership role preferences. Consistent with previous goal research (e.g., Pohlmann, 2001; Roberts & Robin, 2000), the results showed that women, more than men endorsed communal goals such as helping others. Moreover, the results provide initial evidence for the goal congruity perspective of men's and women's leadership role preferences. Specifically, the findings support the supposition that individuals with certain interpersonal values and goals are more likely to have an interest in activities and careers that are perceived as congruent with their values and goals (Diekmann et al., 2011; Morgan et al., 2001). Although leadership is typically viewed as being hierarchy enhancing, the present research presents leadership as being HE or HA. Thus, the present findings suggest that gender differences in leadership role preferences stem from women's greater endorsement of communal goals and possibly the perception that HA leadership roles are more likely to afford fulfillment of these goals (Diekmann & Steinberg, 2013).

However, in contrast to previous research (e.g., Pohlmann, 2001; Roberts & Robin, 2000) and Hypothesis 2b, the results showed that men and women did not differ in their endorsement of agentic goals. There are a number of possible explanations for these results. The first possible explanation relates to women's agentic gender role self-concept. According to role congruity account of motivation (Diekmann & Eagly, 2008), men and women's internalised gender role beliefs influence their goal orientation. As noted previously, recent studies have shown that women nowadays perceive themselves as more agentic, thus, if women perceive themselves as more agentic, this might influence their goal orientation, possibly resulting in women's greater endorsement of agentic goals. The second possible explanation relates to the role of agentic goals in shaping leadership role preferences. Specifically, the results do not conclusively suggest that agentic goals do not play a part in leadership role preference or pursuit, but rather the results suggest that agentic goals may not play a part in differentiating men's and women's preferences for leadership roles. Thus, consistent with the goal congruity perspective which emphasises the importance of communal goals (Diekmann et al., 2011; Diekmann & Steinberg, 2013), the present research found that communal goal endorsement is influential in shaping women's preferences for certain leadership roles.

In addition, counter to previous research (e.g., Pohlmann, 2001) the results showed that although women endorsed communal goals more than men, both women and men endorsed agentic goals more than communal goals. A possible explanation for this result relates to the sample used in the present research. Given that previous research examining men and women's endorsement of communal and agentic goals have generally focused on general undergraduates or psychology undergraduates, the results may indicate that female business students might be more

agentic or are more likely to endorse agentic goals than the general female student population. For example, previous research (e.g., Collins, 1996; Frank, Gilovich, & Regan, 1993) has shown that business students can differ from the general student population in their characteristics and values, with business students found to be more materialistic and individualistic than the general student population. According to vocational theories such as Holland's theory of career choice (1985) and Sansone and Harackiewicz (1996) self-regulation model, individuals seek "fit" or congruence between their characteristics, values or goals and their chosen career. For example, in a study by Fernandez and colleagues (2003), it was found that although overall women preferred communal goals more than men, this changed when gender differences were examined by major, with both men and women in technical and science fields valuing more agentic type goals such as recognition and being the best and both men and women in social science fields valuing more communal type goals such as helping others. Thus, given that female business studies students have self-selected themselves into a business undergraduate degree, they might be more agentic in their characteristics and goals than female general or psychology student population. However, it is important to note that although women were found to more likely endorse agentic goals compared to communal goals, women endorsed communal goals more than men which is consistent with goal congruity perspective on gender differences in communal goal endorsement being influential in shaping gender differences in career preference.

In summary, the findings of Study 1 show that although men and women do not differ in their overall leadership aspirations, they do differ in their leadership role preferences due to their communal goal endorsement. The results of this research provide initial support to the goal congruity perspective (Diekmann et al., 2011) in the

context of leadership. However, the present research also acknowledges that the leadership role preference measure could be extended and improved. Therefore, Study 2 will extend Study 1 by testing for gender differences in leadership role preferences not only by using an optimised instrument with higher scale reliability but also by examining internalised gender beliefs as an antecedent of men's and women's leadership role preference.

CHAPTER SIX

STUDY 2

6.1 INTRODUCTION

The purpose of the Study 2 was twofold: First, it replicated the findings of Study 1. In line with the hypotheses for Study 1, the present study expected that (a) men and women will differ in their leadership aspirations (b) men and women will differ in their endorsement of goals and that (c) goal endorsement will underlie gender differences in preferences for leadership roles.

Second, given the influence of gender role beliefs on shaping men's and women's goal orientation, the present study examined the role of internalised gender beliefs as a possible antecedent of goal endorsement and HA (vs. HE) leadership role preference. According to social role theory (Eagly, 1987; Wood & Eagly, 2012), gender roles influence men's and women's beliefs and behaviours through gender role self-concept or gender identity and stereotypical expectations (i.e., gender norms). Consistent with previous research (e.g., Evans & Diekmann, 2009), gender role beliefs are conceptualised as consisting of an individual's gender role self-concept and gender norms. For the present research, gender role self-concept refers to men's and women's beliefs about their own characteristics and gender norms refer to men's and women's beliefs about the ideal characteristics of their gender.

As mentioned previously in Chapter Two, men and women internalise beliefs about their gender role and norms into their self-concept, forming a personal self-standard to judge themselves (Bem, 1974; Deaux & LaFrance, 1998; Hannover, 2000; Wood & Eagly, 2009, Wood & Eagly, 2010; Wood, Eagly & Diekmann, 2000). These internalised gender beliefs motivate men and women to self-regulate their

behaviour in a gender-typical way in order to be congruent with this personal self-standard (Carver & Scheier, 2008; Wood & Eagly, 2009; Wood & Eagly, 2010; Wood et al., 1997). According to the role congruity account of motivation (Diekmann & Eagly, 2008), internalised gender role beliefs foster gender differences in goal endorsement, because men and women seek role-congruous motivational orientations, specifically agency for men and communion for women. Moreover, through seeking this congruity, individuals are intrinsically rewarded for conforming to gender role expectations, subsequently experiencing positive consequences that further reinforce these internalised gender beliefs (Wood et al., 1997).

According to the goal congruity perspective (Diekmann & Steinberg, 2013), it is the internalisation of gender beliefs that results in men and women differing in their goal endorsement that consequently influences their interest in certain careers. For example, Evans and Diekmann (2009) found that internalised gender beliefs, particularly self-concept and gender norms, predicted the endorsement of gender-typical distant goals that in turn predicted gender-stereotypic career interest. Moreover, in their analyses, it was found that men's and women's endorsement of gender-typical goals were mainly explained by gender beliefs and not by participant sex, suggesting that internalised gender beliefs influence the content of goal endorsement and subsequently influences interest in certain careers (Evans & Diekmann, 2009). Therefore, extending on Study 1, the present study proposed that men's and women's internalised gender beliefs shall predict endorsement of agentic and communal goals, which shall, in turn, predict HA (vs. HE) leadership role preference. Specifically, the present study proposed the following:

Hypothesis 3 a: Men and women will differ in gender role self-concept with women rating themselves as more communal and less agentic than men.

Hypothesis 3 b: Men and women will differ in gender norms with women perceiving norms for their gender as more communal and less agentic than men.

Hypothesis 3 c: Goal endorsement will mediate the relationship between gender beliefs and HA (vs. HE) leadership role preference.

6.2 METHOD

6.2.1 Participants and Procedure

Participants consisted of 282 business undergraduate students (143 men, 139 women), whose ages ranged from 17 to 48 years with a mean age of 18.91 years ($SD = 3.04$). The majority of the sample identified their nationality as Irish (86.5%). The sample included students studying Business Studies (48.2%), Accounting and Finance (16.7%), European Business Studies (11%), and other business or economic related courses (24.1%). The majority of the participants had some type of work experience (58.2%), specifically internships (13.4%) summer work (32.3%), part-time work (42.7%) or full-time work (11.6%). Data collection took place before the commencement of students' "Psychology in Organisations" lecture at a business school in an Irish university and followed the procedure as outlined in Study 1.

6.2.2 Measures

Participant demographics. Participants reported their sex, age, nationality, study programme, and study year. Participants reported whether they had work experience and if so, specified the type of experience.

Gender role self-concept. Participants rated themselves on 13 stereotypically agentic or communal characteristics. Items were adapted from Diekmann and Eagly's (2000) 6 item scales for agentic and communal characteristics, with the addition of a seventh communal item "emotional" which was included because of its relevance to the leadership literature (Eagly & Carli, 2007; Heilman, 2002). Specifically, the instructions read as follows: "Please take a minute to think about yourself and your attributes. How characteristic are each of the following attributes for you". Participants rated themselves on each characteristic using a 5-point rating scale ranging from 1 (*not characteristic*) to 5 (*characteristic*). A principal component analysis (PCA) with varimax rotation was conducted. As previously noted in Chapter Four, a two factor solution was chosen, with communal items loading on the first factor and agentic items loading on the second factor. All retained items loaded at least .30 on their respective factors. The communal gender role self-concept scale included the items "sympathetic", "affectionate", "sensitive", "gentle", "kind", "emotional", and "supportive". The agentic gender role self-concept scale included the items "courageous", "dominant", "daring", "adventurous", "competitive", and "aggressive". The scales produced acceptable consistency reliability, for communal self-concept, $\alpha = .73$ and for agentic self-concept, $\alpha = .63$ ⁴.

Gender norms. Participants rated their ideal same-sex target on 13 stereotypically agentic and communal characteristics. Items were the same list of agentic and communal characteristics used for gender role self-concept. Specifically, for female participants, the instructions read as follows: "Please take a minute to

⁴ Although below the optimal .70, this Cronbach alpha for agentic self-concept is consistent with previous research (e.g., Evans & Diekmann, 2009).

think about the Ideal Woman. How characteristic will each of the following attributes be for the Ideal Woman?” For male participants, the instructions read as follows: “Please take a minute to think about the Ideal Man. How characteristic will each of the following attributes be for the Ideal Man?” Participants rated their ideal same-sex target on each characteristic using a 5-point rating scale ranging from 1 (*not characteristic*) to 5 (*characteristic*). A Principal Component Analysis (PCA) with varimax rotation was conducted. As previously noted in Chapter Four, a two factor solution was chosen, with communal items loading on the first factor and agentic items loading on the second factor. All retained items loaded at least .30 on their respective factors. The communal gender norm scale included the items “sympathetic”, “affectionate”, “sensitive”, “gentle”, “kind”, “emotional”, and “supportive”. The agentic gender norm scale included the items “courageous”, “dominant”, “daring”, “adventurous”, “competitive”, and “aggression”. The scales produced acceptable consistency reliability, for communal gender norms, $\alpha = .82$ and for agentic gender norms, $\alpha = .73$, respectively.

Goal Endorsements. Participants rated how important various goals were to them personally on a 5-point rating scale ranging from *very unimportant (1)* to *very important (5)* following the instructions outlined in Study 1. The scales produced acceptable consistency reliability, for agentic goals, $\alpha = .78$ and for communal goals, $\alpha = .79$, respectively.

General Leadership Aspirations. Participants rated their agreement or disagreement with 10 items on a 5-point rating scale ranging from *strongly disagree*

(1) to *strongly agree* (5) following the instructions outlined in Study 1. The scale produced acceptable consistency reliability, $\alpha = .91$.

Hierarchy Leadership Role Preference. Participants indicated their leadership role preference by examining 10 job titles and choosing between two paired job descriptions representing either HE or HA leadership roles, following the instructions as outlined in Study 1. For statistical analyses, participants' preferences for HA (vs. HE) leadership roles were totalled out of the total number of vignettes. The 10 leadership role vignettes produced acceptable consistency reliability, $\alpha = .81$.

6.3 RESULTS

As in Study 1, a one-way ANOVA was conducted to examine whether men and women differed in their leadership aspirations (see Hypothesis 1). The main effect for gender was non-significant, $F(1, 279) = 1.578, p = .210, \eta^2 = .006$. Men ($M = 4.04, SD = .706$) and women ($M = 3.93, SD = .771$) scored similarly in their leadership aspirations; therefore, Hypothesis 1a was not supported.

As in Study 1, a one-way ANOVA was conducted to examine whether men and women differed in their preference for HA (vs. HE) leadership roles (see Hypothesis 2a). The main effect for gender was significant, $F(1, 280) = 15.17, p < .000, \eta^2 = .05$, with women ($M = 4.57, SD = 2.89$) preferring HA leadership roles more than men ($M = 3.24, SD = 2.85$); therefore, Hypothesis 2a was supported.

As in Study 1, a 2 x 2 mixed ANOVA was conducted to examine whether men and women differ in their goal endorsements (see Hypothesis 2b). The main effect for goals was significant $F(1, 276) = 55.31, p < .000, \eta^2 = .17$, with participants overall rating agentic goals ($M = 4.00, SD = .45$) as more important than

communal goals ($M = 3.66$, $SD = .62$). In addition, the main effect for gender was significant, $F(1, 276) = 6.51$, $p = .011$, $\eta^2 = .02$, with women overall rating goals ($M = 3.89$, $SD = .37$) as more important than men ($M = 3.77$, $SD = .38$). To examine differences in goal endorsement for each gender, repeated-measures ANOVAs with goal endorsement as the within-subject variable were conducted. For women, the main effect for goal endorsement was significant, $F(1, 136) = 4.11$, $p = .045$, $\eta^2 = .03$, with women endorsing agentic goals ($M = 3.95$, $SD = .44$) more than communal goals ($M = 3.84$, $SD = .53$). For men, the main effect for goal endorsement was also significant, $F(1, 140) = 61.43$, $p < .000$, $\eta^2 = .31$, with men endorsing agentic goals ($M = 4.05$, $SD = .46$) more than communal goals ($M = 3.50$, $SD = .65$). As predicted, there was a significant Gender x Goal interaction, $F(1, 276) = 24.94$, $p < .000$, $\eta^2 = .08$ (see Figure 6.1). For agentic goals, unlike Study 1, there was a significant main effect for gender, $F(1, 276) = 4.06$, $p = .045$, $\eta^2 = .01$, with men ($M = 4.05$, $SD = .46$) rating agentic goals as more important than women ($M = 3.95$, $SD = .44$). For communal goals, there was a significant main effect for gender, $F(1, 277) = 8.11$, $p < .000$, $\eta^2 = .076$, with women ($M = 3.84$, $SD = .53$) rating communal goals as more important than men ($M = 3.50$, $SD = .65$); therefore, Hypothesis 2b was supported.

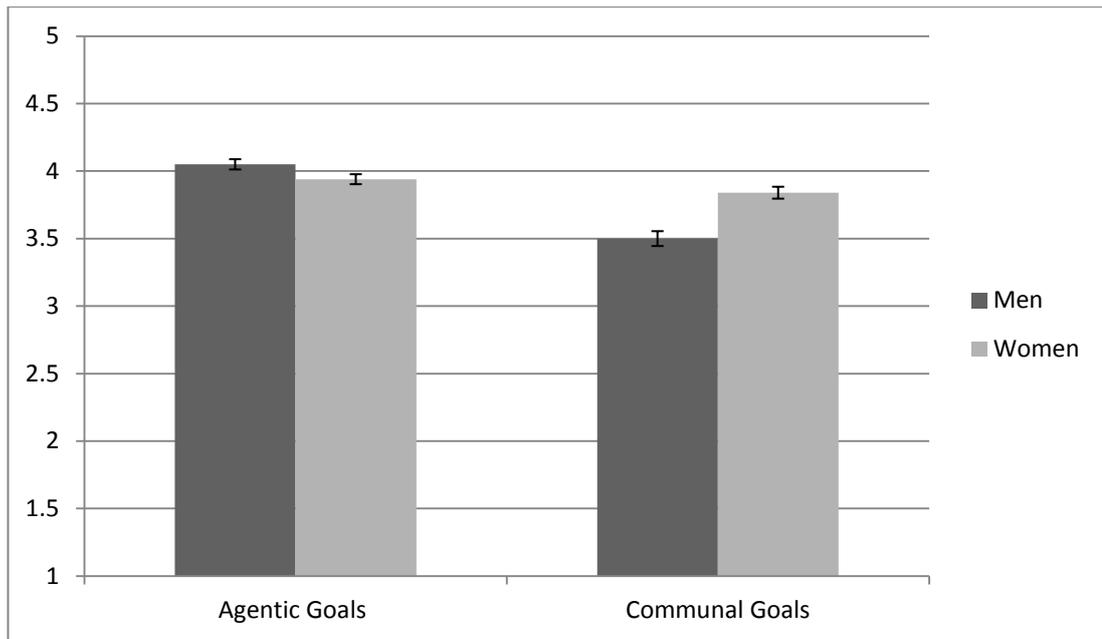


Figure 6.1 Mean scores for participant gender and goal endorsement (with standard error). Ratings of goals were made on a scale ranging from 1 (*very unimportant*) to 5 (*very important*).

As in Study 1, mediation was assessed using both Baron and Kenny’s (1986) mediation method with the Sobel test (1982) and Preacher and Hayes (2008) bootstrapping method. Specifically, mediation analyses using regression (Baron & Kenny, 1986) were performed to examine whether goals mediated the relationship between gender and leadership role preference (see Hypothesis 2c). The indirect effect of gender through goals was examined using the bootstrapping technique (Preacher & Hayes, 2004). First, regression analysis as per Baron and Kenny (1986) and Sobel test (1982) was conducted to examine whether communal goals mediated the relationship between gender and HA (vs. HE) leadership role preference. Following this, the bootstrapping technique was used to examine whether gender had indirect effect through communal goal endorsement on HA (vs. HE) leadership role preference. Second, regression analysis as per Baron and Kenny (1986) and Sobel test (1982) was then conducted to examine whether agentic goals mediated the

relationship between gender and HA (vs. HE) leadership role preference. Following this, the bootstrapping technique was used to examine whether gender had indirect effect through agentic goal endorsement on HA (vs. HE) leadership role preference. Finally, given the indirect effect of gender through agentic and communal goal endorsements on HA (vs. HE) leadership role preference, the bootstrapping technique was used to examine gender indirect effect through both agentic and communal goal endorsement together on HA (vs. HE) leadership role preference.

Table 6.1 presents the results of the regression analysis for communal goals. For HA (vs. HE) leadership role preference, the results of the regression analysis showed that gender predicted HA leadership role preference (see Hypothesis 2a). This effect of gender was still significant when communal goal endorsement was included in the analysis; therefore, communal goals only partially mediated the relationship between gender and HA leadership roles, Sobel $z = 3.03$, $p = .002$.

Table 6.1*Impact of Gender and Communal Goals on HA Leadership Role Preference*

Var.	Hierarchy Attenuating	
	Step 1	Step 2
Gender	1.33*** (.227)	.984** (.168)
Communal Goals		1.10*** (.414)
R^2	.051**	.101***
<i>Adj. R</i> ²	.048	.095
<i>F</i>	15.17***	15.55***
ΔR^2		.05
ΔF		15.32
Z Sobel		3.03**

Note: Unstandardised regression coefficients are shown in table, with standardised coefficients in parentheses. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

As in Study 1, non-parametric bootstrapping analysis (see Preacher & Hayes, 2004; Preacher, Rucker & Hayes, 2007) was used to test the significance of the indirect effects. For HA leadership role preference, the results indicate that both the total effect of gender (TE = 1.36, SE = .34, $p < .000$) and the direct effect were significant (DE = .98, SE = .35, $p = .005$). The results also show that gender had an indirect effect through communal goal endorsement on HA (vs. HE) leadership role preference (IE = .37, SE = .12, lower 95% CI = .17, upper 95% CI = .63).

Table 6.2 presents the results of the regression analysis for agentic goals. For HA (vs. HE) leadership role preference, the results of the regression analysis showed that gender predicted HA leadership role preference (see Hypothesis 2a). This effect of gender was still significant when agentic goal endorsement was included in the

analysis; further analysis also indicated that agentic goals did not significantly mediate the relationship between gender and HA leadership role preference, Sobel $z = 1.89, p = .058$.

Table 6.2

Impact of Gender and Agentic Goals on HA Leadership Role Preference

Var.	Hierarchy Attenuating	
	Step 1	Step 2
Gender	1.33*** (.227)	1.12*** (.190)
Agentic Goals		-1.99*** (-.308)
R^2	.051**	.145***
Adj. R^2	.048	.139
F	15.17***	23.31***
ΔR^2		.094
ΔF		30.10
Z Sobel		1.89

Note: Unstandardised regression coefficients are shown in table, with standardised coefficients in parentheses. * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$.

Non-parametric bootstrapping (see Preacher & Hayes, 2004; Preacher, Rucker & Hayes, 2007) results for agentic goals indicate that both the total effect of gender (TE = 1.35, SE = .34, $p < .000$) and the direct effect of gender were significant (DE = 1.13, SE = .33, $p < .000$). The results also show that gender had an indirect effect through agentic goal endorsement on HA (vs. HE) leadership role preference (IE = .22, SE = .12, lower 95% CI = .017, upper 95% CI = .48).

Given that gender was found to have an indirect effect through agentic and communal goal endorsement on HA (vs. HE) leadership role preference, non-parametric bootstrapping was also conducted to examine agentic and communal goal endorsement together. Specifically non-parametric bootstrapping was conducted to examine the indirect effect of gender through agentic and communal goals on HA (vs. HE) leadership roles. Results indicated that both the total effect of gender (TE = 1.35, SE = .34, $p < .000$) and the direct effect were significant (DE = .75, SE = .33, $p = .024$). The results also indicated that gender had an indirect effect through agentic and communal goal endorsement on HA (vs. HE) leadership role preference (IE = .59, SE = .15, lower 95% CI = .32, upper 95% CI = .91). Therefore, hypothesis 2c was partly supported.

To examine whether men and women differed in their gender role self-concept (see Hypothesis 3a), a 2 x 2 mixed ANOVA with gender role self-concept as the within-subjects factor and gender as the between-subject factor was conducted. The main effect for gender role self concept was significant, $F(1, 277) = 19.88$, $p < .000$, $\eta^2 = .067$, with participants overall rating themselves as more communal ($M = 3.63$, $SD = .62$) than agentic ($M = 3.40$, $SD = .58$). In addition, the main effect for gender was non-significant, $F(1, 277) = .725$, $p = .725$, $\eta^2 = .00$. As predicted, there was a significant Gender x Gender role self-concept interaction, $F(1, 277) = 49.52$, $p < .000$, $\eta^2 = .15$ (see Figure 6.2). For agentic gender role self-concept, there was a significant main effect for gender, $F(1, 277) = 33.03$, $p < .000$, $\eta^2 = .12$, with men ($M = 3.59$, $SD = .58$) rating themselves as more agentic than women ($M = 3.21$, $SD = .53$). For communal gender role self-concept, there was a significant main effect for gender, $F(1, 277) = 23.40$, $p < .000$, $\eta^2 = .078$, with women ($M = 3.81$, $SD =$

.60) rating themselves as more communal than men ($M = 3.46$, $SD = .60$); therefore, Hypothesis 3a was supported.

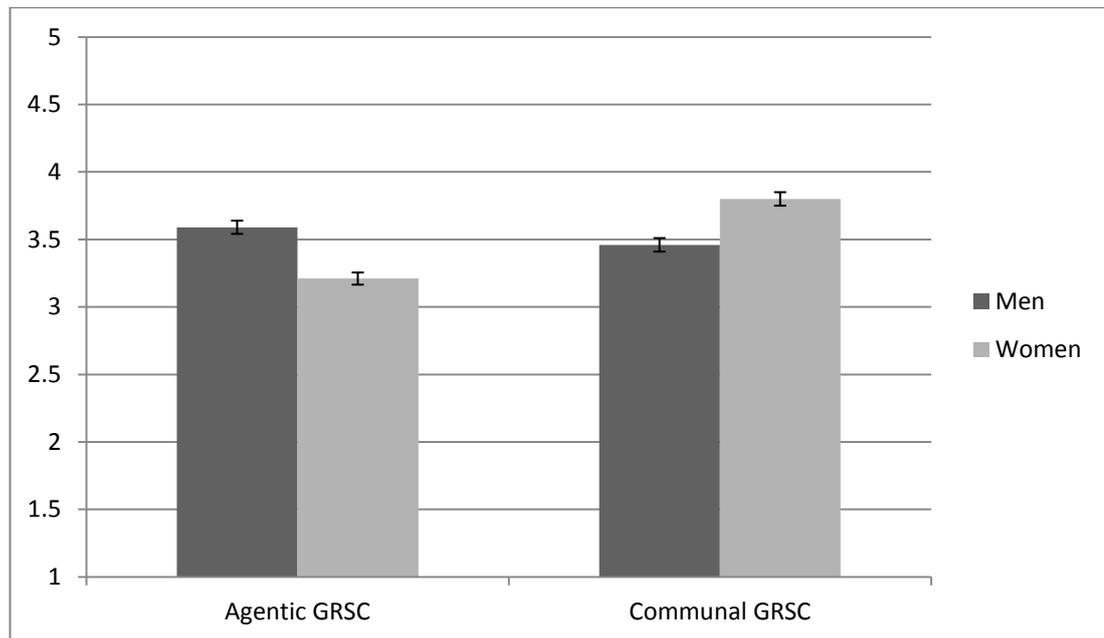


Figure 6.2 Mean scores for participant gender and gender role self-concept (with standard error). Ratings of gender role self-concept (GRSC) were made on a scale ranging from 1 (*not characteristic*) to 5 (*characteristic*).

To examine whether men and women differed in their gender norm endorsement (see Hypothesis 3b), a 2 x 2 mixed ANOVA with gender norms as the within-subjects factor and gender as the between-subject factor was conducted. The main effect for gender norms was significant, $F(1,272) = 40.48$, $p < .00$, $\eta^2 = .13$, with participants overall rating their gender norms as more communal ($M = 4.01$, $SD = .66$) than agentic ($M = 3.66$, $SD = .63$). In addition, the main effect for gender was non-significant, $F(1, 272) = 2.32$, $p = .129$, $\eta^2 = .00$. As predicted, there was a significant Gender x Gender Norm interaction, $F(1, 272) = 50.43$, $p < .000$, $\eta^2 = .15$ (see Figure 6.3). For agentic norms, there was a significant main effect for gender, $F(1, 273) = 33.03$, $p < .000$, $\eta^2 = .12$, with men ($M = 3.89$, $SD = .58$) rating their gender norms as more agentic than women ($M = 3.43$, $SD = .59$). For communal

gender norms, there was a significant main effect for gender, $F(1, 273) = 15.52, p < .000, \eta^2 = .05$, with women ($M = 4.16, SD = .52$) rating their gender norms as more communal than men ($M = 3.85, SD = .75$); therefore, Hypothesis 3b was supported.

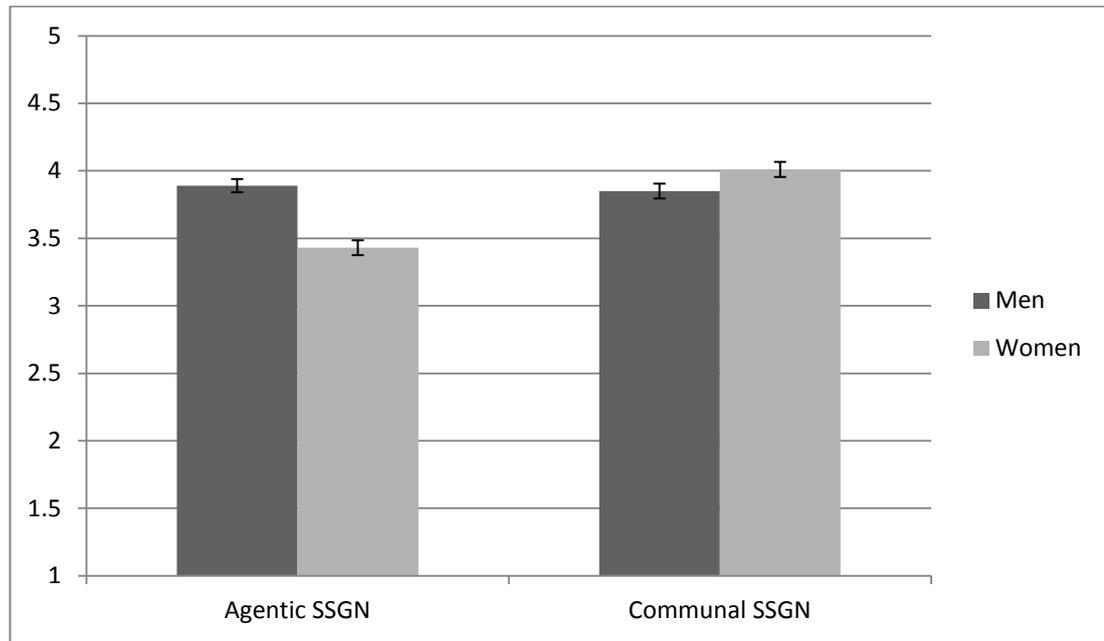


Figure 6.3 Mean scores for participant gender and gender norms (with standard error). Ratings of same-sex gender norms (SSGN) were made on a scale ranging from 1 (*not characteristic*) to 5 (*characteristic*).

To examine the interrelationships among the variables (see Hypothesis 3c), structural equation modelling (SEM) was employed in AMOS 19, with Maximum Likelihood (ML) estimation. Model fit of the SEM model was evaluated based on four goodness of fit indices: the χ^2 value; the Root Means Square Error of Approximation (RMSEA); the Standardised Root Means Square Residuals (SRMR) and Comparative Fit Index (CFI). According to Kline (2005), a good model can be indicated by χ^2/df (Chi square/degrees of freedom) below 3 and CFI above .90. Furthermore a good model fit can also be inferred from levels of 0.06 or lower for RMSEA combined with levels of 0.08 or lower for SRMR (Arbuckle, 2003). In

order to confirm the four factor structure (agentic gender beliefs, communal gender beliefs, agentic goals, and communal goals) for the measurement model, a confirmatory factor analysis using latent variables was conducted. The hypothesised CFA model that included 4 factors yielded a good fit to the data, $\chi^2(574) = 1062.27$, $p < .001$, CFI = .843, RMSEA = .056, SRMR = .072. Comparing the models using the Chi Square difference test (Bentler & Bonett, 1980), this model achieved superior fit to the alternative models (see Table 6.3).

Table 6.3

Tests of Alternative CFA Models.

Model	χ^2	<i>df</i>	$\Delta\chi^2$	CFI	RMSEA	SRMR
1. Hypothesised 4 factor model	1062.27	574	-	.843	.056	.0724
2. 3 factor model: (goals collapsed)	2043.66	591	981.39*	.532	.095	.1205
3. 3 factor model: (gender beliefs collapsed)	1888.39	591	826.12*	.582	.090	.1101
4. 2 factor model: (goals and gender beliefs collapsed)	2336.26	593	1273.99*	.438	.104	.1291
5. 1 factor: (all scales collapsed)	2662.5	594	1600.23*	.333	.113	.1324

Note: χ^2 = Chi-square discrepancy, *df* = degrees of freedom; $\Delta\chi^2$ = difference in chi-square; CFI = comparative fit index; RMSEA = root mean-square error of approximation; SRMR = Standardized Root Mean Square Residual. * $p < .001$

Following the CFA for the measurement model, the theoretical model with structural paths was tested (Anderson & Gerbing, 1988). Specifically, it examined

whether agentic and communal gender beliefs predicted HA leadership role preference, with agentic and communal goal endorsements as mediators. The model indicated full mediation of agentic and communal gender beliefs on HA (vs. HE leadership roles) via their respective goals displayed an adequate fit to the data, $\chi^2(609) = 1112.94, p < .001, CFI = .84, RMSEA = .055, SRMR = .072$ (see Figure 6.4). In this model, the paths from agentic and communal gender beliefs to HA leadership role preference failed to reach significance, indicating that agentic and communal goal endorsement fully mediated the relationship between their respective agentic and communal gender beliefs and HA leadership role preference. Therefore, Hypothesis 3c was supported.

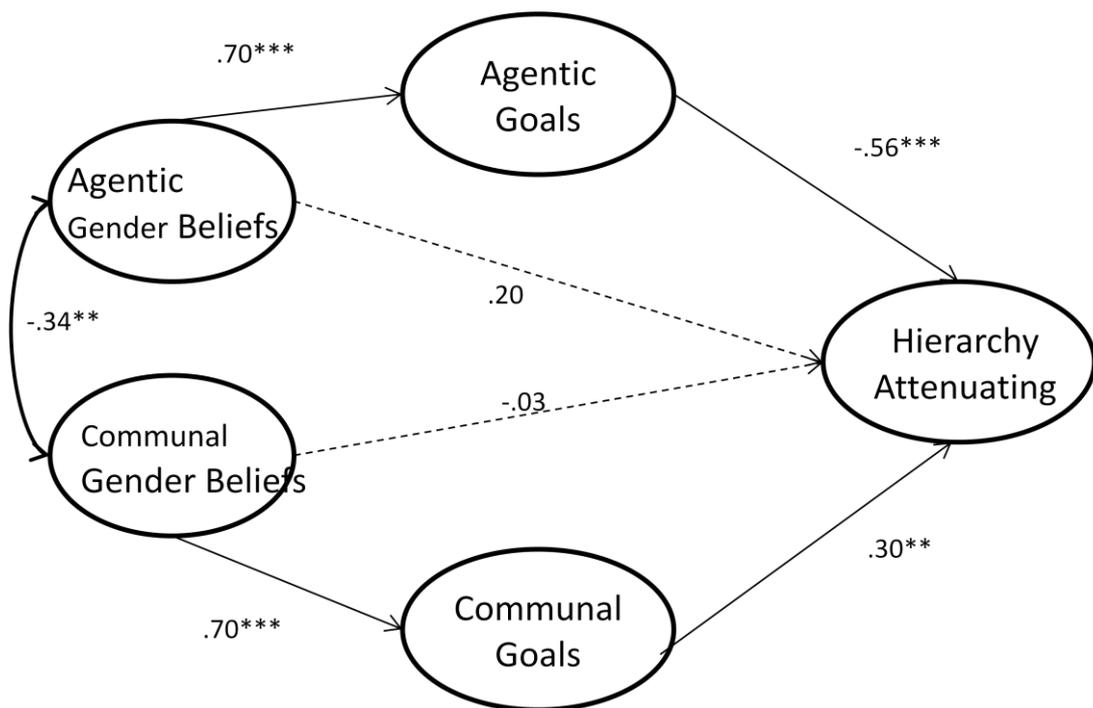


Figure 6.4 Model: Relationships between communal and agentic gender beliefs, communal and agentic goals, and HA (vs. HE) leadership roles, ** $p < .01$, *** $p < .000$.

As per Evans and Diekmann (2009) research, the model was examined including participants' gender as an additional predictor for goal endorsement, and in turn HA (vs. HE) leadership role preference. This model yielded an adequate fit, $\chi^2(641) = 1215.58, p < .001, CFI = .83, RMSEA = .056, SRMR = .0725$, however it was significantly poorer fit than previous Model, $\Delta\chi^2(4) = 18.876, p < .005$. Participant gender, thus, does not appear to contribute to mediation beyond gender beliefs.

6.4 DISCUSSION

Study 2 replicated the findings of Study 1. The study also examined the role of internalised gender beliefs as a possible antecedent of gender differences in goal endorsement and consequently leadership role preference. The results of Study 2 are mainly consistent with those of Study 1 and, therefore, provide additional evidence that even though women and men do not differ in their general leadership aspirations, they do differ in their leadership role preferences. Similar to Study 1, men and women both endorsed agentic goals more than communal goals. However, unlike Study 1, both agentic and communal goal endorsements were found to underlie gender differences in preferences for HA (vs. HE) leadership roles. The results also indicate that gender beliefs contribute significantly to men's and women's leadership role preference.

For leadership aspirations, as in Study 1, the results indicated that men and women did not differ in their leadership aspirations. As mentioned before, there are a number of possible explanations for these results. Specifically, one possible explanation mentioned in Study 1 relates to men's and women's gender role self-concept. Study 1 suggested that women nowadays might perceive themselves as more agentic than women in the past, possibly resulting in young women perceiving

less incongruence between their female gender role and the agentic leadership role. However, the results of Study 2 indicate that men and women significantly differ in their gender role self-concept, with women perceiving themselves as more communal and less agentic than men. Therefore, this might provide initial evidence that non-significant findings in Study 2 might result more from a combination of young women lacking experience of barriers faced by women leaders and envisioning leadership as positive.

For leadership role preference, as in Study 1, results support the role congruity (Eagly & Karau, 2002) and goal congruity perspectives (Diekmann et al., 2011), that is, individuals are more likely to choose occupational roles that afford fulfilment of their greater endorsed goals. However, unlike Study 1, gender differences in men and women's leadership role preferences resulted from their differential endorsement of both communal and agentic life goals. A possible reason for this discrepancy shall be discussed later in the general discussion (see Chapter Nine).

Consistent with the social role theory (Eagly, 1987), the current study found that internalised agentic and communal gender beliefs influenced endorsement of their respective goals and, consequently, preferences for leadership roles. Gender differences found in gender role self-concept and gender norms indicated that women rated themselves and their gender norms as more communal than men, whereas men rated themselves and their gender norms as more agentic than women. As mentioned before, internalised gender beliefs hold significant influence on men's and women's attitudes and behaviour as the adoption of gender norms or stereotypes are incorporated into their self-concept and act as important self-standards (Grossman & Wood, 1992; Wood et al., 1997). Men who adopt such gender-typical

self-standards have been found to endorse and orientate toward agentic goals such as dominance and independence, while women have been found to endorse and orientate toward communal goals such as connection with others (Swann, 1987, 1990; Wood et al., 1997). Therefore, internalisation of such gender beliefs were found to contribute to gender differences in goal endorsement and consequently gender differences in preferences for leadership roles.

In summary, as in Study 1, the results show that although men and women do not differ in their general leadership aspirations, they do differ in their leadership role preferences due to their goal endorsement. Thus, the results of this research provide further support to the goal congruity perspective (Diekmann et al., 2011) in the context of leadership. Nevertheless, given the influence of goal affordance stereotypes on men's and women's career interest and preferences, further research is needed to examine whether HE and HA leadership roles are perceived to afford different goals. Therefore, extending on the role congruity perspective, Study 3 shall examine whether HE and HA leadership roles are perceived to differ in their goal affordance stereotypes.

CHAPTER SEVEN

STUDY 3

7.1 INTRODUCTION

The purpose of Study 3 is to examine whether HE and HA leadership roles were perceived as differing in their goal affordance stereotypes. Specifically, extending on the findings of Study 1 and Study 2, Study 3 examined whether HA leadership roles were perceived as more likely to help fulfilment of communal goals than HE leadership roles and whether HE leadership roles were perceived as more likely to help fulfilment of agentic goals than HA leadership roles.

According to the goal congruity perspective (Diekmann et al., 2011), men's and women's differing attitudes toward certain careers is partly the result of perceptions that certain occupations or activities are more likely to afford the fulfilment of certain goals. These perceptions of goal affordance are referred to as goal affordance stereotypes (Diekmann & Steinberg, 2011). Goal affordance stereotypes influence men's and women's career interest and preference because when making career choices, men and women typically "match" or seek congruence between their greater endorsed goals and occupational roles that are more likely to afford fulfilment of these goals (Brown, 2002; Diekmann et al., 2010, 2011; Marini et al., 1996; Morgan et al., 2001; Weisgram, Dinella, & Fulcher, 2011).

For the present research, leadership roles are conceptualised within the framework of hierarchy orientation as being HE or HA. Previous research has shown that different norms are associated with HE or HA environments, that is, individuals in HE environments have been found to be more anti-egalitarian than individuals in HA environments (Dambrun et al., 2002; Poterat et al., 2007; Sidanius et al., 1994).

Moreover, in a study by De Oliveira and colleagues, HE roles were perceived as more likely to enhance hierarchy and inequalities, whereas HA roles were perceived as more likely to attenuate hierarchy and inequalities (De Oliveira et al., 2012). Therefore, as HA roles serve oppressed groups and are perceived to embody egalitarian values (Dambrun et al., 2002) arguably reflective of communion (Abele & Wojciszke, 2007; Bakan, 1966), HA leadership roles should be perceived as more likely to afford fulfilment of communal goals. In contrast, as HE roles serve powerful groups and are perceived to embody inegalitarian and power values (Dambrun et al., 2002) arguably reflective of agency (Abele & Wojciszke, 2007; Bakan, 1966), HE leadership roles should be perceived as more likely to afford fulfilment of agentic goals. Specifically, the present study proposed the following:

Hypothesis 4: HA leadership roles and HE leadership roles will differ in their goal affordance stereotypes, with HA leadership roles perceived as more likely to help fulfilment of communal goals than HE leadership roles and HE leadership roles as more likely to help fulfilment of agentic goals than HA leadership roles.

7.2 METHOD

7.2.1 Participants and Procedure.

Participants consisted of 102 undergraduate students (34 men, 68 women), whose ages ranged from 19 to 43 years with a mean age of 21.75 years ($SD = 2.74$). The majority of the sample identified their nationality as Irish (80.4%). The sample included students studying Accounting and Finance (28.4%), Business Studies INTRA (20.6%), Business Studies (14.7%), International Business with Languages

(12.4%), Psychology (10.8%) and other business or economic related courses (11.8%). The majority of the participants had some type of work experience (72.5%), specifically internships (35.6%), summer work (5.5%), part-time work (41.1%) or full-time work (17.8%). Data collection took place before the commencement of students' "Business Strategy" or "Organisational Psychology" lecture at a business school in an Irish university and followed the procedure as outlined in Study 1.

7.2.2 Measures

Participant demographics. Participants reported their sex, age, nationality, study programme, and study year. Participants reported whether they had work experience and if so, specified the type of experience.

Goal Affordance Stereotypes. Participants rated the extent to which each leadership role helped or hindered fulfilment of agentic and communal life goals. A short list of items was adapted from the list of communal and agentic life goals used in the previous studies. Specifically, the instructions read as follows: "Please read each job advertisement carefully. Then indicate the extent to which you believe each job helps or hinders fulfilling the following goals?". Participants rated themselves on each item using a 5-point rating scale ranging from 1 (*hinders a lot*) to 5 (*helps a lot*).

A PCA with varimax rotation was conducted to assess the underlying structure of goal affordances stereotypes for each leadership role. As previously noted, a two factor solution was chosen, with communal goal affordance stereotypes loading on one factor and agentic goal affordance loading on the other factor (for factor loadings, see Appendix G). Furthermore, in accordance with previous research

(Diekmann et al., 2010, 2011) and the findings of Study 1 and Study 2, goal items were assigned according to the dimensions of agency and communion. The agentic goal affordance scale included the items “recognition”, “status”, “career”, “achievement”, “succeeding in life” and “power”. The communal goal affordance scale included the items “helping others”, “caring for others”, “attending to others’ needs”, and “serving humanity”. Measures of agentic and communal goal affordance were computed by averaging within each leadership role preference. The scales produced acceptable consistency reliability for agentic goal affordances for HE leadership roles $\alpha = .86$, and for HA leadership roles were $\alpha = .87$ and for communal goal affordances for HE leadership roles $\alpha = .89$ and for HA leadership roles $\alpha = .80$.

7.3 RESULTS

To examine whether HA or HE leadership roles would be perceived as more likely to fulfil communal goals (see Hypothesis 4), a 2 x 2 mixed ANOVA, with communal goal affordance for leadership roles as the within-subjects factor and gender as the between-subject factor was conducted. As predicted, the main effect for communal goal affordance was significant, $F(1, 83) = 122.1, p < .000, \eta^2 = .60$, with HA leadership roles ($M = 3.77, SD = .50$) perceived as more likely to afford communal goals than HE leadership roles ($M = 2.92, SD = .65$). In addition, the main effect for gender was non-significant, $F(1, 83) = 3.91, p = .051, \eta^2 = .05$, (for means, see Table 7.1). Also there was a non-significant Communal Goal Affordance x Gender interaction, $F(1, 83) = 1.11, p = .295, \eta^2 = .01$. Men and women perceived communal goal affordance of HE and HA leadership roles similarly (for means, see Table 7.1). Therefore, Hypothesis 1 was supported.

Table 7.1

Means (standard deviations) on Communal Goal Affordance of Leadership Roles by Gender

Gender	Communal Goal Affordance	
	Hierarchy Enhancing	Hierarchy Attenuating
Male	2.82 (.47)	3.57 (.54)
Female	2.96 (.71)	3.87 (.45)
Total	2.92 (.65)	3.77 (.50)

To examine whether HA or HE leadership roles would be perceived as more likely to fulfil agentic goals (see Hypothesis 4), a 2 x 2 mixed ANOVA, with agentic goal affordance for leadership roles as the within-subjects factor and gender as the between-subject factor was conducted. As predicted the main effect for agentic goal affordance was significant $F(1, 80) = 38.46, p < .000, \eta^2 = .33$, with HE leadership roles ($M = 4.00, SD = .40$) perceived as more likely to afford agentic goals than HA leadership roles ($M = 3.73, SD = .47$). In addition, the main effect for gender was non-significant, $F(1, 80) = 2.06, p = .155, \eta^2 = .03$, (for means, see Table 7.2). Also there was a non-significant Agentic Goal Affordance x Gender interaction, $F(1, 80) = .175, p = .677, \eta^2 = .00$. Men and women perceived agentic goal affordance of HE and HA leadership roles similarly (for means, see Table 7.2). Therefore, Hypothesis 1 was supported.

Table 7.2

Means (standard deviations) on Agentic Goal Affordance of Leadership Roles by Gender

Gender	Agentic Goal Affordance	
	Hierarchy Enhancing	Hierarchy Attenuating
Male	3.90 (.44)	3.65 (.42)
Female	4.05 (.38)	3.77 (.49)
Total	4.00 (.40)	3.73 (.47)

7.4 DISCUSSION

Study 3 examined whether hierarchy enhancing and hierarchy attenuating leadership roles were perceived as differing in their goal affordance stereotypes. As expected, the results indicated that HE and HA leadership roles were perceived to differ in their goal affordance stereotypes. Specifically, HE leadership roles were perceived as more likely to afford fulfilment of agentic goals than HA leadership roles. In contrast, HA leadership roles were perceived as more likely to afford fulfilment of communal goals than HE leadership roles.

Consistent with related research (e.g., Diekmann et al., 2010, 2011; Morgan et al., 2001; Weisgram et al., 2011), the present research demonstrated that HE and HA leadership roles are perceived to afford different goal affordance stereotypes and in doing so, supports and extends the goal congruity perspective into the context of leadership. In particular, the results indicated that men's and women's differences in

leadership role preferences might stem from leadership roles being perceived to differ in the fulfilment of men's and women's greater endorsed goals. For instance, Study 1 and Study 2 found that women, more than men, endorse communal goals and that communal goals either fully (Study 1) or partly (Study 2) mediated the relationship between gender and leadership role preference. Therefore, consistent with the goal congruity perspective (Diekmann et al., 2011; Diekmann & Steinberg, 2013) the present research suggests that women shall prefer HA leadership roles than men, because HA leadership roles are perceived to afford the fulfilment of women's greater endorsed communal goals

In addition, the present study also provides support for the conceptualisation of leadership as capable of being HE or HA. Previous research (Fiske, 1993; Georgeson & Harris, 1998; Pratto & Pitpitan, 2008; Sidanius & Pratto, 1998) has suggested that holding a position of power, such as a leadership position, is related to negative attitudes and hostile behaviour toward subordinate groups, and endorsement of inequality between groups (De Oliveira et al., 2012). In contrast to these findings, the present study supports the supposition that leadership is a broad concept that incorporates different types and styles of leadership that can include aspects of communion, such as helping and serving others. Specifically, the present study demonstrated that although leadership is closely associated with power, it is also capable of embodying egalitarian and communal values and in doing so, is capable of being hierarchy attenuating.

In summary, the findings of Study 3 show that HE and HA leadership roles were perceived as differing in goal affordance stereotypes. The results further expand on the findings of Study 1 and Study 2, and goal congruity perspective (Diekmann et al., 2011) in the context of leadership. However, although Studies 1-3

support the goal congruity perspective and show that a relationship exists between goal endorsement and men's and women's leadership role preferences, the nature of the studies does not allow supposition about the direction or causation of this relationship. Therefore, Study 4 will extend on Study 1-3, by testing the influence of situationally activated goals on men's and women's leadership role preferences, and in doing so provide evidence of the causal direction of goal endorsement and men's and women's leadership role preference.

CHAPTER EIGHT

STUDY 4

8.1 INTRODUCTION

The purpose of Study 4 was to experimentally manipulate the situationally activation of goals in order to test the hypothesis that greater endorsement of certain goals causes increased or decreased preference for HA (vs. HE) leadership roles. Specifically, by examining and testing the influence of situationally activated agentic and communal goals on leadership role preference, Study 4 provides initial evidence of the causal relationship between goal endorsement and men's and women's leadership role preference. Moreover, consistent with previous research (e.g., Diekmann et al., 2011), the present study proposes that the priming effect of activated goals shall not differ for men and women providing further evidence about the influential effect of goal endorsement on leadership role preference.

According to Moskowitz (2002), temporarily activated goals, which result from implicit influence at a specific stage of impression formation, are capable of being triggered or primed in any individual by the contingencies present in their social environment. Moskowitz (2002) further posits that quasi-needs (Lewin, 1936) and current concerns (Klinger, 1975) produce tension states that represent unfulfilled goals and that, to lessen such tension, an individual will seek to attain the goal. Thus, goal activation may occur if quasi-needs are created by having participants experience failure, which triggers feelings of being "incomplete" resulting in goal activation and pursuit in order to restore one's sense of self (Moskowitz, 2002). For

example, in a test of the goal congruity perspective, Diekmann et al., (2011) designed an experimental study in which they activated communal goals through an adaptation of Moskowitz's priming writing task (Moskowitz, 2002). Specifically communal goals were situationally activated by having participants write about a time they failed to act communally. Subsequently, Diekmann and colleagues (2011) found that activation of communal goals resulted in both men's and women's STEM disinterest. Therefore, the present study adopts a similar experimental method to provide specific causation evidence for the goal congruity process, specifically in regards to the influence of goals on leadership role preference. However, given the findings of Study 2, the present study extends on Diekmann and colleagues' (2011) priming writing task by also examining the influence of situationally activated agentic goals on leadership role preference. Specifically, the present study proposed the following:

Hypothesis 5: Activated communal goals will increase HA (vs. HE) leadership role preference.

Hypothesis 6: Activated agentic goals will decrease HA (vs. HE) leadership role preference.

8.2 METHOD

8.2.1 Participants and Procedure

Participants consisted of 220⁵ business undergraduate students (113 men, 107 women), whose ages ranged from 16 to 54 years with a mean age of 18.52 years (*SD* = 2.90). The majority of the sample identified their nationality as Irish (86.3%). The

⁵ One participant had been excluded from this sample due to outlier analyses and examination of the priming exercise.

sample included students studying Business Studies (31.5%), Accounting and Finance (25.8%), European Business Studies (18.3%), and other business or economic related courses (24.3%). The majority of the participants had some type of work experience (56.5%), specifically internships (4.9%) summer work (35%), part-time work (52%) or full-time work (8.1%).

Before the commencement of their “Introduction to Economics” lecture at a business school in an Irish university, participants were first presented with both a cover letter which included informed consent and a writing task (for cover letter, see Appendix A). Participants, who chose to participate, were given 7 minutes to complete their essay. Following the writing task, participants were given a self-report questionnaire, which took approximately 10 minutes to complete. Upon completion, the surveyor collected all writing tasks and questionnaires from participants and thanked them for their participation.

8.2.2 Measures

Participant demographics. Participants reported their sex, age, nationality, study programme and study year. Participants also reported whether they had work experience and if so, specified the type of experience.

Hierarchy Leadership Role Preference. Participants indicated their leadership role preference by examining 10 job titles and choosing between two paired job descriptions that represented either HE or HA leadership roles, following the instructions as outlined in Study 1. The vignettes produced acceptable consistency reliability, $\alpha = .77$.

Goal Priming Task. Participants completed either a writing task used to activate communal or agentic goals, or a neutral writing task. Writing tasks⁶ were adapted from Diekmann et al., (2011). Participants in the communal goal condition were instructed to write about a time they failed to act communally. Specifically, the instructions read as follows:

Please think about a time when you wanted to act communally - that is, you wanted to care for others, help others or attend to others' needs - but you were unable to do so. What was this situation, and what did it feel like? In the space below, please write about this time in as much detail as you can for the next 7 minutes.

Participants in the agentic goal condition were instructed to write about a time they failed to act communally. Specifically, the instructions read as follows:

Please think about a time when you wanted to act agentially - that is, you wanted to achieve something, earn status or gain recognition - but you were unable to do so. What was this situation, and what did it feel like? In the space below, please write about this time in as much detail as you can for the next 7 minutes.

Participants in the neutral task were instructed to write about the nature features of their county (for writing task, see Appendix B).

8.3 RESULTS

To examine whether participants differed in their HA (vs. HE) leadership role preference (see Hypothesis 5 and 6), a two-way between-groups ANOVA, with

⁶ Communal and Agentic goals used in the prime were pre-tested. N = 39. Ps. were asked to rate agentic and communal goals on 5 point rating scale from masculine (1) to feminine (5); from negative (1) to positive (5); from undesirable (1) to desirable (5); and from bad (1) to good (5). Items were chosen based on loading in previous studies and most neutral mean ratings on these scales.

priming condition and gender as between-subject factors and HA (vs. HE) leadership role preference as the dependent variable was conducted. The main effect for gender was significant $F(1, 214) = 8.74, p = .003, \eta^2 = .04$ (for means, see Table 8.1), with women overall preferring HA leadership roles more than men. Consistent with previous research (Diekmann et al., 2011), there was a non-significant Gender x Condition interaction, $F(2, 214) = .233, p = .792, \eta^2 = .00$, (for means, see Table 8.1), with goal priming effects not significantly differing for men and women. To further examine this, one-way ANOVAs were conducted to examine gender differences for each condition. For the control condition, it was found that women preferred HA (vs. HE) leadership roles more than men, $F(1,71) = 4.26, p = .043, \eta^2 = .06$. For the agentic condition, it was found that women preferred HA (vs. HE) leadership roles more than men, $F(1, 71) = 4.17, p = .045, \eta^2 = .06$. However, as expected, for the communal condition, men and women reported similar preferences for HA (vs. HE) leadership roles, $F(1, 72) = 1.17, p = .282, \eta^2 = .02$ (for means, see Table 8.1).

Table 8.1

Means (standard deviations) across Conditions for HA Leadership Role Preference by Gender

Gender	Goal Condition		
	Control (<i>n</i> = 73)	Communal (<i>n</i> = 74)	Agentic (<i>n</i> = 73)
Hierarchy Attenuating			
Male	3.62 (2.50)	5.18 (3.34)	4.03 (2.56)
Female	4.89 (2.74)	5.92 (2.36)	5.29 (2.71)
Total	4.25 (2.68)	5.54 (2.91)	4.63 (2.69)

Note: **p* < .05.

As predicted, the main effect for condition was significant, $F(2, 214) = 4.36$, $p = .014$, $\eta^2 = .04$. Specifically, planned comparisons revealed that participants in the communal condition ($M = 5.54$, $SD = 2.91$) reported greater preference for HA (vs. HE) leadership roles than participants in the control condition ($M = 4.25$, $SD = 2.68$), $F(1, 217) = 8.06$, $p = .005$. Planned comparisons also revealed that participants in the agentic condition ($M = 4.63$, $SD = 2.69$) and participants in the control condition ($M = 4.25$, $SD = 2.68$) reported similar preferences for HA (vs. HE) leadership roles, $F(1, 217) = .704$, $p = .403$. Therefore, Hypothesis 1 was supported, but Hypothesis 2 was not supported.

Further analysis, specifically planned comparison by gender, also revealed that women in the control condition and women in the communal condition, $F(1, 104) = 2.80$, $p = .098$ and agentic condition, $F(1, 104) = .411$, $p = .523$ reported similar preference for HA (vs. HE) leadership roles. Planned comparisons by gender also revealed that men in the communal condition reported greater preference for HA

(vs. HE) leadership roles than in the control condition, $F(1, 110) = 5.71, p = .019$. Planned comparisons also revealed that men in the control condition and agentic condition reported similar preferences for HA (vs. HE) leadership roles, $F(1, 110) = .383, p = .537$. Thus, the results show that men in the communal condition significantly differed in their preference for HA leadership roles compared to men in the control condition, whereas women did not differ across the conditions (for means, see Table 8.1).

8.4 DISCUSSION

Study 4 examined whether the activation of goals would test the hypothesis that greater endorsement of communal or agentic goals would increase or decrease men's and women's preference for HA (vs. HE) leadership roles. The results of the study provide causal evidence for the effects of communal goals on gender differences in leadership role preferences. Specifically, it was found that situationally activated communal goals, not agentic goals, influenced preference for HA (vs. HE) leadership roles, further supporting Diekmann and colleagues (Diekmann et al., 2011; Diekmann & Steinberg, 2013) assertion about the importance of communal goals in shaping women's career preferences.

The results of study 4 lend further support to both the previous studies' findings (Study 1-3) and Diekmann and colleagues' (Diekmann et al., 2011; Diekmann and Steinberg, 2013) supposition that because women internalise communal gender role beliefs, they will more likely endorse communal goals than men and in doing so, prefer occupational roles that afford fulfilment of these greater endorsed communal goals. Specifically, in Study 4, it was found that communal goal activation increased participants' preferences for HA (vs. HE) leadership roles. In particular, further

analysis showed that activation of communal goals resulted in men's increased preference for HA (vs. HE) leadership roles, resulting in men and women reporting similar preference for HA leadership roles in the communal goal condition. Thus, due to communal goal activation, gender differences in hierarchy leadership role preferences disappeared. These findings are consistent with the idea that gender differences in leadership role preferences occur in part because of gender differences in communal goal endorsement, further supporting the assertion that communal goal processes are influential in contributing to gender differences in leadership role preferences (Diekmann et al., 2011). Thus, the present research both supports the goal congruity perspective in the context of leadership and provides causal evidence for a new perspective on the underlying psychological processes for men's and women's leadership role preferences.

CHAPTER NINE

DISCUSSION AND CONCLUSIONS

9.1 INTRODUCTION

The overall objectives of the research were: (1) to examine whether men and women differed in their leadership aspirations; and (2) to examine whether men and women differed in their leadership role preferences. First, building on the theoretical framework of the role congruity theory (Eagly & Karau, 2002), the research hypothesised that women and men would differ in their leadership aspirations, with women showing lower leadership aspirations than men. Second, within the theoretical framework of the goal congruity perspective (Diekmann et al., 2011), the present research hypothesised that men and women would endorse different goals and that leadership roles would be perceived to vary in their affordance of these goals which, in turn would lead to the preference of different leadership roles by men and women. These hypotheses were examined over four studies resulting in a number of key findings. This chapter begins with a discussion of these findings, followed by an overview of the theoretical contributions and practical implications of the research. Finally, the chapter concludes with an outline of the limitations and recommendations for future research.

9.2 DISCUSSION OF THE FINDINGS

In this section, the results of the research are discussed. Overall, the majority of hypotheses are supported. For non-significant findings, possible theoretical explanations are discussed.

9.2.1 Leadership Aspirations

In Study 1 and Study 2, Hypothesis 1 proposed that men and women would differ in their leadership aspirations, with women reporting lower leadership aspirations than men. From a role congruity perspective, it was posited that gender differences in leadership aspirations would result from the perceived incongruence between the female gender role and the leadership role, with women less likely to aspire to leadership positions than men in order to avoid this incongruence and the subsequent negative consequences. However, counter to previous related research (e.g., Litzky & Greenhaus, 2007; Powell & Butterfield, 1979, 2003), the hypothesis was not supported and both studies found that men and women had a similar level of leadership aspirations. A number of possible explanations for this finding are explored.

The first explanation relates to the role of gender identity or gender role self-concept in shaping aspirations. Empirical studies have shown that gender differences in self-ascribed agency have narrowed, with women nowadays perceiving themselves as more agentic (e.g., Sczesny 2003; Tinklin, Croxford, Ducklin, & Frame, 2005; Twenge, 1997, 2001). Moreover, while perceived gender differences in communion continue to remain stable, recent studies have indicated that women are perceived to become even more agentic in the future (e.g., Diekmann & Eagly, 2000; Diekmann & Goodfriend, 2006). This implies that women may perceive less incongruence between their female gender role and the agentic leadership role than in the past, possibly resulting in men and women having a similar level of leadership aspirations. In support of this assumption, Powell and Butterfield (2013) found that it was the masculinity of one's gender identity, not one's sex that predicted top management aspirations. This has led to suggestions in the literature (e.g., Powell &

Butterfield, 2003, 2013; Tharneau, 2001) that individuals with a high masculine identity are more likely to aspire to top management than individuals with a low masculine gender identity. Consistent with the role congruity account (Diekmann & Eagly, 2008; Wood & Eagly, 2009), it is argued that individuals with high masculine gender identity will perceive themselves as more congruent with masculine-typed senior management positions, compared to individuals with low masculine gender identity (e.g., Powell & Butterfield, 2003, 2013; Tharenou, 2001). Thus, it can be argued that because women perceive themselves as more agentic nowadays, the incongruence between their gender role and leadership role has narrowed; possibly contributing to men and women having a similar level of leadership aspirations. Given that the present research found that men and women did differ in their agentic gender role self-concept but did not differ in their leadership aspirations, further research is needed to examine if other variables contribute to this relationship.

The second possible explanation for the finding relates to the sample used in the research. As noted in Chapter Two, women leaders who act in an agentic manner to narrow the perceived incongruence or lack of fit between their gender role and leadership role often face negative evaluations and consequences for violating their female gender role (Eagly & Karau, 2002). In contrast to other research (e.g., van Vianen & Fisher, 2002; Litzky & Greenhaus, 2007), the samples used in the present research consisted of young undergraduate business students with limited work experience. Thus, it might be the use of this particular sample that contributed to the non-significant findings. Specifically, it is unlikely that young female business students have encountered the barriers facing women leaders in the workforce (e.g., gender bias, glass ceiling, discrimination, sexism etc.). Consequently, they may not have experienced the accompanying/resultant negative self- and other-evaluations

(Eagly & Karau, 2002; Heilman, 2001) that can influence self-limiting behaviours (Dickerson & Taylor, 2000). Consistent with this viewpoint, Powell and Butterfield (2003) found that female undergraduate business students had higher aspirations to top management than older female MBA students, and suggested that this difference occurred due to lack of experience by younger and less experienced students.

A further explanation for the absence of gender differences in leadership aspirations might relate to the aspirations concept itself, which generally embodies positive and ideal rather than realistic visions of one's future (Killeen et al., 2006). For example, in a study by Killeen and colleagues (2006), male and female students were asked to envision themselves in a leadership role, and then were asked to indicate how positive and possible the role would be for them. It was found that although male students envisioned leadership as more possible, both female and male students envisioned leadership as positive. Thus, in Study 1 and Study 2, it is possible that young women envisioned a positive and ideal future as a woman leader, without consideration of the barriers or challenges that women typically encounter in the pursuit of leadership (Eagly & Karau, 2002; Heilman, 2001).

To conclude, the non-significant findings for Hypothesis 1 may have occurred due to a combination of young women perceiving less incongruence between themselves and leadership roles, lacking awareness or personal experience of the barriers faced by women leaders, and envisioning leadership as positive, thereby perhaps being overly optimistic in terms of their future careers in leadership. These non-significant findings provide an important contribution to further understanding women and leadership. Specifically, it provides initial evidence that young women, prior to entering the workforce, aspire to leadership as much as their male counterparts. The implications of this shall be discussed later in this chapter.

9.2.2 Leadership Role Preferences

The present research set out to examine whether women and men differed in their preferences for certain leadership roles. From the goal congruity perspective, it was hypothesised that women would prefer HA (vs. HE) leadership roles more than men, because of gender differences in goal endorsement and the perception that HA leadership roles would tend to afford the fulfilment of women's greater endorsed communal goals. As noted in previous chapters, the goal congruity perspective (Diekmann et al., 2011; Diekmann & Steinberg, 2013) emphasises the influence of goal endorsement and goal affordance stereotypes in forming attitudes toward goal pursuit. Specifically, Diekmann and colleagues (Diekmann et al., 2011; Diekmann et al., 2010; Diekmann & Steinberg, 2013) posit that gender differences in communal goal endorsement and the perception of communal goal affordance influences women's preferences for certain careers. However, given the close association between agency and leadership (e.g., Schuh et al., 2013), the present research examined whether both communal and agentic goals were influential in shaping men's and women's preferences for leadership roles.

In Studies 1 and 2, Hypothesis 2a proposed that men and women would differ in their leadership role preferences, with women showing greater preference for HA leadership roles compared to men. Hypothesis 2b proposed that men and women would differ in their goal endorsement with women reporting greater endorsement of communal goals and men reporting greater endorsement of agentic goals. Hypothesis 2c proposed that goal endorsement would mediate the relationship between gender and HA leadership role preference. As predicted in Studies 1 and 2, women preferred HA leadership roles and endorsed communal goals more than men, with communal goals either fully (Study 1) or partially (Study 2) mediating the

relationship between gender and leadership role preference. These findings are consistent with previous research (e.g., Diekmann et al., 2010; Pöhlmann, 2001; Roberts & Robin, 2000) that has found that women endorse communal goals such as helping others more than men.

However, counter to Hypothesis 2b, and previous research (e.g., Pöhlmann, 2001; Roberts & Robin, 2000) that has found men endorse agentic goals more than women, the present research found men and women either did not differ in their agentic goal endorsement (Study 1) or did differ, with men rating agentic goals as more important than women (Study 2). There is a possible explanation for why men and women did not differ in their agentic goals in Study 1. As noted previously, recent studies suggest that women are now more likely to perceive themselves as more agentic, and thereby narrow the gender differences gap in self-ascribed agency. According to the role congruity account of motivation (Diekmann & Eagly, 2008), gender role beliefs are internalised, forming a personal self-standard that influences goals and goal pursuit options. Thus, if women perceive themselves as more agentic nowadays, this should influence their goal orientation resulting in greater endorsement of agentic goals, and consequently narrow the gender differences gap for agentic goal endorsement.

This explanation, however, does not explain the discrepancy of the findings relating to gender differences in agency goals between Study 1 and Study 2. A possible explanation for this discrepancy may relate to the timing of the data collection for Study 1 and Study 2. Specifically, participants in Study 1 were sampled at the end of their first year of university, whereas participants in Study 2 were sampled at the beginning of their first year. Previous research has emphasised that holding similar social roles and being in similar environments can often result in

men and women becoming more similar in their beliefs and behaviours (Diekmann & Eagly, 2008; Diekmann & Schneider, 2010; Yoder & Kahen, 2003). According to role congruity and goal congruity perspectives (Diekmann & Eagly, 2008; Diekmann & Steinberg, 2013), there is an interplay between external (i.e., environmental affordances, social interaction and automatic activated goals) and internal mechanisms (i.e. self-concept, self-efficacy) that can further shape men's and women's motivational orientations and goals. Thus, as business schools are seen as typically masculine or hierarchy enhancing environments (Sidanius, van Laar, Levin, & Sinclair, 2003), it is possible that as students become more exposed to this environment and the specific role of "business student", gender differences in agentic goals might narrow (Diekmann & Schneider, 2010). Specifically, business students have already self-selected themselves into business related degree programmes, presumably in order to better pursue and fulfil their endorsed agentic goals. Thus, further exposure to this environment shall continue to activate and shape the endorsement and pursuit of agentic goals. However, as gender differences remained consistent for communal goal endorsement across Study 1 and Study 2, this provides further support to Diekmann and colleagues' (Diekmann et al., 2011; Diekmann & Steinberg, 2013) assertion that communal goal congruity is the differentiating factor influencing women's preferences for leadership roles. Given previous research examining agency and leadership (e.g., Bosak & Sczesny, 2007; Schuh et al., 2013), it is important to note that the present research is not disregarding the role that agentic goals play in the pursuit of leadership, but rather it provides initial evidence that agentic goals do not play a main part in differentiating men's and women's preferences for leadership roles.

Extending the findings of Study 1, Study 2 also examined the influence of gender role beliefs on goal endorsement and leadership role preference. Hypothesis 3a proposed that men and women would differ in their gender role self-concept, with women rating themselves as more communal and men rating themselves as more agentic. Hypothesis 3b proposed that men and women would differ in their gender norms with women reporting their gender norms as more communal and men reporting their gender norms as more agentic. Hypothesis 3c proposed that goals would mediate the relationship between gender beliefs (i.e. gender role self-concept and gender norms) and HA (vs. HE) leadership role preference. As predicted, and consistent with previous research (e.g., Evans & Diekmann, 2009), women rated their gender role self-concept and their gender norms as more communal than men, and men rated their gender role self-concept and their gender norms as more agentic than women. Moreover, as predicted, and consistent with social role and role congruity framework (Diekmann & Eagly, 2008; Evans & Diekmann, 2009; Wood & Eagly, 2009, 2010), internalised gender role beliefs - specifically self-concept and gender norms - predicted endorsement of goals that in turn predicted leadership role preference. As the inclusion of participant gender did not improve the model, previous findings between gender and goal endorsement might be the result of different internalisations of gender role beliefs. Moreover, consistent with the role congruity account (Diekmann & Eagly, 2008; Evans & Diekmann 2009), these findings suggest that goals might serve as a mechanism through which gender role beliefs contribute to preferences for certain occupational roles.

Diekmann and colleagues (Diekmann et al., 2011; Diekmann et al., 2011; Diekmann & Steinberg, 2013) argue that attitudes toward careers or occupational roles stem from a combination of goal endorsement and perceptions of whether

certain roles help or hinder fulfilment of these endorsed goals (i.e. goal affordance stereotypes). The present research set out to examine whether certain leadership roles, specifically HE and HA leadership roles, were perceived to help or hinder the fulfilment of agentic and communal goals. Specifically, Hypothesis 4 proposed that HA and HE leadership roles would differ in their goal affordance stereotypes, with HA leadership roles being perceived as more likely to help fulfilment of communal goals and HE leadership roles being perceived as more likely to help fulfilment of agentic goals. As expected, the findings from Study 3 showed that HA leadership roles were perceived as affording the fulfilment of communal goals more than HE leadership roles. The findings also showed that HE leadership roles were perceived as affording the fulfilment of agentic goals more than HA leadership roles.

Consistent with goal congruity perspective (Diekmann et al., 2011), these results indicate that gender differences in leadership role preferences might partly stem from differences in goal affordance stereotypes of HE and HA leadership roles. Specifically, in Studies 1 and 2, it was found that women endorsed communal goals more than men, resulting in their greater preference for HA leadership roles. Given this, the results of Study 3 possibly suggest that women prefer HA leadership roles more than men, because HA leadership roles are perceived to afford the fulfilment of women's greater endorsed communal goals. In addition, the findings of Study 3 also provide further support for a broader and inclusive perspective of leadership that conceptualises leadership as being HE or HA. In particular, the present study demonstrated that although leadership is closely associated with power and typically perceived as being hierarchy enhancing (e.g., De Oliveira et al., 2012; Pratto et al., 1994), it is also capable of affording the fulfilment of communal goals and being hierarchy attenuating. Therefore, the findings extend on Diekmann and colleagues'

(Diekmann et al., 2011; Diekmann & Steinberg, 2013) argument that communal goal congruity plays an influential part in women's leadership role preferences.

In Study 4, Hypothesis 5 proposed that activated communal goals would increase HA leadership role preference and decrease HE leadership role preference. As predicted, it was found that individuals primed in the communal goal condition preferred HA leadership roles, compared to individuals in both the control and agentic goal conditions. This provided causal evidence of the influence of communal goals on leadership role preferences. In contrast to previous research (e.g., Diekmann et al., 2011), the present priming study also included an agentic goal condition. Findings indicate that individuals in this agentic goal condition did not differ from individuals in the control condition. Thus, the present research extends research by Diekmann and colleagues (2011) and provides new evidence that gender differences in leadership role preferences result from communal goal endorsement, rather than agentic goal endorsement or a combination of the endorsement of both goals. Taken together, the four studies support and extend the goal congruity perspective of role selection in the context of leadership. Specifically, the present research found that women preferred HA leadership roles more than men due to women's greater endorsement of communal goals and the perception that HA leadership roles are more likely to afford fulfillment of these goals.

9.3 CONTRIBUTIONS TO THEORETICAL KNOWLEDGE

The present research makes a number of valuable contributions to literature on gender and leadership. Study 1 and Study 2 contribute to the theoretical knowledge of leadership aspirations by providing initial evidence that men and women have similar leadership aspirations. Furthermore, Study 1 and Study 2

provide an empirical contribution by measuring leadership aspirations with a multi-item leadership aspiration measure. For leadership role preference, the present research findings (Study 1- 4) contribute to knowledge about leadership in a number of ways. First, it conceptualises and operationalises leadership roles within the framework of hierarchy orientation, thus providing a broader and encompassing perspective on leadership. Second, by examining leadership in this manner, the present research provides a better understanding of gender differences in preferences for certain leadership roles. Finally, the present research extends on the goal congruity perspective into the context of leadership, by showing the important role communal goal congruity plays in shaping women's preferences for certain leadership roles. These contributions shall be discussed in more detail in the following sections.

9.3.1 Leadership Aspirations

For leadership aspirations, the present research makes two contributions to the leadership literature. First, from the role congruity perspective, the research examined gender differences in leadership aspirations. Despite the vast and diverse range of leadership literature, the research domain of leadership aspirations more generally is very limited (e.g., Bloatwright et al., 2003; Singer, 1989, 1991), with fewer studies specifically examining gender differences in leadership aspirations (e.g., Singer, 1989, 1991). Furthermore, even these few studies that examine gender differences in leadership aspirations have methodological issues that limit the interpretability of their results⁷. Thus, despite the vast amount of research on leadership in general, and the predictive nature of aspirations for future career

⁷ Leadership aspirations were measured with single item measure (e.g. Singer, 1989, 1991).

attainment (e.g., Hede & Ralston, 1993; Schoon & Parsons, 2002; Schoon & Polek, 2011; Tharenou & Terry, 1998), the question of whether women, compared to men, actually aspire to leadership is often neglected. The present research addresses this gap and further contributes to the leadership aspiration literature, through examining men and women's level of leadership aspirations within the framework of the role congruity theory. Specifically, the research findings showed that men and women have similar leadership aspirations, suggesting that, prior to entering the workforce, women aspire to leadership as much as men.

A possible explanation for these findings is that female business students lack work experience and thus have little experience of the prejudice and barriers that women leaders face. If true, this suggests that the present research might be capturing a particular moment in the timeline of women's leadership development. Thus, these studies may provide initial evidence about the detrimental effect of environmental and cultural organisational factors in creating barriers for women leaders and their leadership aspirations. In sum, the contribution of the present research, therefore, rests both in the evidence that young women and men similarly aspire to leadership, and in the possible questions it raises for future research about women's leadership development and their pursuit of leadership.

The present research also makes an empirical contribution to the leadership aspiration literature. Specifically, the present research adapted management aspiration scales (Tharenou, 2001; van Vianen, 1999) to provide a multi-item measurement for leadership aspirations that captures an individual's motivational drive for general leadership. Previous research (e.g., Powell & Butterfield, 1981, 2003; Singer, 1989, 1991) has often used single-item measures to examine whether men and women differ in their aspirations. Such measures have a number of

limitations, such as being prone to social desirability, extreme responses and being problematic, especially in the assessment of reliability and the occurrence of measurement error (Nunnally, 1978; Nunnally & Bernstein, 1994; Paulhus & Vazire, 2007; Spector, 1992). For example, in Singer's research on leadership aspirations (1989, 1991), a dichotomously scored single item was used to assess leadership aspirations. Such a measure lacks scope and precision in assessing leadership aspirations. In contrast, related multi-item aspiration measures, such as the career aspiration scale (CAS; Gray & O'Brien, 2007), often focus on a mixture of aspirations within a career, rather than on general leadership aspirations. Therefore, the present research addresses this evident gap through using a multi-item leadership aspiration measure that captures the present study's definition of general leadership aspirations. Furthermore, as the leadership aspiration measure displayed both good construct validity⁸ and consistent reliability across Study 1 and Study 2, this measure promises to be a valuable scale for future research.

9.3.2 Leadership Role Preferences

The present research makes a novel contribution to gender and leadership literature in two ways. First, it conceptualises and operationalises leadership, within the framework of hierarchy orientation, as either hierarchy enhancing or hierarchy attenuating. The present research extends on previous research on hierarchy job choice (e.g., Pratto & Espinoza, 2001; Pratto et al., 1997) and research in the wider leadership literature by examining leadership through the lens of hierarchy orientation, specifically, by conceptualising leadership as not just serving the elite and powerful (i.e., hierarchy enhancing), but also as being capable of serving the

⁸ Leadership aspirations scale was positively correlated with related construct of leadership self-efficacy (Murphy, 1992) for Study 1 ($r = .67, p < .000$) and Study 2 ($r = .64, p < .000$), with PCA two factor solution revealing two related but distinct constructs with few cross-loadings.

oppressed and less powerful in a society (i.e., hierarchy attenuating). Hierarchy leadership role preferences stem from research on hierarchy job choice in the domain of social dominance theory (Pratto et al., 1997). From the social dominance perspective, society is group-based, with some groups more dominant and powerful than others. Different social roles reflect different orientations toward intergroup relations, in that, one set of roles is more egalitarian orientated and the other is more hierarchical. The present research adapts this perspective on social roles, specifically focusing on this different orientation within leadership. This conceptualisation allows a more comprehensive perception of leadership, beyond the more traditional perspective of leadership as only being hierarchy enhancing (Pratto, Sidanius, Stallworth, & Malle, 1994).

Previous leadership literature has focused on prototypical leaders (e.g., Lord et al., 2001; Schein, 2001) that have a certain set of characteristics, typically embodying agentic and/or masculine characteristics (e.g., Koenig et al., 2011). However, more recently, the leadership literature has adopted a more inclusive approach when defining and examining leadership, with a growing body of research examining different roles and styles. For example, multiple studies have examined spiritual leadership (e.g., Fry, 2003), transformational (e.g., Bass, 1985; Eagly & Johannesen-Schmidt, 2003) or servant leadership (e.g., Barbuto & Wheeler, 2006; Graham, 1991) that incorporate more feminine/communal characteristics and attributes such as helping and serving others. This trend highlights the importance of distinguishing between different types of leadership roles by hierarchy orientation as it provides a broader, more encompassing perspective on leadership. Moreover, rather than only focusing on the leader-follower relationship, this conceptualisation of leadership considers a leader's role in relation to broader societal context. It is this

focus on whom is served by leadership in society that is the defining characteristic for hierarchy leadership roles. No previous research has framed leadership in relation to hierarchy orientation, i.e. according to the people leaders serve and/or the egalitarian ethos or aims of the organisation in which leadership takes place. Thus, the present research contributes to theoretical knowledge about leadership by providing a new way of conceptualising leadership.

The second contribution to the literature on role preferences is that by conceptualising and operationalising leadership within the framework of hierarchy orientation, the present research provides a new avenue of research for understanding men's and women's preferences for leadership roles. Previous research (e.g., Diekmann et al., 2011; Morgan et al., 2001) examining the goal congruity perspective has focused mainly on specific career interests or preferences, such as men's and women's interest in STEM careers. By extending the goal congruity perspective into the context of leadership, the present research addresses an important gap in the literature, providing a deeper understanding of the psychological processes that underlie men's and women's preferences for certain leadership roles. First, the present research provides support to previous findings (e.g. Pohlmann, 2001) that women endorse communal goals more than men. Second, it provides new evidence that these goals play an important part in leadership role preference. In particular, despite previous research (e.g., Brown, 2002; Harackiewicz & Sansone, 1991; Holland, 1985; Lent, et al., 1994; Morgan, et al., 2001) emphasising goals and related constructs as being influential for career preferences, there is limited research that has examined the influence of goals on men's and women's pursuit of and preference for leadership and none that specifically examined the role that communal goals play in leadership role preferences.

Third, it provides evidence that leadership roles can be perceived as helping or hindering fulfilment of different life goals. Despite previous research (e.g., Brown, 2002; Marini et al., 1996; Morgan et al., 2001) highlighting the importance of choosing careers that afford one's endorsed goals or values, little research (e.g., Diekman et al., 2010; Weisgram et al., 2011) has empirically examined goal affordance stereotypes and none that specifically examined the goal affordance stereotypes of different leadership roles. While there has been a focus in previous leadership literature on the appropriate motives and motivations individuals should have for leadership (e.g., McClelland, 1985; Miner, 1977), these studies have not examined whether leadership was actually perceived to fulfil these motives. By not examining the perceived goal affordances of leadership, there is a gap in the literature which may result in certain presumptions about leadership. Indeed, the present research shows that leadership can be perceived in different ways and perceived to afford the fulfilment of different goals, which might have implications for men's and women's pursuit of leadership roles. Taken together, these studies do not just support and extend the goal congruity perspective into a new domain, but also provide a novel perspective on the psychological processes underlying men's and women's preferences for leadership.

9.4 PRACTICAL IMPLICATIONS

The present research has a number of implications for addressing women's underrepresentation in leadership roles. One of the main findings of the present research is that young women, prior to entering the workforce, aspire to leadership as much as their male counterparts. The other main finding of the present research is that women more than men prefer leadership roles that are hierarchy attenuating,

because such roles are perceived to afford the fulfilment of women's greater endorsed communal goals. Such findings have important practical implications for universities and organisations that seek to both develop leaders and address women's underrepresentation in leadership roles. Thus, this section shall discuss the practical implications of these findings for universities and organisations.

9.4.1 Implications for universities and other higher education institutions

With the growing emphasis on the importance of leadership skills in the workplace, coupled with the criticism that business schools are not adequately developing such skills (e.g., O'Reilly, 1994), many universities and other higher level institutions have sought to address this gap in traditional educational courses through the development of leadership programmes. According to Burngardt (1996), leadership development can be defined as "every form of growth or stage of development in the life-cycle that promotes, encourages and assists the expansion of knowledge and expertise required to optimize one's leadership potential and performance" (p. 83). In the leadership development field, it has been emphasised that in order for leadership development programmes and interventions to be effective, there should be a consideration of the needs of both organisations and participants. Given the findings of the present research, universities and other higher education institutions need to acknowledge that both young women and men aspire to leadership and consequently develop leadership programmes that are considerate of their needs. In particular, leadership programmes should be aware of young women's needs by nurturing their aspirations and best preparing them for pursuit of leadership roles in the future. Specifically, universities should further incorporate and promote a broader definition of leadership, beyond the more traditional

perspective of leadership. As noted previously, leadership is an extremely diverse field of literature with different types and styles. Thus, in classes and leadership development programmes, universities need to highlight the varying and changing nature of leadership. In particular, as the present research findings have found that communal goals have a unique relationship with women's greater preference for HA leadership roles than men, universities should promote leadership as having the potential to fulfil both agentic goals like power and status which are valued by both male and female students, but also communal goals like helping the community or attending to others' needs. Thus, the ability of universities to highlight the potential of leadership to fulfil communal goals, has the potential to increase the appeal of leadership to women and to men that highly endorse communal goals.

9.4.2 Implications for Organisations

In recent years, there has been a growing consensus that women leaders have the "right stuff" (Sharpe, 2000, p. 74), with research showing that women leaders often engage in more effective leadership styles, are more ethical, and even improve organisation's financial performance (for reviews, see Eagly & Carli, 2003; Kark & Eagly, 2010). Given these findings, organisations need to implement different strategies to address women's underrepresentation in leadership roles in order to recruit and promote the best candidates for leadership positions. Given the present research findings, organisations need to maintain young women's leadership aspirations and support their pursuit of leadership roles. Specifically, the present findings found that young men and women similarly aspire to leadership prior to entering the workforce. A possible explanation given for these results is that young women may not have experienced prejudice or discrimination, thus, having

important implications for organisations. Specifically, the present research may provide initial evidence that young women's leadership aspirations could be negatively influenced by organisational cultures and barriers. Therefore, organisations need to be conscious of possible barriers that influence women's aspirations (Kark & Eagly, 2010) and provide an organisational culture that is supportive of young women's aspirations by providing young women a clear path for advancement opportunities and progression to leadership positions (e.g., Catalyst, 2010; Litzky & Greenhaus, 2007; Lyness & Thompson, 2000; Powell & Mainiero, 1992; Tharenou, Latimer, & Conroy, 1994). In addition, given that the present research found that women, more than men, preferred HA leadership roles due to women's greater endorsement of communal goals, organisations should implement changes to reconstruct the perception of leadership roles. Specifically, organisations can nurture women's leadership aspirations through highlighting ways in which leadership roles incorporate feminine and communal attributes. For example, organisations could emphasise the value of behaviours such as power and information sharing, importance of teamwork and considering the needs of followers (Bass & Riggio, 2006; Oakley, 2000) so as to support women's leadership development and promotion in a manner congruent with their values and goals (e.g., Eagly et al., 2003; Judge & Piccolo, 2004; Vinkenbergh et al., 2011). In particular, leadership development and skills programmes in organisations should emphasise the diversity of leadership and its potential to accommodate women's greater endorsed communal goals.

In sum, the findings from the present research suggests that universities and organisations need to recognise that young men and women similarly aspire to leadership and in doing so, implement leadership development and skills

programmes that continue to develop and nurture women's leadership aspirations prior and post entry to the workforce. Moreover, incorporation of diversity education and training across programmes need to be considered in order to promote different perspectives of leadership that might accommodate women's communal goals, raise awareness of possibly barriers and then reduce these barriers in organisations, so young women shall be better prepared for the pursuit of leadership roles in the future.

9.5 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

There are a number of limitations in the present research that need to be taken into account when considering the research findings. These limitations may be addressed through incorporating recommendations for future research. In this section, two general limitations of the research are addressed. Following this, specific limitations and future research directions are discussed for leadership aspirations and leadership role preferences.

The first limitation of the present research relates to the self-report nature of the data. Self-report data has been shown to contribute to the occurrence of common method bias, especially in correlational research (Podsakoff et al., 2003). A number of steps were implemented to limit the influence of common method bias in the present study (Chang et al., 2011). For example, in the questionnaire design, counterbalancing of measures and scales was included and questionnaires were administered to participants in random order (Harrison et al., 1996). In addition, a Harman's single factor test was conducted in order to assess common method bias. The results of these tests coupled with the procedural remedies suggest that common method bias was not a major concern. However, since self-report questionnaires in correlational research have the potential for allowing response bias to impact the

results, a combination of data gathering methods, methodological separation of study sections, time delay in gathering of data and longitudinal research should be considered in the future (Chang et al., 2011; Harrison et al., 1996; Podsakoff et al., 2003).

The second limitation was not controlling for social desirability bias. Social desirability bias occurs when participants respond in an untruthful manner that will be favourably viewed by others (Breakwell et al., 2012). Considering the nature of some of the leadership measures, specifically HA leadership roles that are perceived to afford communal goals like serving humanity, participants might be susceptible to this bias. However, although the present research did not include a social desirability bias scale, other approaches were implemented to limit this bias (Nederhoff, 1985). A key approach is anonymous administration, ideally through self-administration that emphasises the confidentiality and anonymous nature of the data (Sudman & Bradburn, 1974). For the present research, participants were administered self-report questionnaires. Moreover, the researcher reminded participants verbally about the anonymity and confidentiality of the research and also emphasised that there were no right or wrong answers in order to lessen social desirability bias. Further to this, the use of forced-choice items, such as leadership role preference measure, has been shown to reduce faking and social desirability bias (Edwards, 1970; Breakwell et al., 2012). Nevertheless, future studies should consider inclusion of a social desirability bias scale.

9.5.1 Leadership Aspirations

A further limitation of the present research was the lack of examination of the processes that lead to men's and women's level of leadership aspirations. As noted

previously, a number of possible explanations were suggested for the present research findings. Future research needs to be conducted in order to examine these possible explanations. Specifically for leadership aspirations, there are two main directions for future research. First, similar to related research (e.g., Litzky & Greenhaus, 2007), the degree of congruence between men's and women's gender role self-concept and the perceived characteristics of the leader should be examined. More specifically, future research should examine whether self-perceived degree of incongruence between gender role self-concept and leader roles influence men's and women's leadership aspirations. In particular, future studies could involve manipulation of men's and women's gender role self-concept through priming in order to examine whether degree of incongruence impacts men's and women's level of leadership aspirations. For instance, women primed in the gender-typical condition could have greater perceived incongruence between their gender role self-concept and the leadership role possibly resulting in greater self-limiting beliefs and behaviours compared to women primed in the gender-atypical condition. Previous research (e.g., Rudman & Phelan, 2010) that has primed gender roles, has found that women primed with traditional gender roles showed increased automatic gender stereotypes, which mediated their reduced interest in masculine occupations. Furthermore, Litzky and Greenhaus (2007) found that women were less likely to desire promotion to senior management partly due to the smaller degree of perceived congruence between their personal characteristics and senior management positions. Thus, by priming men and women either in gender typical or atypical condition, future researchers could manipulate the degree of perceived congruence between men's and women's gender role self-concept and the leadership role. In doing so, future research could then confirm or disprove whether the degree of incongruence

between one's gender role self-concept and leadership role impacts men and women's level of leadership aspirations.

Second, the possibility that women will differ from men in their leadership aspirations over time as they gain more work experience and encounter barriers to leadership needs to be examined. Future research should replicate and extend on the present research using a longitudinal design to investigate and allow a greater understanding of the relationships. For example, O'Brien and colleagues (O'Brien, Friedman, Tipton, & Linn, 2000) examined men's and women's career aspirations over a five year period. They found that although young women initially aspired to a wide and diverse range of careers, they subsequently selected more traditional and less prestigious careers (O'Brien et al., 2000). As the present research included a self-generating identity code in all questionnaires, further data could be gathered. For example, as part of the university's degree programme, students can partake in a programme that allows them to experience work in their penultimate year. Therefore, comparisons can be made between students' leadership aspirations pre- and post-work experience, with the potential to gather further longitudinal data when students leave university and enter the workforce. In doing so, future research can determine whether awareness or personal experience of barriers negatively impacts women's leadership aspirations.

For instance, Litzky and Greenhaus (2007) found that women had lower desired aspirations for promotion to senior management because of a smaller degree of self-senior management congruence but also because of the less favourable prospects and opportunities for women's career advancement. In light of previous findings, perceptions of career progression barriers such as family, societal and organisational related barriers (e.g., Ismail & Ibrahim, 2007; for review, see Kark &

Eagly, 2010), and perceived career advancement and support (e.g., Litzky & Greenhaus, 2007), should be considered longitudinally. In addition, leadership aspirations are conceptualised as a desired aspiration typically representing a more positive and ideal future. Given this, future research should also examine whether men and women differ in their leadership expectations (i.e., their beliefs about whether they will attain a leadership position). In particular, future research should examine the possible incongruence between women's leadership aspirations and their actual leadership expectations, and whether this incongruence influences women's pursuit of leadership.

9.5.2 Leadership Role Preferences

A further limitation of the present research was the forced choice nature of hierarchy leadership role preference measure. Forced choice measures have a number of advantages such as reducing desirability bias and faking (Bartram, 2007; Christiansen, Burns & Montgomery, 2005), and have been used frequently in previous research in the vocational literature (e.g., Hesketh et al., 1990; Leung & Plake, 1990; Pratto et al., 1997). However this method does have certain limitations, especially in respect to the ipsative nature of the data (Clemens, 1966; Meade, 2004). Specifically, ipsative data can be problematic for score interpretation and certain psychometric analyses (Baron, 1996). Future research should address this issue by also including a rating scale with the forced choice measure to allow a more in depth examination of men and women's leadership role preferences.

The novelty of the goal congruity perspective in the context of leadership and the manner in which leadership is now being conceptualised provides exciting new avenues for future research. Specifically for leadership role preferences, there are

two main directions for future research. First, although this study deliberately examined self-perceptions, future research is needed to examine the influence of perceptions by others on gender differences in leadership role preferences. As mentioned previously, the goal congruity perspective is an extension of role congruity theory, which places particular focus on the influence of perceptions by others. Diekmann and colleagues (2011) emphasise that the goal congruity perspective should not replace or supplant other important variables, like prejudice against women, but rather be used to frame such variables providing a new perspective for research in this area. For example, the present research argues that due to women endorsing communal goals more than men, and the perception that HA leadership roles are more likely to afford these goals; women will prefer HA leadership roles more than men. According to role congruity theory (Eagly & Karau, 2002), the perceived incongruence between the female gender and leadership roles often results in prejudice and discrimination toward women leaders, that has detrimental consequences for women leaders. Future research needs to examine the influence of such prejudice within the framework of the goal congruity perspective. Specifically, future research should consider the influential force of others' perceptions on women's goal endorsements and leadership role preferences. For instance, communal goal endorsement and subsequent preferences for HA leadership roles might be perceived by others as more congruent with female gender role, which might result in less negative evaluations and consequences for women leaders who prefer HA leadership roles. Thus, women's communal goal endorsement and preferences for HA leadership roles might result from a combination of complying with their own internalised gender beliefs but also complying with perceptions by others. In exploring this further, future research may provide a more comprehensive

picture of women's leadership role preferences that considers the influence of both self-perception and perceptions by others.

Related to this, another interesting avenue for future research is to examine the concept of backlash in relation to HE versus HA leadership roles. Backlash occurs as a result of women being perceived as overly agentic and violating their female gender roles (Rudman, 1998), with fear of backlash often resulting in self-limiting behaviour (Moss-Racusin & Rudman, 2010). Previous research has shown that such backlash against women leaders can be mitigated or lessened if women are seen to be advocating for others, rather than themselves (Amanatullah & Tinsley, 2012). Given the nature of HA leadership roles, backlash might be weakened for agentic women leaders in such roles, especially in comparison to agentic women leaders in HE leadership roles. Moreover, in considering the issue of backlash in regards to women leaders in HE or HA leadership roles, it might also provide further insight into women's leadership role preferences and the higher percentage of women leaders in non-profits compared to for-profits.

9.6 CONCLUSION

The overall objectives of the research were: (1) to examine whether men and women differed in their leadership aspirations; and (2) to examine whether men and women differed in their leadership role preference. From the role congruity perspective (Eagly & Karau, 2002), the present research proposed that men and women would differ in their leadership aspirations, as women would seek to align their beliefs and behaviour to their internalised gender beliefs to avoid incongruence and its subsequent negative consequences. It was found that men and women did not differ, but actually had similar levels of leadership aspirations. There were two

possible explanations proposed for these findings, which need to be examined in future research. From the goal congruity perspective (Diekmann et al., 2011), the present research proposed that women would prefer HA leadership roles more than men as a result of women's greater communal goal endorsement and the perception that HA leadership roles would more likely fulfil these endorsed goals. As expected, it was found that women, more than men, preferred HA leadership role preferences due to their greater communal goal endorsement. It was also found that HA leadership roles were more likely to fulfil communal goals than HE leadership roles. Thus, across the four studies, the majority of the hypotheses were supported.

By examining these hypotheses, the present research makes a number of contributions to the leadership literature. The main contribution of the present research is the conceptualisation and operationalisation of leadership through the lens of hierarchy orientation, providing a new perspective on leadership. The second contribution is the extension of the goal congruity perspective into the context of leadership in order to examine the psychological processes underlying men and women's preferences for leadership roles. Another contribution is the examination of gender differences in leadership aspirations, providing new evidence about men and women's leadership aspirations. The findings of the present research also have practical implications for universities and organisations. Specifically further support is needed to nurture and maintain women's leadership aspirations pre and post entry to the workforce, and to promote the perception of possible different avenues of leadership and their possible goal affordances.

In conclusion, the overall aim of the present research was to contribute to a possible explanation for women's underrepresentation in leadership by examining whether men and women differ in their leadership aspirations and leadership role

preferences. The present research found that although men and women did not differ in their level of leadership aspirations, men and women did differ in their leadership role preferences. Moreover, the present research found that women's pursuit of communal goal congruity is an important factor in explaining men's and women's differing preferences for leadership roles. Thus, the present research provides new evidence about leadership aspirations and leadership role preferences and, in doing so, provides a strong foundation for future research to further explain and examine women's underrepresentation in leadership.

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APPENDIX A

Questionnaire Cover Letters

Appendix A – Cover letter for Study 1



Study on Perception of Leadership.

Dear Participant,

We are kindly inviting you to participate in a study designed to assess people's perception of leadership. In this questionnaire you will be asked questions about yourself and your perception of leaders and leadership.

Keep in mind that a leader is a person who exercises authority over other people. Leadership entails influencing, motivating, organising, and coordinating the work of others to foster progress toward shared goals.

Biographical questions will also be asked (e.g. your middle initial) to allow coding of your questionnaire for a longitudinal study. The following questionnaire should only take approx 10-15 minutes of your time to complete. We are asking you kindly to complete all questions and to answer them based on your own personal opinion.

Confidentiality is guaranteed, and all completed questionnaires are anonymous. Your participation is voluntary and is much appreciated. Your involvement or non-involvement in this study will not affect your ongoing assessment/grades or your relationship with DCU in any way.

Thank you in advance for your time and effort. We greatly appreciate your help. If you have any questions, you may contact me at 700 6583, or mary.kinahan@dcu.ie. In addition, if participants are concerned and wish to contact an independent person, please contact: The Secretary, DCU Ethics Committee, c/o Office of the Vice-President of Research, DCU. Tel: 01-7008000

Yours faithfully,

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Appendix A – Cover letter for Study 2



Study on Perception of Leadership.

Dear Participant,

We are kindly inviting you to participate in a study designed to assess people's perception of leadership. In this questionnaire you will be asked questions about yourself and your perception of leaders and leadership.

Keep in mind that a leader is a person who exercises authority over other people. Leadership entails influencing, motivating, organising, and coordinating the work of others to foster progress toward shared goals.

Biographical questions will also be asked (e.g. your middle initial) to allow coding of your questionnaire for a longitudinal study. The following questionnaire should only take approx 15-20 minutes of your time to complete. We are asking you kindly to complete all questions and to answer them based on your own personal opinion.

Confidentiality is guaranteed, and all completed questionnaires are anonymous. Your participation is voluntary and is much appreciated. Your involvement or non-involvement in this study will not affect your ongoing assessment/grades or your relationship with DCU in any way.

Thank you in advance for your time and effort. We greatly appreciate your help. If you have any questions, you may contact me at 700 6583, or mary.kinahan@dcu.ie. In addition, if participants are concerned and wish to contact an independent person, please contact: The Secretary, DCU Ethics Committee, c/o Office of the Vice-President of Research, DCU. Tel: 01-7008000

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Appendix A – Cover letter for Study 3



Study on Perception of Leaders.

Dear Participant,

We are kindly inviting you to participate in a study designed to assess people's perception of leaders and certain jobs. In this questionnaire you will be asked questions about yourself and your perception of leaders and certain jobs.

The following questionnaire should only take approx 15-20 minutes of your time to complete. We are asking you kindly to complete all questions and to answer them based on your own personal opinion.

Confidentiality is guaranteed, and all completed questionnaires are anonymous. Your participation is voluntary and is much appreciated. Your involvement or non-involvement in this study will not affect your ongoing assessment/grades or your relationship with DCU in any way.

Thank you in advance for your time and effort. We greatly appreciate your help. If you have any questions, you may contact me at 700 6583, or mary.kinahan@dcu.ie. In addition, if participants are concerned and wish to contact an independent person, please contact: The Secretary, DCU Ethics Committee, c/o Office of the Vice-President of Research, DCU. Tel: 01-7008000

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Appendix A – Cover letter for Study 4



Dear Participant,

We are kindly inviting you to participate in a study designed to assess people's perceptions. In this questionnaire you will be asked questions about your perceptions.

The following questionnaire should only take approx 15 minutes of your time to complete. We are asking you kindly to complete all questions and to answer them based on your own personal opinion.

Confidentiality is guaranteed, and all completed questionnaires are anonymous. Your participation is voluntary and is much appreciated. Your involvement or non-involvement in this study will not affect your ongoing assessment/grades or your relationship with DCU in any way.

Thank you in advance for your time and effort. We greatly appreciate your help. If you have any questions, you may contact me at 700 6583, or mary.kinahan@dcu.ie. In addition, if participants are concerned and wish to contact an independent person, please contact: The Secretary, DCU Ethics Committee, c/o Office of the Vice-President of Research, DCU. Tel: 01-7008000

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Appendix A – Cover letter for HEA Test



Study on Perception of Jobs.

Dear Participant,

We are kindly inviting you to participate in a study designed to assess people's perception of certain jobs. In this questionnaire you will be asked questions about your perception of certain jobs.

The following questionnaire should only take approx 10 minutes of your time to complete. We are asking you kindly to complete all questions and to answer them based on your own personal opinion.

Confidentiality is guaranteed, and all completed questionnaires are anonymous. Your participation is voluntary and is much appreciated. Your involvement or non-involvement in this study will not affect your ongoing assessment/grades or your relationship with DCU in any way.

Thank you in advance for your time and effort. We greatly appreciate your help. If you have any questions, you may contact me at 700 6583, or mary.kinahan@dcu.ie. In addition, if participants are concerned and wish to contact an independent person, please contact: The Secretary, DCU Ethics Committee, c/o Office of the Vice-President of Research, DCU. Tel: 01-7008000

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Appendix B –Questionnaire Measures for Study 1

Goals

Please rate how **important** the following kinds of **goals** are to **you personally**.

5 – Very important

4 – Important

3 – Neither important nor unimportant

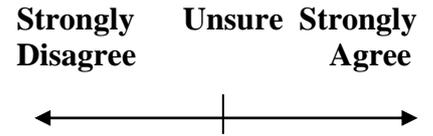
2 – Unimportant

1 – Very unimportant

Power	.....	Mastery	.....
Serving the community	.....	Working with people	.....
Achievement	.....	Independence	.....
Caring for others	.....	Individualism	.....
Status	.....	Focus on the self	.....
Financial rewards	.....	Succeeding in life	.....
Connection with others	.....	Spiritual rewards	.....
Helping others	.....	Self-direction	.....
Self-promotion	.....	Demonstrating skill or competence	.....
Attending to others' needs	.....	Competing with other people	.....
Recognition	.....	Career Success	.....
Serving humanity	.....	Becoming a parent	.....

Leadership Aspirations

Please read each statement carefully. Then indicate the extent to which you **agree** or **disagree** with each of the statements, using the following scale:



1. If a leadership position was offered to me in the future, I would accept such a position.	1	2	3	4	5
2. I believe leadership would be an attractive challenge to me.	1	2	3	4	5
3. I would prefer to leave leadership to someone else.	1	2	3	4	5
4. I want to fulfill a leadership position in the near future.	1	2	3	4	5
5. I told my family and friends that I hope to become a leader	1	2	3	4	5
6. I do not wish to become a leader in the near future.	1	2	3	4	5
7. It would bother me if I never became a leader.	1	2	3	4	5
8. I have no ambition to advance to a leadership position.	1	2	3	4	5
9. I would like to be in a leadership position in the future, for greater influence in the department/organisation.	1	2	3	4	5
10. It would not bother me if I never hold a leadership position.	1	2	3	4	5
11. I would not wish to advance to a position of more responsibility.	1	2	3	4	5
12. I would like to move into a leadership position in the next ten years.	1	2	3	4	5
13. For me the hassles of being in a leadership position would outweigh the benefits.	1	2	3	4	5
14. I intend to apply for a leadership position in the future.	1	2	3	4	5

Leadership Role Preference

PLEASE READ CAREFULLY:

Below are advertisements for a variety of jobs. In each section two organisations are offering positions at the same salary and workload. For each field, assume that you are qualified for each job and indicate which job you would prefer to work for by ticking the box. You can only tick one box per position.

1. Director of Public Relations	
<p><u>Green Oil</u>, one of the world's leading suppliers of petroleum products is seeking applicants for the position of director of public relations.</p>	<p><u>All Together</u>, a union of charitable organisations that assist those who lack social status and material means, is seeking applicants for the position of director of public relations.</p>

Please indicate which position is your preference:

Green Oil:

All Together:

2. Senior Human Resource Manager

Jones, a large cosmetic company which prides itself on hiring and integrating individuals from minority backgrounds, is seeking applicants for the position of senior human resource management.

Smyth, a large cosmetic company which prides itself on hiring and integrating individuals on their merits, is seeking applicants for the position of senior human resource management.

Please indicate which position is your preference:

Jones:

Smyth:

3. Senior Accountant

Thompson, a law firm which mainly represents and assists large corporations, is seeking applicants for the position of senior accountant.

Wright, a law firm which mainly represents and assists lower status groups such as the poor and children, is seeking applicants for the position of senior accountant.

Please indicate which position is your preference:

Thompson:

Wright:

4. Chief Executive Officer

Top Agency, a prominent advertising agency which represents most elite Irish and UK corporations, is seeking suitable candidates to fulfil a position of CEO.

Hart Agency, a prominent advertising agency which represents national charity organisations, is seeking suitable candidates to fulfil a position of CEO.

Please indicate which position is your preference:

Top Agency:

Hart Agency:

5. Senior Financial Advisor

Byrne & Fallon, a major brokerage firm which mainly invests in large profit focused corporations, is seeking applicants for the position of senior financial advisor.

Lincoln & White, a major brokerage firm which mainly invests in socially responsible corporations and public funds, is seeking applicants for the position of senior financial advisor.

Please indicate which position is your preference:

Byrne & Fallon:

Lincoln & White:

Appendix B –Questionnaire Measures for Study 2

Gender Role Self-Concept

Please take a minute to think about **Yourself** and **your attributes**. How characteristic are each of the following attributes for **You**? Please indicate your response using the following 1-5 scale:

5 – Characteristic

4 – Somewhat characteristic

3 – Neither characteristic nor uncharacteristic

2 – Somewhat uncharacteristic

1 – Not characteristic

Competitive	.....	Daring	.....
Affectionate	.....	Sensitive	.....
Adventurous	.....	Gentle	.....
Courageous	.....	Dominant	.....
Kind	.....	Supportive	.....
Sympathetic	.....	Aggressive	.....
Emotional	.....	

Same Sex Gender Norms (For Women Sample Measure)

Please take a minute to think about the **Ideal Woman**. How characteristic will each of the following attributes be for the **Ideal Woman**? Please indicate your response using the following 1-5 scale:

5 – Characteristic

4 – Somewhat characteristic

3 – Neither characteristic nor uncharacteristic

2 – Somewhat uncharacteristic

1 – Not characteristic

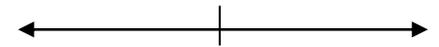
Competitive	.....	Daring	.....
Affectionate	.....	Sensitive	.....
Adventurous	.....	Gentle	.....
Courageous	.....	Dominant	.....
Kind	.....	Supportive	.....
Sympathetic	.....	Aggressive	.....
Emotional	.....	

Goals (same as previous)

Leadership Aspirations

Please read each statement carefully. Then indicate the extent to which you **agree** or **disagree** with each of the statements, using the following scale:

Strongly Disagree **Unsure** **Strongly Agree**



1. If a leadership position was offered to me in the future, I would accept such a position.	1	2	3	4	5
2. I believe leadership would be an attractive challenge to me.	1	2	3	4	5
3. I want to fulfill a leadership position in the near future.	1	2	3	4	5
4. I do not wish to become a leader in the near future.	1	2	3	4	5
5. I have no ambition to advance to a leadership position.	1	2	3	4	5
6. I would like to be in a leadership position in the future, for greater influence in the department/organisation.	1	2	3	4	5
7. It would not bother me if I never hold a leadership position.	1	2	3	4	5
8. I would not wish to advance to a position of more responsibility.	1	2	3	4	5
9. I would like to move into a leadership position in the next ten years.	1	2	3	4	5
10. I intend to apply for a leadership position in the future.	1	2	3	4	5

Leadership Role Preference

PLEASE READ CAREFULLY:

Below are advertisements for a variety of jobs. In each section two organisations are offering positions at the same salary and workload. For each field, assume that you are qualified for each job and indicate which job you would prefer to work for by ticking the box. You can only tick one box per position.

1. Director of Public Relations	
<u>Green Oil</u> , one of the world's leading suppliers of petroleum products is seeking applicants for the position of director of public relations.	<u>All Together</u> , a union of charitable organisations that assist those who lack social status and material means, is seeking applicants for the position of director of public relations.
<p>Please indicate which position is your preference: Green Oil: <input type="checkbox"/> All Together: <input type="checkbox"/></p>	
2. Senior Human Resource Manager	
<u>Jones</u> , a large cosmetic company is seeking applicants for position of Senior Human Resource Manager. Job requirements include setting policy for how we identify, recruit, and train individuals to become part of our company family. Maintain contacts with Equal Employment Opportunity commissioners and heads of hiring agencies. Review and adjust company procedures to promote minority hiring and the hiring of women, develop plans to create a welcoming environment, such as childcare and cultural sensitivity programs.	<u>Smyth</u> , a large cosmetic company is seeking applicants for position of Senior Human Resource Manager. Job requirements include setting policy for how we identify, recruit, and train the best and the brightest to maintain our company's predominance in personal care products. Maintain contacts with VIPs at prestigious universities and other recruitment centres. Review and adjust company employee merit policy, such as setting bonus levels for Level III staff and planning probationary tests for Level I staff.
<p>Please indicate which position is your preference: Jones: <input type="checkbox"/> Smyth: <input type="checkbox"/></p>	
3. Senior Accountant	
<u>Thompson</u> , a law firm which mainly represents and assists large corporations, is seeking applicants for the position of senior accountant.	<u>Wright</u> , a law firm which mainly represents and assists lower status groups such as the poor and children, is seeking applicants for the position of senior accountant
<p>Please indicate which position is your preference: Thompson: <input type="checkbox"/> Wright: <input type="checkbox"/></p>	
4. Chief Executive Officer	
<u>Top Agency</u> , a prominent advertising agency which represents national charity organisations, is seeking suitable candidates to fulfil a position of CEO.	<u>Hart Agency</u> , a prominent advertising agency which represents most elite Irish and UK corporations, is seeking suitable candidates to fulfil a position of CEO.
<p>Please indicate which position is your preference: Top Agency: <input type="checkbox"/> Hart Agency: <input type="checkbox"/></p>	

5. Senior Financial Advisor	
<u>Byrne & Fallon</u> , a major brokerage firm which mainly invests in large profit focused corporations, is seeking applicants for the position of senior financial advisor.	<u>Lincoln & White</u> , a major brokerage firm which mainly invests in socially responsible corporations and public funds, is seeking applicants for the position of senior financial advisor.
<p>Please indicate which position is your preference: Byrne & Fallon: <input type="checkbox"/> Lincoln & White: <input type="checkbox"/></p>	
6. Regional Manager	
<u>Rayne Ltd.</u> , a property development company is seeking applicants for Regional Manager. New position requires development of mixed business/residential facilities for low-income neighbourhoods. Project will provide affordable housing and entry-level employment opportunities. Budgetary authority, autonomy, and opportunities for advancement.	<u>Forest Ltd.</u> , a property development company is seeking applicants for Regional Manager. New position requires development project in areas with undervalued properties. Will buy up low-priced storefronts and transform these into lucrative commercial market space. Also will convert low-rent apartments into stylish condominiums. Budgetary authority, autonomy, and opportunities for advancement.
<p>Please indicate which position is your preference: Rayne Ltd.: <input type="checkbox"/> Forest Ltd.: <input type="checkbox"/></p>	
7. Chief Financial Officer	
<u>Brown Ltd.</u> , a large technology company which specifically provides services for certain government departments, such as the Department of Justice or Defence, is seeking suitable candidates to fulfil a position of CFO to help guide the business forward.	<u>Campbell Ltd.</u> , a large technology company which specifically provides services for certain government departments, such as Department of Social Protection or Children, is seeking suitable candidates to fulfil a position of CFO to help guide the business forward.
<p>Please indicate which position is your preference: Brown Ltd.: <input type="checkbox"/> Campbell Ltd.: <input type="checkbox"/></p>	
8. Managing Director	
<u>Williams Logistics</u> , is a leading supplier of simulation, scheduling and optimising solutions which is used by a variety of companies within the commercial and business sectors, is seeking suitable and qualified applicants to fulfil the position of Managing Director.	<u>Taylor Logistics</u> , is a leading supplier of simulation, scheduling and optimising solutions which is used by a variety of companies within the non-government and non-profit sectors, is seeking suitable and qualified applicants to fulfil the position of Managing Director.
<p>Please indicate which position is your preference: Williams Logistics: <input type="checkbox"/> Taylor Logistics: <input type="checkbox"/></p>	
9. Senior Campaign Manager	
<u>White Agency</u> , a prominent marketing agency is seeking suitable candidates to fulfil a position of Senior Campaign Manager. This position entails managing, developing, executing and evaluating client's marketing	<u>Clark Agency</u> , a prominent marketing agency is seeking suitable candidates to fulfil a position of Senior Campaign Manager. This position entails managing, developing, executing and evaluating client's marketing

<p>campaigns across print and digital media to ensure clients meet and exceed targets. Clients include several non-profit organisations and charities. Our goal is to promote volunteerism, community knowledge of and support for these organizations.</p>	<p>campaigns across print and digital media to ensure our highly selective clientele meet and exceed business targets. Our accounts include the biggest names in retail, including several Fortune 100 companies and leading “dot-com” companies.</p>
<p>Please indicate which position is your preference: White Agency: <input type="checkbox"/> Clark Agency: <input type="checkbox"/></p>	
<p>10. Head of Advertising</p>	
<p><u>Moore & Milan</u>, a major advertisement firm whose services are tailored to large business corporations, is seeking applicants for the position for head of Advertising. Job requirements include supervising department responsible for producing materials which present a positive company image of clients to potential investors and consumers. Maintain contacts with the press. Publicise client companies’ actions and intervene to counteract negative publicity. Leadership in this position is vital to the company and its shareholders.</p>	<p><u>Jackson & Black</u>, a major advertisement firm whose services are tailored to non-profits is seeking applicants for the position of head of Advertising. Job requirements include supervising department responsible for producing materials that present our clients’ cause to potential donors. Maintain contacts with the media and educate the public about the need for clients’ community programs and about ongoing projects. Leadership in this position is vital to our program of community service.</p>
<p>Please indicate which position is your preference: Moore & White: <input type="checkbox"/> Jackson & Black: <input type="checkbox"/></p>	

Appendix B –Questionnaire Measures for Study 3

HE and HA leadership Role Goal Affordance Stereotypes

PLEASE READ THE FOLLOWING JOB ADVERTISEMENTS

Please read **each job advertisement** carefully. Then indicate the extent to which you believe each **job helps** or **hinders** fulfilling the following **goals**?

Please indicate your response using the following 1-5 scale:

5 – Helps a lot

4 – Helps

3 – Neither helps nor hinders

2 – Hinders

1 – Hinders a lot

Director of Public Relations

All Together, a union of charitable organisations that assist those who lack social status and material means, is seeking applicants for the position of director of public relations.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Chief Financial Officer

Brown Ltd., a large technology company which specifically provides services for certain government departments, such as the Department of Justice or Defence, is seeking suitable candidates to fulfil a position of CFO to help guide the business forward.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Financial Advisor

Byrne & Fallon, a major brokerage firm which mainly invests in large profit focused corporations, is seeking applicants for the position of senior financial advisor.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Chief Financial Officer

Campbell Ltd., a large technology company which specifically provides services for certain government departments, such as Department of Social Protection or Children, is seeking suitable candidates to fulfil a position of CFO to help guide the business forward.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Campaign Manager

Clark Agency, a prominent marketing agency is seeking suitable candidates to fulfil a position of Senior Campaign Manager. This position entails managing, developing, executing and evaluating client's marketing campaigns across print and digital media to ensure our highly selective clientele meet and exceed business targets. Our accounts include the biggest names in retail, including several Fortune 100 companies and leading "dot-com" companies.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Regional Manager

Forest Ltd., a property development company is seeking applicants for Regional Manager. New position requires development project in areas with undervalued properties. Will buy up low-priced storefronts and transform these into lucrative commercial market space. Also will convert low-rent apartments into stylish condominiums. Budgetary authority, autonomy, and opportunities for advancement.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Director of Public Relations

Green Oil, one of the world's leading suppliers of petroleum products is seeking applicants for the position of director of public relations.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Chief Executive Officer

Hart Agency, a prominent advertising agency which represents most elite Irish and UK corporations, is seeking suitable candidates to fulfil a position of CEO.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Head of Advertising

Jackson & Black, a major advertisement firm whose services are tailored to non-profits is seeking applicants for the position of head of Advertising. Job requirements include supervising department responsible for producing materials that present our clients' cause to potential donors. Maintain contacts with the media and educate the public about the need for clients' community programs and about ongoing projects. Leadership in this position is vital to our program of community service.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Human Resource Manager

Jones, a large cosmetic company is seeking applicants for position of Senior Human Resource Manager. Job requirements include setting policy for how we identify, recruit, and train individuals to become part of our company family. Maintain contacts with Equal Employment Opportunity commissioners and heads of hiring agencies. Review and adjust company procedures to promote minority hiring and the hiring of women, develop plans to create a welcoming environment, such as childcare and cultural sensitivity programs.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Financial Advisor

Lincoln & White, a major brokerage firm which mainly invests in socially responsible corporations and public funds, is seeking applicants for the position of senior financial advisor.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Head of Advertising

Moore & Milan, a major advertisement firm whose services are tailored to large business corporations, is seeking applicants for the position for head of Advertising. Job requirements include supervising department responsible for producing materials which present a positive company image of clients to potential investors and consumers. Maintain contacts with the press. Publicise client companies' actions and intervene to counteract negative publicity. Leadership in this position is vital to the company and its shareholders.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Regional Manager

Rayne Ltd., a property development company is seeking applicants for Regional Manager. New position requires development of mixed business/residential facilities for low-income neighbourhoods. Project will provide affordable housing and entry-level employment opportunities. Budgetary authority, autonomy, and opportunities for advancement.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Human Resource Manager

Smyth, a large cosmetic company is seeking applicants for position of Senior Human Resource Manager. Job requirements include setting policy for how we identify, recruit, and train the best and the brightest to maintain our company's predominance in personal care products. Maintain contacts with VIPs at prestigious universities and other recruitment centres. Review and adjust company employee merit policy, such as setting bonus levels for Level III staff and planning probationary tests for Level I staff.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Managing Director

Taylor Logistics, is a leading supplier of simulation, scheduling and optimising solutions which is used by a variety of companies within the non-government and non-profit sectors, is seeking suitable and qualified applicants to fulfil the position of Managing Director.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Accountant

Thompson, a law firm which mainly represents and assists large corporations, is seeking applicants for the position of senior accountant.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Chief Executive Officer

Top Agency, a prominent advertising agency which represents national charity organisations, is seeking suitable candidates to fulfil a position of CEO.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Campaign Manager

White Agency, a prominent marketing agency is seeking suitable candidates to fulfil a position of Senior Campaign Manager. This position entails managing, developing, executing and evaluating client's marketing campaigns across print and digital media to ensure clients meet and exceed targets. Clients include several non-profit organisations and charities. Our goal is to promote volunteerism, community knowledge of and support for these organizations.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Managing Director

Williams Logistics, is a leading supplier of simulation, scheduling and optimising solutions which is used by a variety of companies within the commercial and business sectors, is seeking suitable and qualified applicants to fulfil the position of Managing Director.

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Senior Accountant

Wright, a law firm which mainly represents and assists lower status groups such as the poor and children, is seeking applicants for the position of senior accountant

Power	.....	Helping others	.....
Serving humanity	.....	Recognition	.....
Achievement	.....	Career Success	.....
Caring for others	.....	Attending to others' needs	.....
Status	.....	Succeeding in life	.....

Appendix B – Questionnaire Measures for Study 4

Agentic Priming Writing Task

Please think about a time when you wanted to act **agenticly** - that is, you wanted to **achieve something, earn status or gain recognition** - but **you were unable to do so**. What was this situation, and what did it feel like?

In the space below, please write about this time in as much detail as you can for the next 7 minutes.

Communal Priming Writing Task

Please think about a time when you wanted to act **communally** - that is, you wanted to **care for others, help others or attend to others' needs** - but **you were unable to do so**. What was this situation, and what did it feel like?

In the space below, please write about this time in as much detail as you can for the next 7 minutes.

Control

Please think about the natural features of your county (e.g. lakes, mountains, cliffs etc.). In as much detail as possible describe the details of these features in the space below.

In the space below, please write in as much detail as you can for the next 7 minutes.

Leadership Role Preference (same as Study 2)

Appendix B –Questionnaire Measures for HEA vignettes test

Hierarchy Enhancing and Hierarchy Attenuating Leadership Roles Sample Questionnaire 1

Please note that **hierarchy-enhancing** positions are defined as jobs or organisation serves the elite or powerful in society and defends their interests. **Hierarchy-Attenuating** positions are defined as job or organisation serves the disadvantaged who have low wealth, status or power such as children or minorities and defends their interests.

Same Leadership role vignettes as Study 2.

Example:

Director of Public Relations

All Together, a union of charitable organisations that assist those who lack social status and material means, is seeking applicants for the position of director of public relations.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

Senior Campaign Manager

Clark Agency, a prominent marketing agency is seeking suitable candidates to fulfil a position of Senior Campaign Manager. This position entails managing, developing, executing and evaluating client’s marketing campaigns across print and digital media to ensure our highly selective clientele meet and exceed business targets. Our accounts include the biggest names in retail, including several Fortune 100 companies and leading “dot-com” companies.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

Filler Job Advertisements

Legal Assistant

Frye & Hollande Ltd., a law firm is seeking applicants for position of legal assistant. The intern will gain practical experience in legal research and training will be given in compiling briefs and documentation management.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

Digital Communications Officer

Johnston University Marketing and Communications Office is seeking a digital communications officer to manage the university's online presence and enhance the reputation of the university through the University's website and other online and social media.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

Human Resource Administrator

Menis Systems, is seeking applicants for position of Human resource administrator. Responsibilities include office and clerical functions and providing administrative support for the Operations Manager and Division Vice President.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

Safety Officer

Milton Construction Ltd., is seeking applicants for position of safety officer. Job requirements include promoting a positive health and safety behavioural culture and assisting in development of safer and healthier ways of working.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

Financial Analyst

Silverwood, a company based in Ireland, which supports our US parent company's financial technology team, is seeking applicants for position of entry level financial analyst.

Not at all prestigious	1	2	3	4	5	Very prestigious
Requires no competence	1	2	3	4	5	Requires much competence
Hierarchy attenuating	1	2	3	4	5	Hierarchy enhancing

APPENDIX C

DCU Research Ethics Committee Approval Letters

Dr. Janine Bosak
DCU Business School

15th April 2011

REC Reference: DCUREC/2011/036
Proposal Title: **Motivation to Lead: Does Gender Matter?**
Applicants: Dr. Janine Bosak, Ms. Mary Kinahan

Dear Janine,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this research proposal. Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Donal O'Mathuna', is written over a horizontal line.

Dr. Donal O'Mathuna
Chair
DCU Research Ethics Committee



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Dr. Janine Bosak
DCU Business School

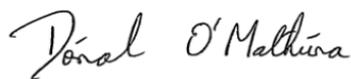
22nd December 2011

REC Reference: DCUREC/2011/151
Proposal Title: Study on Perception of Leadership
Applicants: Dr. Janine Bosak, Ms. Mary Kinahan

Dear Janine,

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this research proposal. Materials used to recruit participants should note that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee. Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink that reads 'Donal O'Mathuna'.

Dr. Donal O'Mathuna
Chair
DCU Research Ethics Committee



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Ms. Mary Kinahan
DCU Business School

18th September 2012

REC Reference: DCUREC/2012/157

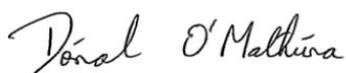
Proposal Title: **Hierarchy Enhancing vs. Hierarchy Attenuating: Does gender matter for leadership role preference**

Applicants: Ms. Mary Kinahan, Dr. Janine Bosak

Dear Mary

This research proposal qualifies under our Notification Procedure, as a low risk social research project. Therefore, the DCU Research Ethics Committee approves this research proposal. Materials used to recruit participants should note that ethical approval for this project has been obtained from the Dublin City University Research Ethics Committee. Should substantial modifications to the research protocol be required at a later stage, a further submission should be made to the REC.

Yours sincerely,

A handwritten signature in black ink that reads 'Donal O'Mathuna'.

Dr. Donal O'Mathuna
Chairperson
DCU Research Ethics Committee



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APPENDIX D

Correlation Matrices for Study 1, Study 2, and Study 3

Table D1*Correlation Matrix of the Main Variables in Study 1*

Measure	1	2	3	4	5	6
1. Gender	–					
2. Agentic Goals	-.005	–				
3. Communal goals	.273**	.036	–			
4. Leadership Aspirations	-.081	.415**	-.011	–		
5. Hierarchy Attenuating LRP	.189**	-.199**	.435**	-.055	–	
6. Hierarchy Enhancing LRP	-.203**	.200**	-.438**	.051	-.981**	–

Note: LRP = leadership role preference, ** $p \leq .01$; * $p \leq .05$.

Table D2*Correlation Matrix of the Main Variables in Study 2*

Measure	1	2	3	4	5	6	7	8	9	10
1. Gender	–									
2. Agentic GRSC	-.326**	–								
3. Communal GRSC	.279**	-.201**	–							
4. Agentic SSGN	-.374**	.357**	-.144*	–						
5. Communal SSGN	.232**	-.030	.335**	-.156**	–					
6. Agentic Goals	-.120*	.453**	-.083	.290**	.029	–				
7. Communal goals	.276**	-.118*	.455**	-.052	.295**	-.030	–			
8. Leadership Aspirations	-.075	.325**	-.062	-.015	.069	.315**	.077	–		
9. Hierarchy Attenuating LRP	.227**	-.215**	.162**	-.109	.073	-.331**	.277**	-.203**	–	
10. Hierarchy Enhancing LRP	-.247**	.228**	-.171**	-.101	-.055	.359**	-.287**	.210**	-.969**	–

Note: GRSC = gender role self-concept; SSGN = same-sex gender norms; LRP = leadership role preference, **p≤ .01; *p≤.05.

Table D3*Correlation Matrix of the Main Variables in Study 3*

Measure	1	2	3	4	5
1. Gender	–				
2. Agentic Goal Affordance for HE Leadership roles	.201	–			
3. Communal Goal Affordance for HE Leadership roles	.120	.323**	–		
4. Agentic Goal Affordance for HA Leadership roles	.129	.682**	.446**	–	
5. Communal Goal Affordance for HA Leadership roles	.277**	.448**	.415**	.288**	–

Note: HE = hierarchy enhancing, HA = hierarchy attenuating, **p≤ .01; *p≤.05.

APPENDIX E

HIERARCHY LEADERSHIP ROLE TEST

Method

Participants and Procedure: Participants consisted of 91 undergraduate business students (41 men, 50 women), whose ages ranged from 17 to 50 years with a mean age of 19.55 years ($SD = 4.03$). The majority of the sample identified their nationality as Irish (83.5%). The sample consisted of students studying Business Studies (49.5%), Accounting and Finance (11%), European Business Studies (14.3%), and other business or economic related courses (25.3%). The majority of the participants had some type of work experience (55.3%), specifically internships (6.4%) summer work (36.2%), part-time work (48.9%) and full-time work (8.5%).

Before the commencement of their 'Introduction to Economics' tutorials at a business school in an Irish university, participants were first presented with both the self-report questionnaire and cover letter which included brief information about the study and informed consent. Participants, who chose to participate, took approximately 10 minutes to complete the questionnaire. Upon completion, the surveyor collected all questionnaires from participants and thanked them for their participation.

Measures.

Participant Demographics. Participants reported their sex, age, nationality, study programme, and study year. Participants also reported whether they had work experience and if so, specified the type of experience.

Hierarchy Leadership Role Vignettes. Participants were presented with hierarchy leadership roles which included leadership role title and description (see Appendix A). Participants were also presented with a separate sheet which included

definitions of HE and HA leadership roles. These definitions were also included on each page of the questionnaire (for example, see Appendix A). Participants rated the degree to which each leadership role was hierarchy enhancing or hierarchy attenuating on a 5-point rating scale ranging from *hierarchy enhancing* (1) to *hierarchy attenuating* (5). Participants also rated the prestige of each leadership role on a 5-point rating scale ranging from *not at all prestigious* (1) to *very prestigious* (5). Participants also rated the competence required for each leadership role on a 5-point rating scale ranging from *requires no competence* (1) to *requires much competence* (5). Order of leadership roles and rating scales for hierarchy orientation were counterbalanced to prevent order effect in the questionnaire. Due to concerns regarding the length of the questionnaire and possible student fatigue, the 20 vignettes were divided, with each student being presented with 10 leadership role vignettes and five filler vignettes.

Results

To examine whether paired HE and HA leadership roles differed in their perceived ratings of prestige, competence, and hierarchy orientation, a series of mixed factorial 2 (participants' sex) x 2 (hierarchy orientation) ANOVAs were conducted, with hierarchy orientation as the within subjects factor and gender as the between subjects factor. Overall analyses showed that participants rated the paired leadership roles similarly for prestige (for means, see Table E1) and for competence (for means, see Table E2). The results for the ANOVAs for prestige are found below in Table E4, for competence are found below in Table E5.

In relation to hierarchy orientation, analyses showed a main effect for hierarchy orientation, with participants rating HE leadership roles as more HE and

HA leadership roles as more HA (for means, see Table E3). There was no main effect for gender with men and women rating paired leadership roles similarly and no significant interaction effect between gender and hierarchy orientation. The results for the ANOVAs for hierarchy orientation are found below in Table E6.

Table E1

Prestige means (standard deviations) for leadership role vignettes.

Leadership Roles	Prestige	
	Hierarchy Enhancing	Hierarchy Attenuating
Chief Financial Officer	4.27 (.75)	4.27 (.72)
Sen. Financial Advisor	4.31 (.87)	3.98 (.87)
Regional Manager	3.24 (.83)	3.29 (.84)
Head of Advertising	3.93 (.81)	3.69 (.90)
Senior Accountant	4.33 (.77)	4.13 (.73)
Director of Public Relations	3.89 (.88)	3.54 (.94)
Senior Campaign Manager	4.20 (.87)	3.98 (.81)
Chief Executive Officer	4.60 (.65)	4.38 (.86)
Senior Human Resource Manager	3.95 (.78)	3.91 (.71)
Managing Director	4.02 (.90)	3.93 (.85)

Table E2

Competence means (standard deviations) for leadership role vignettes.

Leadership Roles	Competence	
	Hierarchy Enhancing	Hierarchy Attenuating
Chief Financial Officer	4.24 (.77)	4.36 (.71)
Sen. Financial Advisor	4.38 (.77)	4.22 (.77)
Regional Manager	3.73 (.78)	3.69 (.70)
Head of Advertising	4.09 (.79)	4.04 (.88)
Senior Accountant	4.49 (.70)	4.44 (.67)
Director of Public Relations	4.00 (.76)	3.80 (.93)
Senior Campaign Manager	4.29 (.73)	4.00 (.71)
Chief Executive Officer	4.56 (.66)	4.38 (.68)
Senior Human Resource Manager	4.09 (.70)	4.04 (.71)
Managing Director	4.35 (.90)	4.09 (.84)

Table E3*Hierarchy orientation means (standard deviations) for leadership role vignettes.*

Leadership Roles	Hierarchy Orientation	
	Hierarchy Enhancing	Hierarchy Attenuating
Chief Financial Officer	2.07 (1.16)	3.27 (1.36)
Sen. Financial Advisor	1.69 (1.22)	3.38 (1.17)
Regional Manager	2.67 (1.30)	3.91 (1.35)
Head of Advertising	2.09 (1.22)	3.58 (1.49)
Senior Accountant	2.02 (1.32)	3.84 (1.38)
Director of Public Relations	1.87 (1.09)	4.48 (.91)
Senior Campaign Manager	1.82 (1.01)	4.09 (1.06)
Chief Executive Officer	1.62 (1.09)	4.00 (1.40)
Senior Human Resource Manager	2.13 (1.16)	3.67 (1.15)
Managing Director	2.02 (1.02)	3.70 (1.15)

Table E4*Mixed ANOVA results of prestige ratings for leadership roles.*

Effect	SS	MS	F	df	p	$p\eta^2$
Prestige Ratings						
Chief Financial Officer						
Participants' sex	1.23	1.23	1.46	1	.234	.033
Error (sex)				43		
Hierarchy Leadership roles	.000	.000	.000	1	.992	.000
Leadership Roles x Sex	.044	.044	.192	1	.663	.004
Error(leadership roles)	9.96	.232		43		
Senior Financial Advisor						
Participants' sex	.959	.959	1.13	1	.295	.025
Error (sex)	36.66	.853		43		
Hierarchy Leadership roles	2.46	2.46	3.69	1	.062	.079
Leadership Roles x Sex	.242	.242	.362	1	.551	.008
Error(leadership roles)	28.76	.669		43		
Regional Manager						
Participants' sex	.003	.003	.003	1	.958	.000
Error (sex)	48.60	1.13		43		
Hierarchy Leadership roles	.051	.051	.173	1	.679	.004
Leadership Roles x Sex	.406	.406	1.39	1	.245	.031
Error(leadership roles)	12.55	.292		43		

Effect	SS	MS	F	df	p	$p\eta^2$
Head of Advertising						
Participants' sex	.238	.238	.300	1	.587	.007
Error (sex)	34.05	.792		43		
Hierarchy Leadership roles	1.35	1.35	1.93	1	.172	.043
Leadership Roles x Sex	.017	.017	.025	1	.876	.001
Error(leadership roles)	30.14	.701		43		
Senior Accountant						
Participants' sex	.620	.620	.721	1	.401	.016
Error (sex)	36.98	.860		43		
Hierarchy Leadership roles	.950	.950	4.00	1	.052	.085
Leadership Roles x Sex	1.39	1.39	5.88	1	.020	.120
Error(leadership roles)	10.21	.237		43		
Director of Public Relations						
Participants' sex	.001	.001	.002	1	.967	.000
Error (sex)	35.65	.810		44		
Hierarchy Leadership roles	2.05	2.05	2.41	1	.128	.052
Leadership Roles x Sex	.829	.829	.975	1	.329	.022
Error(leadership roles)	37.39	.850		44		
Senior Campaign Manager						
Participants' sex	1.19	1.19	1.65	1	.206	.037
Error (sex)	31.10	.723		43		
Hierarchy Leadership roles	.675	.675	.993	1	.325	.023
Leadership Roles x Sex	.675	.675	.993	1	.325	.023
Error(leadership roles)	29.21	.679		43		
Chief Executive Officer						
Participants' sex	.267	.267	.357	1	.554	.008
Error (sex)	32.22	.749		43		
Hierarchy Leadership roles	1.18	1.18	2.70	1	.108	.059
Leadership Roles x Sex	.071	.071	.161	1	.690	.004
Error(leadership roles)	18.82	.438		43		
Senior Human Resource Manager						
Participants' sex	.258	.258	.464	1	.500	.011
Error (sex)	23.33	.556		42		
Hierarchy Leadership roles	.029	.029	.05	1	.824	.001
Leadership Roles x Sex	.029	.029	.05	1	.824	.001
Error(leadership roles)	23.93	.570		42		
Managing Director						
Participants' sex	.682	.682	.570	1	.454	.013
Error (sex)	50.27	1.20		42		
Hierarchy Leadership roles	.147	.147	.416	1	.523	.010
Leadership Roles x Sex	.010	.010	.029	1	.866	.001
Error(leadership roles)	14.81	.353		42		

Table E5*Mixed ANOVA results of competence ratings for leadership roles.*

Effect	SS	MS	F	df	p	$p\eta^2$
Competence Ratings						
Chief Financial Officer						
Participants' sex	1.03	1.03	1.18	1	.284	.027
Error (sex)	37.38	.869		43		
Hierarchy Leadership roles	.275	.275	1.16	1	.288	.026
Leadership Roles x Sex	.009	.009	.037	1	.848	.001
Error(leadership roles)	10.21	.238		43		
Senior Financial Advisor						
Participants' sex	2.06	2.06	3.49	1	.069	.075
Error (sex)	25.34	.589		43		
Hierarchy Leadership roles	.562	.562	.980	1	.328	.022
Leadership Roles x Sex	.295	.295	.515	1	.477	.012
Error(leadership roles)	24.66	.573		43		
Regional Manager						
Participants' sex	.818	.818	1.15	1	.290	.026
Error (sex)	30.67	.713		43		
Hierarchy Leadership roles	.041	.041	.104	1	.749	.002
Leadership Roles x Sex	.174	.174	.446	1	.508	.010
Error(leadership roles)	16.78	.390		43		
Head of Advertising						
Participants' sex	.383	.383	.467	1	.498	.011
Error (sex)	35.22	.819		43		
Hierarchy Leadership roles	.046	.046	.077	1	.783	.002
Leadership Roles x Sex	.046	.046	.077	1	.783	.002
Error(leadership roles)	25.91	.603		43		
Senior Accountant						
Participants' sex	.887	.887	1.39	1	.245	.031
Error (sex)	27.51	.640		43		
Hierarchy Leadership roles	.049	.049	.177	1	.676	.004
Leadership Roles x Sex	.182	.182	.664	1	.420	.015
Error(leadership roles)	11.77	.274		43		
Director of Public Relations						
Participants' sex	.010	.010	.013	1	.909	.000
Error (sex)	34.61	.787		44		
Hierarchy Leadership roles	.435	.435	.655	1	.423	.015
Leadership Roles x Sex	1.39	1.39	2.095	1	.155	.045
Error(leadership roles)	29.23	.664		44		

Effect	SS	MS	F	df	p	$p\eta^2$
Senior Campaign Manager						
Participants' sex	.039	.039	.069	1	.795	.002
Error (sex)	24.58	.572		43		
Hierarchy Leadership roles	1.64	1.64	3.43	1	.071	.074
Leadership Roles x Sex	.039	.039	.082	1	.776	.002
Error(leadership roles)	20.58	.479		43		
Chief Executive Officer						
Participants' sex	.061	.061	.117	1	.734	.003
Error (sex)	22.34	.520		43		
Hierarchy Leadership roles	.664	.664	1.66	1	.205	.037
Leadership Roles x Sex	.000	.000	.000	1	.994	.000
Error(leadership roles)	17.29	.402		43		
Senior Human Resource Manager						
Participants' sex	.025	.025	.041	1	.840	.001
Error (sex)	26.58	.618		43		
Hierarchy Leadership roles	.012	.012	.032	1	.860	.001
Leadership Roles x Sex	.146	.146	.373	1	.545	.009
Error(leadership roles)	16.81	.391		43		
Managing Director						
Participants' sex	.427	.427	.586	1	.448	.014
Error (sex)	29.88	.729		41		
Hierarchy Leadership roles	.834	.834	1.87	1	.179	.044
Leadership Roles x Sex	.834	.834	1.87	1	.179	.044
Error(leadership roles)	18.26	.445		41		

Table E6

Mixed ANOVA results of hierarchy orientation ratings for leadership roles.

Effect	SS	MS	F	df	p	$p\eta^2$
Hierarchy Orientation Ratings						
Chief Financial Officer						
Participants' sex	.598	.598	.284	1	.597	.007
Error (sex)	90.40	2.10		43		
Hierarchy Leadership roles	32.52	32.52	28.95	1	.000	.402
Leadership Roles x Sex	.301	.301	.268	1	.608	.006
Error(leadership roles)	48.30	1.12		43		
Senior Financial Advisor						
Participants' sex	3.99	3.99	3.21	1	.080	.069
Error (sex)	53.42	1.24		43		
Hierarchy Leadership roles	64.06	64.06	40.06	1	.000	.482
Leadership Roles x Sex	.059	.059	.037	1	.848	.001
Error(leadership roles)	68.76	1.60		43		

Effect	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>pη²</i>
Regional Manager						
Participants' sex	.481	.481	.235	1	.630	.005
Error (sex)	88.01	2.05		43		
Hierarchy Leadership roles	34.64	34.64	23.78	1	.000	.356
Leadership Roles x Sex	.507	.507	.348	1	.558	.008
Error(leadership roles)	62.65	1.46		43		
Head of Advertising						
Participants' sex	2.61	2.61	1.89	1	.176	.042
Error (sex)	59.39	1.38		43		
Hierarchy Leadership roles	49.74	49.74	.077	1	.000	.331
Leadership Roles x Sex	.137	.137	.077	1	.810	.001
Error(leadership roles)	100.5	2.34		43		
Senior Accountant						
Participants' sex	2.22	2.22	2.43	1	.127	.053
Error (sex)	39.38	.916		43		
Hierarchy Leadership roles	74.99	74.99	27.19	1	.000	.387
Leadership Roles x Sex	.680	.680	.247	1	.622	.006
Error(leadership roles)	118.6	2.76		43		
Director of Public Relations						
Participants' sex	.638	.638	.982	1	.327	.022
Error (sex)	28.58	.650		44		
Hierarchy Leadership roles	141.3	141.3	104.9	1	.000	.705
Leadership Roles x Sex	2.21	2.21	1.64	1	.207	.036
Error(leadership roles)	59.27	1.35		44		
Senior Campaign Manager						
Participants' sex	.105	.105	.111	1	.741	.003
Error (sex)	40.72	.947		43		
Hierarchy Leadership roles	100.5	100.5	85.21	1	.000	.665
Leadership Roles x Sex	2.68	2.68	2.27	1	.139	.050
Error(leadership roles)	50.72	1.18		43		
Chief Executive Officer						
Participants' sex	.924	.924	.774	1	.384	.018
Error (sex)	51.36	1.19		43		
Hierarchy Leadership roles	121.45	121.45	60.61	1	.000	.585
Leadership Roles x Sex	.118	.118	.059	1	.810	.001
Error(leadership roles)	86.17	2.00		43		
Senior Human Resource Manager						
Participants' sex	4.18	4.18	3.30	1	.076	.071
Error (sex)	54.42	1.27		43		
Hierarchy Leadership roles	43.88	43.88	33.98	1	.000	.441
Leadership Roles x Sex	3.08	3.08	2.38	1	.130	.052
Error(leadership roles)	55.52	1.29		43		

Effect	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>df</i>	<i>p</i>	<i>pη²</i>
			Managing Director			
Participants' sex	4.31	4.31	3.76	1	.059	.082
Error (sex)	48.1	1.14		42		
Hierarchy Leadership roles	57.68	57.68	48.68	1	.000	.537
Leadership Roles x Sex	.000	.000	.000	1	.985	.000
Error(leadership roles)	49.77	1.19		42		

APPENDIX F

POWER ANALYSES

Table F1

A Post-hoc Power Analysis for Study 1 regression analyses

Input		Small Effect	Medium Effect	Large Effect
Alpha		0.05	0.05	0.05
Effect Size		.02	.15	.35
Sample Size		234	234	234
No. of tested predictors		2	2	2
Total no. of predictors		2	2	2
Result				
Power (1- β)		0.47	.99	1.00
Critical F		3.03	3.03	3.03
Noncentrality parameter λ		4.68	35.1	81.9

Table F2

A Post-hoc Power Analysis for Study 2 regression analyses

Input		Small Effect	Medium Effect	Large Effect
Alpha		0.05	0.05	0.05
Effect Size		.02	.15	.35
Sample Size		282	282	282
No. of tested predictors		3	3	3
Total no. of predictors		3	3	3
Result				
Power (1- β)		0.48	.99	1.00
Critical F		2.64	2.64	2.64
Noncentrality parameter λ		5.64	42.3	98.7

Table F3*A Post-hoc Power Analysis for Study 3 ANOVA*

Input		Small Effect	Medium Effect	Large Effect
	Alpha	0.05	0.05	0.05
	Effect Size	.02	.15	.35
	Sample Size	102	282	282
	No. of Groups	2	2	2
	No. of measures	2	2	2
Result				
	Power (1- β)	0.06	.85	.99
	Critical F	3.93	2.64	2.64
	Noncentrality parameter λ	0.163	9.10	49.9

Table F4*A Priori Power Analysis for Study 4 ANOVA*

Input		Small Effect	Medium Effect	Large Effect
	Alpha	0.05	0.05	0.05
	Effect Size	.10	.25	.40
	Power	.80	.80	.80
	Cell Number	6	6	6
Result				
	Actual Power	.80	.81	.82
	Critical F	2.22	2.26	2.32
	Noncentrality parameter λ	12.9	13.5	14.4
	Total Sample Size	1290	216	90

APPENDIX G

PCA for Goal Affordance Stereotypes of HE and HA Leadership roles

A PCA extraction using varimax rotation was conducted to assess the underlying structure of the goal affordance stereotypes of each leadership role (HE, HA). Overall the scree plots of each analysis suggested two factor solutions. Thus, as per previous research (Diekmann et al., 2011), a two factor solution was chosen which produced factor loadings representing agentic goal affordance stereotypes and communal goal affordance stereotypes.

Table G1

Factor Loading for Goal Affordance Stereotype Measure for Director of Public Relations Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Caring for others	.899			.900
Helping others	.874			.867
Serving humanity	.848			.653
Attending to others' needs	.794			.826
Career Success		.787	.770	
Power		.692	.739	
Recognition		.681	.691	
Succeeding in life		.628	.684	
Status		.619	.727	
Achievement		.603	.721	
Eigen value	3.213	2.722	3.176	2.722
% of variance	32.13	27.22	31.76	27.22

Note: Factor loadings for HA are not in order of size.

Table G2

Factor Loading for Goal Affordance Stereotype Measure for Chief Financial Officer Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Attending to others' needs	.887		.904	
Caring for others	.872		.914	
Serving humanity	.833		.849	
Helping others	.807		.845	
Recognition		.838		.572
Status		.750		.691
Power		.676		.654
Succeeding in life		.653		.708
Career Success		.630		.792
Achievement		.621		.735
Eigen value	2.990	2.947	3.162	2.932
% of variance	29.89	29.47	31.62	29.32

Note: Factor loadings for HA are not in order of size.

Table G3

Factor Loading for Goal Affordance Stereotype Measure for Senior Financial Advisor Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Attending to others' needs	.895		.827	
Serving humanity	.892		.879	
Caring for others	.862		.918	
Helping others	.836		.905	
Succeeding in life		.735		.768
Career success		.706		.836
Recognition		.679		.564
Achievement		.645		.652
Status		.618		.758
Power		.545		.584
Eigen value	3.11	2.62	3.190	2.957
% of variance	31.13	26.25	31.90	29.57

Note: Factor loadings for HA are not in order of size.

Table G4

*Factor Loading for Goal Affordance Stereotype Measure for Senior Campaign
Manager Leadership role (HE, HA).*

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Career success	.786			.667
Power	.753			.653
Recognition	.693			.668
Status	.627			.725
Achievement	.615			.490
Succeeding in life	.612			.652
Caring for others		.842	.854	
Attending to others' needs		.834	.782	
Helping others		.809	.679	
Serving humanity		.781	.789	
Eigen value	2.928	2.774	2.527	2.523
% of variance	29.28	27.74	25.27	25.23

Note: Factor loadings for HA are not in order of size.

Table G5

*Factor Loading for Goal Affordance Stereotype Measure for Regional Manager
Leadership role (HE, HA).*

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Status	.759		.673	
Achievement	.746		.717	
Recognition	.737		.705	
Succeeding in life	.713		.635	
Power	.678		.657	
Career success	.647		.816	
Caring for others		.881		.855
Helping others		.865		.782
Attending to others' needs		.845		.815
Serving humanity		.760		.816
Eigen value	3.151	2.929	2.987	2.830
% of variance	31.51	29.29	29.87	28.31

Note: Factor loadings for HA are not in order of size.

Table G6

Factor Loading for Goal Affordance Stereotype Measure for Chief Executive Officer Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Caring for others	.926			.872
Attending to others' needs	.904			.763
Helping others	.872			.863
Serving humanity	.831			.633
Status		.843	.771	
Achievement		.730	.736	
Career success		.728	.819	
Succeeding in life		.719	.706	
Recognition		.653	.774	
Power		.540	.789	
Eigen value	3.189	3.091	3.552	2.822
% of variance	31.89	30.91	35.52	28.22

Note: Factor loadings for HA are not in order of size.

Table G7

Factor Loading for Goal Affordance Stereotype Measure for Head of Advertisement Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Caring for others	.870			.864
Attending to others' needs	.869			.822
Helping others	.869			.796
Serving humanity	.750			.681
Recognition		.789	.711	
Career success		.702	.813	
Status		.689	.827	
Succeeding in life		.637	.699	
Achievement		.619	.695	
Power		.599	.670	
Eigen value	2.949	2.759	3.281	2.569
% of variance	29.49%	27.59	32.81	25.69

Note: Factor loadings for HA are not in order of size.

Table G8

Factor Loading for Goal Affordance Stereotype Measure for Senior Human Resource Manager Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Caring for others	.899			.878
Helping others	.874			.753
Serving humanity	.848			.794
Attending to others' needs	.794			.816
Career Success		.787	.804	
Power		.692	.698	
Recognition		.681	.730	
Succeeding in life		.628	.639	
Status		.619	.757	
Achievement		.603	.626	
Eigen value	3.21	2.722	3.071	2.723
% of variance	32.13%	27.22	30.71	27.23

Note: Factor loadings for HA are not in order of size.

Table G9

Factor Loading for Goal Affordance Stereotype Measure for Managing Director Leadership role (HE, HA).

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Status	.769		.797	
Succeeding in life	.749		.750	
Achievement	.710		.708	
Career success	.696		.797	
Power	.676		.762	
Recognition	.641		.705	
Caring for others		.842		.876
Helping others		.770		.825
Serving humanity		.723		.815
Attending to others' needs		.693		.848
Eigen value	3.061	2.422	3.418	2.915
% of variance	30.61%	24.22	34.18	29.15

Note: Factor loadings for HA are not in order of size.

Table G10

*Factor Loading for Goal Affordance Stereotype Measure for Senior Accountant
Leadership role (HE, HA).*

Items	Hierarchy Enhancing		Hierarchy Attenuating	
	Factor 1	Factor 2	Factor 1	Factor 2
Achievement	.784		.606	
Succeeding in life	.774		.645	
Recognition	.727		.770	
Status	.686		.741	
Career Success	.674		.758	
Power	.589		.491	
Attending to others' needs		.878		.802
Serving humanity		.853		.753
Helping others		.819		.864
Caring for others		.800		.815
Eigen value	3.065	2.850	2.763	2.732
% of variance	30.65%	28.50	27.63	27.32

Note: Factor loadings for HA are not in order of size.