

A longitudinal study investigating changing implicit leadership theory in an Irish business school

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Abstract

Purpose – The purpose of this study is to investigate changing implicit leadership theories (ILTs) within a business student population over a ten-year period.

Design/methodology/approach – Students from the same business student population rated men, women and managers in general, using Schein's Descriptive Index, first during the academic year 2008–2009 and again in 2018–2019.

Findings – In Sample 1, the authors found multiple ILTs, male students gender typed the managerial role in favour of men, while female students held a more gender egalitarian view of the managerial role. In Sample 2, the authors found evidence that ILTs are starting to converge, as neither the male nor female sample gender typed the managerial role.

Practical implications – These results aid the understanding of the ILTs that these graduating professionals bring into their new full-time organisations.

Originality/value – The analysis of data from the same population using the same measurement at ten-year intervals, along with the findings that male students no longer gender type the managerial role in the most recent round of data collection, are original contributions to the literature.

Keywords Implicit leadership theories, Gender in management, Gender role stereotypes, Schein's descriptive index, Think-manager, Think-male

Paper type Research paper

Introduction

Within the gender in management literature, the link between gender and managerial [1] stereotypes has been one of the most researched areas in the field (Powell *et al.*, 2021; Schein, 1973; Schein, 1975; Schein, 2007; Schein, 2001; Boyce and Herd, 2003; Booysen and Nkomo, 2010). Research by Schein (1973, 1975) was among the first to look at the relationship between gender [2] role stereotypes and requisite managerial characteristics, reflecting the extent to which males and females are viewed as leader like; this is now referred to as the “think manager–think male” (TMTM) paradigm. The contribution of SDI to the literature on women in management remains as important today, albeit 50 years later, as its initial contribution in 1973. Over the past five decades, this research has been replicated across different cultures within both student and workplace populations, see for example



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Schein (1973), Schein (1975), Brenner *et al.* (1989), Martell *et al.* (1998), Booyesen and Nkomo (2010), Braun *et al.* (2017), Berkery *et al.* (2013), Braun *et al.* (2017) and Busse and Poell (2020). Most of these studies have led to the conclusion that male's gender-type the managerial role in favour of men, while the findings among female respondents are less consistent. For example, Schein *et al.* (1996) reported that both male and female students in Japan and the People's Republic of China perceived managers to possess characteristics more commonly ascribed to men than women, while within a US sample, Brenner *et al.* (1989) found that male respondents gender typed the managerial role in favour of men, whereas female respondents did not gender type the managerial role. More recently, Busse and Poell (2020) reported that both male and female German students gender typed the managerial role in favour of men. While these studies provide a useful overview of gender role stereotypes and requisite managerial characteristics, these snapshot studies do not show long-term trends, making it difficult to draw overall conclusions as to whether gender stereotypes are changing within a particular population, hence the need for more longitudinal comparative data in this area.

Running parallel to the literature on SDI is the literature on Implicit Leadership Theory (ILT). ILT is based on the premise that individuals create cognitive representations of the world, using these preconceived ideas to understand their surroundings, which in turn individuals use to construct their views and perceptions of what a leader is (Offermann *et al.*, 1994). These views and perceptions of leadership represent cognitive structures or schemas, specifying traits and behaviours that followers expect from leaders (Epitropaki and Martin, 2004). Literature to date on ILT has led empirical evidence to support the role of leader categorisation or ILT theory in overall leader effectiveness (Tskhay and Rule, 2018). This research highlights the resulting effect of women having, for example, more difficult career pathways, referred to as the leadership labyrinth (Eagly and Carli, 2007), as well as women facing significant barriers to advancement in the form of the glass ceilings and the glass cliff (Morgenroth *et al.*, 2020a). However, Lord and Maher (1993) suggest that ILTs can be changed through recognition-based processes, and within the context of women in management, as the number of women in management increases so too should the perceived fit between women and the managerial role. Since the 1980s, not only has the number of female managers grown, but so too has the composition of management changed. Of the new management positions created between 1980 and 2010, 2.6 million were filled by women and 1.9 million by men (Scarborough, 2018). More recently, the European Commission indicated that the number of women in management in Europe accounted for 35.3% in 2021, compared to 41% in Australia reported by the Workplace Gender Equality Agency and 40.9% in the USA as reported by the US Bureau of Labour Statistics. Therefore, one would expect a direct correlation between the number of women entering the managerial role and changing ILTs. However, this correlation is difficult to track in the studies thus far as samples to date are not directly comparable.

Combined, the TMTM paradigm and ILTs can be used to explain the misfit between female stereotypes and leader stereotypes and form the theoretical basis for this study. The remainder of our paper is structured as follows. First, we start with a theoretical overview of the TMTM paradigm and ILT, from which we develop a series of research questions. To answer these research questions, we gather data at two different points in time, 2008 and 2018, from a business student population in a large public university in the Republic of Ireland. We first assess whether gender role stereotypes and requisite managerial characteristics within this business student population have influenced ILTs over the past decade. We then determine the effect of exposure to target stimuli or leadership exemplars in the form of their previous work supervisors on influencing ILTs. In doing so, we can track long-term trends within this population of business students. Following the presentation of

our findings, we discuss the theoretical and practical implications of our results, before drawing conclusions and offering recommendations for future research.

Literature review

Research suggests that one of the main barrier women face throughout their careers is the belief that women lack the characteristics requisite for the managerial role (Schein, 2007; Schein, 1975). This mismatch of women and the managerial role has created a stubborn persistence of gender stereotypes, and for many, a prototype where leaders and managers are perceived as masculine in nature (Eagly and Karau, 2002; Schein, 2007; Schein, 1975; Schein, 1973), placing women at a distinct disadvantage compared to their male counterparts. This has also led to occupational gender stereotyping, as occupational preferences are influenced by gender stereotypes and thus lead to segregation of the sexes by occupation (Basfirinci *et al.*, 2019).

Think Manager–Think Male paradigm and implicit leadership theories

Research suggests that the discrimination towards women in their plight to attain senior organisational roles occurs mainly because people believe that women lack the capacity to be leaders (Antonakis and Dalgas, 2009). Although there is no evidence to suggest that women are incompetent leaders when using either effectiveness or optimal leadership styles as measures (Hyde, 2014). For many, the ideal leader prototype is masculine (Epitropaki and Martin, 2004). This leader prototype or cognitive schemata theory is characterised by ILT (Offermann *et al.*, 1994). ILT defines the process through which followers categorise traits to identify a leader which in turn contributes to leader emergence and ultimately organisational outcomes. A 2014 systematic review of ILT gathered documented research which suggested male leaders fit the ideal image of a leader better than their female counterparts (Junker and Van Dick, 2014). The TMTM paradigm was designed to look at the compatibility of men and women's stereotypes with general leader/manager stereotypes, and to understand the relationship, if any, between the characteristics and attributes of a manager and gender role stereotypes. Attributes of gender stereotypes are generally described across two dimensions: agency and communion (Nett *et al.*, 2021). Agentic traits, which include being dominant, ambitious, autonomous and confident, are more strongly related with men (Eagly and Karau, 2002), and communal traits, such as being helpful, kind, nurturing, emotionally expressive and affectionate, are more often linked with women (Eagly and Karau, 2002). Agentic and communal orientations are considered to be the qualities required for particular roles and positions. As women have been traditionally expected to fulfil caring roles within an employment setting, such as nursing and teaching, and primary caregiver in the home, woman were traditionally perceived to be communal in nature (Eagly and Steffen, 1984). In contrast, as men have been traditionally expected to assume the role of main breadwinner in the home and within an employment setting held roles in areas such as construction, engineering and management, they were traditionally perceived to be agentic in nature (Eagly and Steffen, 1984). Studies have also indicated that agentic characteristics are usually seen to be essential for successful leadership (Duehr and Bono, 2006; Eagly and Carli, 2007; Nett *et al.*, 2021), indicating that high status is related to the perception of agency, rather than communion (Eagly and Steffen, 1984). As a result, Eagly and Carli (2007) suggest that the communal attributes ascribed to women in general put women in the pursuit of leadership roles at a disadvantage.

Recent studies have attempted to extend the TMTM association by looking at the effect of intersecting roles or identities. For example, Morgenroth *et al.* (2020b) looked at the intersection of parenthood and gender and found that parenthood stereotypes provide

benefits for both men and women; however, this advantage is quickly eroded for women as a result of the harsh structural and normative gender inequalities they experience. Black and minority ethnic (BME) employees also appear to experience more difficulty in reaching senior leadership positions (Wyatt and Silvester, 2015). Researchers contend that managers' stereotypes about BME employees frequently lead to their segregation into less esteemed positions (Fearfull and Kamenou, 2006). A study conducted by Booyesen and Nkomo (2010) on the intersection between BME groups and TMTM found that the intraclass coefficient of the resemblance between characteristics of men and successful managers was significantly higher for black men than white men. More recently, research on the intersection between sexual minority groups and TMTM has shown that the stereotypes of these groups can limit access to leadership positions impeding their progress in organisations (Lieberman and Golom, 2015). Other studies have looked at how TMTM can be applied across different cultures (Schein, 2001; Berkery *et al.*, 2013; Schein *et al.*, 1996; Boyce and Herd, 2003) and across different contexts. Most of these studies have led to the conclusion that male respondent's gender-type the managerial role in favour of men, with a greater degree of variance among the female respondents, with more recent studies recording lesser degrees of gender role stereotyping of the managerial role among female samples. Tying the results of previous studies together, Koenig *et al.* (2011) found evidence of decreasing stereotyping over time in the TMTM paradigm. They found the overlap between female attributes and leadership had shifted in the TMTM paradigm, but not the overlap between male traits and leadership, which has largely remained unchanged.

ILT proposes that leadership is a socially constructed idea of what a leader is that exists in the individual's perception (Offermann *et al.*, 1994). In this context, ILTs are mental representations developed over time through interaction with our social environment. Research suggest ILTs are developed early in our lives (Antonakis and Dalgas, 2009; Antonakis and Day, 2018), through our interactions with others (Smith, 1996) and from our immediate surroundings (Antonakis and Day, 2018). From a cognitive perspective, individuals may be clearly disadvantaged in seeking management appointments because of stereotype based biases (Hoyt and Chemers, 2008). Social role theory provides a useful framework to help understand the complexity of gender in society and how this subsequently filters through into organisational settings (Eagly *et al.*, 2000). All societies assign specific roles to adults based on their gender, which is then passed on in the socialisation of their children and to subsequent generations. By virtue of belonging to the social categories of men or women, individuals encounter broad expectations about men and women within a particular society (Diekmann and Schneider, 2010). Although social roles are thought to be deeply engrained in society, social role theory predicts that the female gender role stereotype could shift given changes in the number of women in managerial roles (Arnold and Loughlin, 2019). Empirical research in this area suggests that changing the number of women in these roles is a crucial first step to changing management composition, and eventually gender stereotypes (Arnold and Loughlin, 2019; Stoker *et al.*, 2012). As the increasing number of women in managerial roles reflects a shift in social roles, whereby women now occupy roles traditionally ascribed to their male counterparts, both direct or indirect observation of women in managerial roles should alter perceptions about the misfit between women and the managerial role. Furthermore, Scarborough *et al.* (2019, p. 1) highlight that "successive birth samples are becoming more egalitarian, with Generation-Xers and Millennials being the most likely to hold strong egalitarian views". In all, from a societal perspective, much has changed for women over the past decade both in the workplace and in the home, yet little research has been carried out to identify the nuances of a possible shift in the perceptions about women's suitability for managerial positions and

changes in ILTs. To address this gap in our knowledge, we firstly seek an answer to the following question:

RQ1. Are ILTs within this population of business students changing?

Implicit leadership theories and exposure to stimuli

ILTs suggest that recognition-based processes can change stereotypes (Lord and Maher, 1993). In other words, an individual's detailed knowledge structures regarding leadership are altered based on day-to-day interactions and observations. Therefore, as the number of women in management increase so too will their visibility in the workplace, altering day-to-day interactions, particularly for those reporting to a female supervisor. Yet, from a workplace perspective, we see that despite organisational and societal changes ILTs have remained highly stable (Offermann and Coats, 2018). Offermann *et al.* (1994) in their seminal paper on the generalisability of ILTs noted that future research is needed to look at whether exposure to different types of organisational superiors can affect an individual's ILT. However, this call for further research has been largely ignored in the studies thus far. Stoker *et al.* (2012) observed that the preference for managers who were male, or who displayed masculine qualities, was reduced when the manager was female, or when there was a high representation of female managers in the company. Prototypes are formed through the categorisation process of individuals into different social groups or categories based on a set of attributes and behaviours. However, this approach to understanding an individual's emotional or behavioural reactions to a person is limited (Smith and Zarate, 1990). Strong salient exemplars of leadership have been found to influence social categorisations or judgements beyond prototypes developed through social learning (Smith and Zarate, 1990). Based on this, when we think about what distinguishes a particular manager or leader from a follower, we use both our established prototype structures as well as our actual experiences with the individual (Lord *et al.*, 2020). Research has shown that even fleeting exposure to exemplars can have a substantial effect on an individual's cognitive schema's (McCarty *et al.*, 2020). This would suggest it is possible that working directly for supervisors of different genders could affect the way individuals gender type a leadership role. As women are seen as entering non stereotypical roles such as leadership the importance of this can be seen in the "indirect altering of stereotypical schemata" (Gibson and Cordova, 1999, p. 119) or how these female exemplars can rearrange both men and woman's ideas of how much power woman can have. We suggest that through exposure to women supervisors our samples may be changing the way they see women leaders or their ILTs resulting in a change to the TMTM phenomena. Finally, ILTs can be dynamic and may change when context changes, underpinning the importance of studying ILTs over time (Epitropaki and Martin, 2004). The second part of our study is designed to look at the effect of exposure to target stimuli or leadership exemplars of students in the form of their previous work supervisors, using a perspective sample study over a ten-year period. Through this research, we provide a glimpse of the ILTs of soon-to-be professionals as they are about to enter the full-time world of work and how target stimuli may be effecting this change. Therefore, we put forward the following as our second research question:

RQ2. Do individual differences of experiences with female/male supervisors predict ILTs?

Methodology

We examined the gender role stereotypes of business students in a large public University in Ireland at a ten-year interval. Using randomly selected core modules across both undergraduate and postgraduate programmes, surveys were handed out and collected at the end of class over a two-week period (during both rounds of data collection). We have two samples in our population, which are subsequently broken down by gender creating four distinct samples in this research: the data in Sample 1 was collected during the spring semester of the 2008/09 academic year ($n = 628$) and the data in Sample 2 was collected during the spring semester of the 2018–2019 academic year ($n = 654$). The total sample size was 1,282, comprising 608 (47%) male respondents and 674 (53%) female respondents, representing a gender breakdown of 52% males and 48% females in Sample 1, and 49.6% male and 51.4% females in Sample 2. Overall, 90% of the sample were undergraduate students and 10% were postgraduate students. The average age of respondents in Sample 1 was 21 years old, with an average age of 20 years old recorded in Sample 2. All survey responses were optional, and confidentiality and anonymity were assured. Surveys were eliminated if sex of respondent was not reported, survey was incomplete, or non-variability was demonstrated in item ratings.

Instrument and procedure

We use the classical TMTM paradigm (SDI) in this study. SDI, consisting of a series of 92 descriptive terms commonly used to characterise people in general, was developed using items that differentially describe men and women drawing from the work of [Brim \(1958\)](#), [Bennett and Cohen \(1959\)](#) and [Rosenkrantz et al. \(1968\)](#), listing both communal and agentic characteristics. Some of these characteristics are positive in nature (e.g. sympathetic, sentimental, creative, courteous, sociable, kind, helpful, prompt, generous), others are negative (e.g. bitter, selfish, submissive, vulgar, passive, deceitful, hasty, quarrelsome) and some are neither very positive nor very negative (e.g. curious, competitive, knows the way of the world, hides emotion, demure, desire for friendship) ([Berkery et al., 2013](#)). In a typical SDI study, participants rate how characteristic the 92 descriptive words/phrases are of men, women and managers in general. In total, there were three versions of our survey, which included the original 92 adjectives listed on SDI. Participants were randomly assigned one of the three target conditions to rate:

- (1) men;
- (2) women; and
- (3) managers in general.

For example, some participants were asked to report the extent to which each adjective was reflective of “men in general”. In this instance, participants were instructed that when making their judgements, they should imagine they were about to meet the person for the first time and the only thing they knew in advance is the person was a male. These instructions were modified for each of the target conditions. Participants rated the adjectives on a five-point scale:

- (1) not characteristic;
- (2) somewhat uncharacteristic;
- (3) neither characteristic nor uncharacteristic;
- (4) somewhat characteristic; and
- (5) characteristic.

Each participant responded to only one target condition. [Table 1](#) is a useful guide when following our results, where we provide a breakdown of responses by sample and gender.

Data analysis methods

In line with previous studies using the TMTM paradigm, intraclass correlation coefficients (ICC, r^1) were computed using mean values of descriptive items for each group to determine the relationship between men and women and requisite managerial characteristics. ICC scores measure the relationship between two variables of different classes, in this case the relationship between the ratings of managers and men/women. A high ICC (close to 1) indicates high similarity between the target conditions, for example an ICC score of 0.98 for the ratings of men and managers represents a high degree of similarity between the ratings of men and managers. On the other hand, a low ICC (close to zero) of 0.12 for the ratings of men and managers represents a very low degree of similarity between the ratings of men and managers. In line with research conducted by [Duehr and Bono \(2006\)](#), when the difference in the correlation between two sets of conditions (e.g. managers and men in general as compared to managers and women in general) exceeds 0.29, the difference is statistically significant ($p < 0.05$), assuming equal variance across samples. To determine if individual differences in experiences with female/male supervisors predict stereotypes about men, women and managers, we compute ICC scores across the four samples moderating for sex of supervisor.

Reliability and validity of Schein’s Descriptive Index

SDI has been widely used in empirical studies over the past five decades. Reliability for SDI in this study was computed using the coefficient alpha method, otherwise known as Cronbach’s alpha. [Aron et al. \(2006\)](#) categorised Cronbach’s alpha as the most widely used measure of reliability. Cronbach’s alpha values were calculated for each of the three versions of the survey across both samples. Results of Cronbach’s alpha values are presented in [Table 2](#). All versions of the survey showed high reliability.

Analysis and findings

Data was analysed using Statistical Package for Social Sciences, Version 26 for Windows (SPSS Inc., Chicago, IL, USA). Overall ICCs were computed between managers in general and both men in general and women in general for each of the samples. Based on the findings in [Table 3](#), which presents the results of the analyses of variance and the intraclass correlation coefficient (ICC, r^1), in Sample 1, there was a significant resemblance between the overall ratings of men and managers ($r^1 = 0.637, p < 0.001$), with the resemblance of women

Source	Sample 1: Male responses 2008–2009	Sample 1: Female responses 2008–2009	Sample 2: Male responses 2008–2009	Sample 2: Female responses 2018–2019	Total responses
Men in general	93	122	130	139	484
Women in general	83	113	116	101	413
Managers in general	107	110	79	89	385
Total responses	283	345	325	329	1,282

Table 1.
Breakdown of
responses by sample,
gender and target
condition

Source: Author’s own creation

and managers significantly weaker ($r^1 = 0.382, p < 0.001$); however, the difference recorded is not statistically significant, meaning the overall sample did not gender type the managerial role in favour of men. Among Sample 2, there was a significant resemblance between the overall ratings of men and managers ($r^1 = 0.662, p < 0.001$), as well as a significant resemblance between women and managers ($r^1 = 0.608, p < 0.001$); however, difference recorded was not statistically significant. These results are outlined in [Table 3](#).

Table 2.
Cronbach's alpha
reliability ratings for
SDI

Ratings	Cronbach's alpha (Sample 1)	Cronbach's alpha (Sample 2)
Men in general	0.909	0.913
Women in general	0.861	0.908
Managers in general	0.904	0.904

Source: Author's own creation

Table 3.
Analysis of variance
of mean item ratings
and intraclass
coefficients by
sample and sex of
respondent

Source	df	MS	Sample 1		MS	Sample 2	
			F	r ¹		F	r ¹
<i>All respondents</i>							
<i>Men and managers</i>							
Between items	91	0.674	4.55***	0.637***	0.512	3.74***	0.662***
Within items	92	0.148			0.103		
<i>Women and managers</i>							
Between items	91	0.605	2.24***	0.382***	0.563	4.10***	0.608***
Within items	92	0.270			0.137		
<i>Male respondents</i>							
<i>Men and managers</i>							
Between items	91	0.705	5.69***	0.703***	0.477	6.27***	0.738***
Within items	92	0.124			0.076		
<i>Women and managers</i>							
Between items	91	0.486	1.49*	0.192*	0.448	2.98***	0.496***
Within items	92	0.326			0.150		
<i>Female respondents</i>							
<i>Men and managers</i>							
Between items	91	0.679	3.75***	0.578***	0.561	3.71***	0.573***
Within items	92	0.181			0.151		
<i>Women and managers</i>							
Between items	91	0.724	2.99***	0.496***	0.726	5.34***	0.688***
Within items	92	0.245			0.136		

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; the MS for between items looks at the amount of variation that can be explained by accounting for differences between the descriptive items. The MS for within items looks at the variation within each descriptive item across the two groups (men and managers). If men and managers are rated similarly, the within item will be small compared to the between item, and the F statistic will be significant, as is in this case; df = Degrees of Freedom; MS = Mean Squared; r^1 = Interclass correlation coefficient score (ICC)

Source: Author's own creation

To determine whether gender of respondent moderated the relationship between gender role stereotypes and requisite managerial characteristics, further ICC tests were carried out to moderate for gender. These tests revealed that the gender of the respondent did have an impact on the relationship between gender role stereotypes and requisite management characteristics in Sample 1, with males' gender typing the managerial role in favour of men (men and managers $r^1 = 0.703, p < 0.001$, women and managers $r^1 = 0.192, p < 0.05$); however, there was no evidence of gender tying the managerial role among men in Sample 2 (men and managers $r^1 = 0.738, p < 0.001$, women and managers $r^1 = 0.496, p < 0.05$). Furthermore, there was a significant difference in way in which men rated women and managers between Sample 1 (women and managers $r^1 = 0.192, p < 0.05$) and Sample 2 (women and managers $r^1 = 0.496, p < 0.001$). Across the female samples, neither women in Samples 1 or 2 gender typed the managerial role. Interestingly though, women in Sample 2 recorded a higher ICC score for women and managers ($r^1 = 0.688, p < 0.00$) compared to men and managers ($r^1 = 0.573, p < 0.00$). Overall, these results indicate that gender stereotypes of the managerial role have changed in the 10-year period between the data collection from Sample 1 to Sample 2, representing a shift in ILTs among the male respondents. Therefore, in response to *RQ1*, we can say that gender stereotyping of the managerial role no longer exists within this population.

Next, to determine if individual differences in experiences with female/male supervisors predict stereotypes about men, women and managers, and influence ILTs, we compute ICC scores across the four samples moderating for sex of supervisor. Table 4 outlines the breakdown of responses by gender of respondent, employment status and sex of supervisor.

Because the response rate for those who had never been used and those with both male and female supervisors was too low to conduct meaningful analysis on the three target conditions, analysis was only conducted on data for male and female respondents who reported having either a male or a female supervisor, the results of are outlined in Table 5.

Among the ICC scores recorded in Table 5, only two statistically significant results were recorded. Within Sample 1, male respondents who had worked/work for female supervisors recorded a statistically significant difference between the rating of men and manager ($r^1 = 0.790, p < 0.001$), compared to the ratings of women and managers ($r^1 = 0.159, p < 0.05$), with male respondents with a female manager gender typing the managerial role in favour of men. This finding is counter intuitive given the expectation that familiarity of working with a female supervisor would reduce gendered stereotypes of the management role. There was also a statistically significant difference in the ratings of women and managers between sample 1 ($r^1 = 0.159, p < 0.05$), and Sample 2 ($r^1 = 0.501, p < 0.001$), by male respondents who had experience of working with female managers. Overall, in response to *RQ2*, individual differences in experiences with male/female supervisors did not predict beliefs about women compatibility with the managerial role. With the exception male students in Sample 1 with female supervisors, no other sample gender typed the managerial role.

Source	Sample 1: males %	Sample 1: females %	Sample 2: males %	Sample 2: females %
Male supervisor	162 (57)	136 (39)	171 (52)	142 (43)
Female supervisor	73 (26)	150 (44)	103 (32)	137 (42)
Male and female supervisor	21 (7)	25 (7)	21 (6)	20 (6)
Never employed	14 (5)	18 (5)	25 (8)	30 (9)
Missing data	13 (5)	16 (5)	5 (1)	0 (0)

Source: Author's own creation

Table 4.
Breakdown of
responses by gender
of respondent,
employment status
and sex of supervisor

Source	df	MS	Sample 1 <i>F</i>	r^1	MS	Sample 2 <i>F</i>	r^1
<i>Male respondents with male supervisors</i>							
<i>Men and managers</i>							
Between items	91	0.712	3.86***	0.589***	0.545	4.90***	0.664***
Within items	92	0.184			0.111		
<i>Women and managers</i>							
Between items	91	0.565	1.76**	0.303**	0.538	2.74***	0.462***
Within items	92	0.320			0.196		
<i>Male respondents with female supervisors</i>							
<i>Men and managers</i>							
Between items	91	0.850	8.41***	0.790***	0.410	6.72***	0.755***
Within items	92	0.101			0.061		
<i>Women and managers</i>							
Between items	91	0.533	1.38	0.159*	0.398	3.01***	0.501***
Within items	92	0.386			0.132		
<i>Female respondents with male supervisors</i>							
<i>Men and managers</i>							
Between items	91	0.760	3.27***	0.530***	0.877	4.81***	0.624***
Within items	92	0.232			0.132		
<i>Women and managers</i>							
Between items	91	0.782	2.99***	0.515***	0.748	3.91***	0.602***
Within items	92	0.261			0.191		
<i>Female respondents with female supervisors</i>							
<i>Men and managers</i>							
Between items	91	0.674	3.80***	0.587***	0.588	2.77***	0.456***
Within items	92	0.177			0.221		
<i>Women and managers</i>							
Between items	91	0.763	2.89***	0.489***	0.826	5.50***	0.700***
Within items	92	0.264			0.150		

Table 5.
Analysis of variance
of mean item ratings
and intraclass
coefficients by
sample, gender of
respondent and sex
of supervisor

Notes: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$; the MS for between items looks at the amount of variation that can be explained by accounting for differences between the descriptive items. The MS for within items looks at the variation within each descriptive item across the two groups (men and managers). If men and managers are rated similarly, the within item will be small compared to the between item, and the F statistic will be significant, as is in this case; df = Degrees of Freedom; MS = Mean Squared; r^1 = Interclass correlation coefficient score (ICC)

Source: Author's own creation

Discussion

Studies, which span five decades of research, using SDI as their research instrument, have recorded a consistent pattern of results; male students persistently gender typing the managerial role in favour of men, while the findings among female samples are more varied. However, difficulties arise when trying to assess changes in stereotypes and directly comparing results from previous studies, due to variance in sampling groups and cultural differences. To add to this extant literature, we replicate SDI among the same business student population in 2008 and again in 2018. The analysis of data from the same population, using the same measurement, at ten-year intervals, along with the findings that male students no longer gender type the managerial role in the most recent round of data

collection, are original contributions to the literature. Our findings indicate a shift in the TMTM paradigm among the male population, further representing a shift in ILTs among the male sample. Our results indicate that although male students continue to rate men and managers higher than women and managers, the gap is significantly narrowing (male ratings Sample 1 – men and managers $r^1 = 0.703$, $p < 0.001$, women and managers $r^1 = 0.192$, $p < 0.05$; male ratings in Sample 2 – men and managers $r^1 = 0.738$, $p < 0.001$, women and managers $r^1 = 0.496$, $p < 0.05$), indicating a more gender egalitarian view of the management role among Sample 2.

The overall trajectory of results recorded among this sample are extremely encouraging. While the ICC score for males rating men and managers only changed slightly between the two samples (Sample 1 – $r^1 = 0.703$, $p < 0.001$; Sample 2 – $r^1 = 0.738$, $p < 0.001$), there was a significant change in the rating of women and managers (Sample 1 – $r^1 = 0.192$, $p < 0.05$; Sample 2 – $r^1 = 0.496$, $p < 0.001$). These results indicate that the reason male students no longer gender type the managerial role is because of a change in the way in which women are perceived. Within the female samples, there has been little by way of change within the samples, with neither samples gender typing the managerial role. The female ratings for men and managers remained largely unchanged (Sample 1 – $r^1 = 0.578$, $p < 0.001$; Sample 2 – $r^1 = 0.573$, $p < 0.001$), while women recorded a higher ICC score for women and managers in Sample 2 (Sample 1 – $r^1 = 0.496$, $p < 0.001$; Sample 2 – $r^1 = 0.688$, $p < 0.001$). It is interesting to note that the ICC score recorded by male respondents in Sample 2 for women and managers ($r^1 = 0.496$, $p < 0.001$) is the same as the ICC score recorded by female respondents in Sample 1 ($r^1 = 0.496$, $p < 0.001$) for women and managers, indicating that male students' perception of women's suitability to the managerial role is ten years behind that of their female counterparts.

The results in Sample 2 highlight a significant change in female stereotypes among the male sample of students and illustrate that current cohorts of students hold a gender egalitarian view of the managerial role, supporting [Lueptow et al. \(2001\)](#), who claimed that that as society changes, so too will the social roles ascribed in that particular society. Social role theory ([Eagly, 1987](#)) implies that individuals might question the capacity of one gender in a particular role, particularly when these roles are traditionally confined for one gender. As greater numbers of women have entered managerial roles over the past decade and gender mainstreaming has become commonplace, the traditional view of the managerial role has been challenged and is reflected in the ICC scores and ILTs recorded between managers and women by male and female respondents across Sample 2. However, the challenge going forward is maintaining this gender egalitarian view of the managerial role among this sample when they enter the workplace.

[Diekman et al. \(2004\)](#) propose that as women gain greater access to managerial positions, gender differences in power within organisations will begin to erode. For this to happen, women must be first perceived to be a suitable fit to the managerial role. The male students from Sample 1 have entered the workforce with the perception that women do not hold the characteristics necessary for management roles. This incongruence between women and managerial role, coupled with deeply engrained organisational cultures, may result in women being unfairly treated and overlooked for promotions, as they are seen to be lacking in managerial characteristics compared to their male counterparts. In this vein, [Schein \(2001\)](#) warns that participation rates of women in managerial roles will be kept low if the attitudes of male decision makers, prejudiced strongly by managerial gender types are allowed to go unchallenged. While societal changes may have changed gender role stereotypes, these changes alone will not help women's plight into management roles, unless the perception of those making the hiring decisions are also aligned. From a gendered pipeline perspective,

the incongruence between women and the managerial role, as displayed by men in Sample 1, may have a negative effect on females' aspirations within the workplace, particularly among the women that entered the workplace at the same time as them. In line with this, [Powell and Butterfield \(2022\)](#) highlight that any decline in early-career women's aspirations to top management over a sustained period may contribute in the long run to perpetuating the under-representation of women in top management, further exacerbating occupational gender stereotypes.

This study also shows that the sex of the supervisors may be having less of an effect on the perceptions of gender role stereotypes and requisite managerial characteristics. This is particularly true for the men in our sample, while men in Sample 1 with a female supervisor gender typed the managerial role in favour of men, this gender typing of the managerial role no longer exists in Sample 2. These findings may be explained by the concept of the double bind, which suggests that incongruity exists between gender role stereotypes and the commonly held implicit beliefs of what makes up a leader ([Eagly and Karau, 2002](#)). In the first sample, the male students with a female leader counterintuitively gender typed the leadership role as male. Research tells us that even short exposures to exemplars can change our stereotypes ([McCarty et al., 2020](#)); however, in this first example, even with the experience of working directly for these female leaders in the organisation, the incongruity continued. The double bind theory suggests women experience less favourable evaluations both in terms of their potential in the organisation and actual leadership behaviour based on the follower's implicit ideas of leadership. In the second sample however, this was not the case; the male participants with female supervisors no longer gender typed the leadership role suggesting they did not perceive an incongruity between the female supervisors and the characteristics of a leader. We would suggest that this is a significant finding indicating that the concept of the double bind that women experience in the workplace may be changing. This research is particularly important for two reasons. Firstly, based on the data from Sample 2, this research suggests that the leadership style selected by the female supervisors is in line with the male student's ILTs intimating that these female supervisors were free to enact their "possible selves" ([Ibarra and Petriglieri 2016](#)) as a leader. Secondly, the sample that moved from incongruity to a more egalitarian view of gender and leadership was the male cohort of students. This change should mean that the current imbalance in the upper echelons in organisations ought to progressively be reduced as these cohorts advance in the organisation. Overall, these results reinforce the importance of exemplars in organisations not just to provide ambition as role models for individuals with similar characteristics but more importantly as a way of changing gendered cognitive schemas of leadership in the form of ILTs.

Practical implications of these findings

From a practical perspective, these results aid our understanding of the ILTs that these graduating professionals bring into their new full-time organisations. This research should reinforce the importance of organisations developing systems and educational platforms to both eliminate gender bias and to develop gender-balanced ILTs. In addition, it highlights the importance of creating gender balance in terms of visible leadership exemplars across all levels and functions in the organisations as a way of combating outdated gender-based ILTs. Furthermore, immediate attention must be paid to equality, diversity and inclusion initiatives within organisations to foster and promote fairness in the promotion process. Organisations should look towards their talent management strategy. Such strategies should be implemented to identify top performing individuals, or those with the highest potential for performance in management and technical domains in the future ([Farndale et al., 2015](#)). Likewise, organisations serious about tackling gender disparity in the workplace should engage in and develop diversity and inclusion training. Such training

should include and create an awareness around unconscious bias and second-generation gender bias. A talent management strategy that is cognizant of such inherent biases would therefore need to be established to ensure that women have equal opportunities to be identified as talent (Farndale *et al.*, 2015). Organisations can also create a climate and culture of inclusion through the introduction of female in management initiatives/academies that champion the advancement and achievements of women within their organisation. Doing so will create a vision of gender equality in the workplace, common goals can be created that all members of the workforce strive towards and increase the visibility of women leaders.

Limitations

This study was subject to several limitations that suggest opportunities for future research. Firstly, the data were collected from samples within a large public University in Ireland, thereby allowing us to assess changing ILTs and gender typing of the managerial role over time within this population. As a result, the findings we present may be unique to this population and should not be generalised to other populations or national cultures without further research. Future research should also include the narrative around changes to ILTs, while we are able to conclude a convergence of ILTs we do not know the reason behind this change. A more nuanced approach is needed to examine the attributes ascribed to men, women and managers in general to determine the causes of these changes. Additionally, while the findings in this study allowed us to determine that gender role stereotypes among business students are changing, it does not give us an insight into what is currently happening within the workforce. Further research is merited in this area to capture the perceptions of the current workforce in Ireland to determine whether gender role stereotypes of requisite managerial characteristics exist in the Irish workforce, as well as following up with focus groups and interviews to yield a greater understanding of the experiences of both genders in the Irish workforces.

Conclusion

The results of this study are positive for women and leadership, as they suggest that the linkage between gender and managerial stereotypes has evolved over the past decade. This study indicates that the ILTs for the cohorts studied are becoming more egalitarian as neither male nor female students in Sample 2 gender type the managerial role. These findings are significant to the literature, as they signal a greater level of role congruity between women and the managerial role. They are also significant from an organisational viewpoint, as it is now the responsibility of organisations to ensure they have the necessary measures in place to ensure that these expectations of students are met upon entering the workplace to ensure employee retention and equal opportunities for both genders into the future.

Notes

1. For this study, we use the terms *manager* and *leader* interchangeably to refer to individuals in formally designated managerial position, with responsibility for dyadic relationships within the organisation. We do so as the literature and measure we review do not allow leadership or management roles to be separated; our treatment of the terms leader and manager in this way is consistent with narrative reviews.
2. We use the term sex to denote the grouping of people into male and female categories and the term gender to define the meanings that societies and individuals ascribe to being a man or a woman (based on the definition of Canadian Institutes of Health Research).

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