



**A Longitudinal Study of Gender Representation in Business English
Textbooks**

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Abstract

Studying gender representation in textbooks longitudinally is crucial for understanding how textbooks keep up with the changes taking place in gender relationships in the real-world. Such studies are even more vital with reference to English for Specific Purposes (ESP) textbooks in fields which are more biased in favour of one gender such as business and nursing.

However, not a single study examining longitudinal changes in gender representation in ESP textbooks was found. To fill this gap in literature, the present study investigates two editions of an internationally used business English textbook for equality of gender representation. It also explores the presence and nature of longitudinal change in the visibility and portrayal of women and men in the books.

The study conducts mixed method scrutiny of images, text and speech using a framework eclectically derived from pre-existing codes in literature and from examination of the textbooks. Statistical tests were used to find the significance of differences in representation of females and males. Qualitative analysis was used for contextual understanding of those representations.

Results suggest that though gender bias has reduced in the newer textbook, especially at the level of images, much change is needed to bring them up to the level of equality suggested in several guidelines published by government and independent organizations. Also, the results suggested that the bias in textbooks might reflect gender bias existing in the real-world.

Since literature in the field reported significant impact of textbooks on gender relationships in the real-world, the study recommends that textbooks developers, instead of imitating the realities of the world, must consider presenting scenarios that the societies aim to achieve. Furthermore, in the absence of gender equality in textbooks, stereotypical depictions of gender need to be discussed critically in classrooms.

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List of Acronyms and Abbreviations

- Female(s) – F
- Male(s) – M
- HR – Human Resources
- IM – International Markets
- *Market Leader Course Book: Intermediate Business English* (Cotton, Falvey & Kent, 2000) – 1stEd
- *Intermediate Market Leader: Business English Course Book* (Cotton, Falvey & Kent, 2010) – 3rdEd

Chapter 1 – Introduction

1.1 Rationale

Literature published on gender bias in textbooks across the world has reported unrealistic and stereotypical depiction of both women and men irrespective of the date and place of publication, subject, target audience, country of use and its level of development (Blumberg, 2007). Since textbooks have been found to construct and validate social structures (Brugeilles & Cromer, 2009), the disadvantages of prejudiced representation of the people in textbooks might not only constrain male (M) and female (F) students' relationships with people of the other gender but could also restrict the conceptualization of their present and future possible selves including selection of subjects for studies and career (Gray, 2000; Mukundan & Nimehchisalem, 2008; Nielsen & Davies, 2007; Lee, 2014; Mustafa, 2013; Samadikhah & Shahrokhi, 2015). Despite publication of several guidelines to depict both the genders equally (Blumberg, 2007; Brugeilles & Cromer, 2009; Florent, Fuller, Pugsley, Walter & Young, 1994; Linguistic Society of America, 1996; Mc Graw Hill, 1974; National Council of Teachers of English, 1976; Roberts, 1975; Warren, 1986), textbooks have continuously been reported to either underrepresent F (Adel & Enayat, 2016; Aydinoğlu, 2014; Barton & Sakwa, 2012; Fatemi, Pishghadam & Heidarian, 2011) or present M and F in stereotypical roles (Ansary & Babaii, 2003; Bakhtiyaari & Saadat, 2015; Ghorbani, 2009; Lewandowski, 2014). However, an overall improvement in the relative representation of both the genders has been observed with more stereotypical portrayal reported in earlier studies such as by Hartman and Judd (1978), Hellinger (1980) and Porreca (1984) as compared to the more recent ones such as Aydinoğlu (2014), Samadikhah and Shahrokhi (2015) and Adel and Enayat (2016).

Though much research has been conducted on the representation of textbooks published or used at a specific point in time, the literature in the field of gender delineation in textbooks has scarcity of longitudinal studies tracing the change in portrayal of gender in textbooks over a period of time. This is particularly important in terms of gender in business textbooks, as important changes have taken place in the role F and M play in business world in the last few decades. Examples of changes which the textbooks “lag behind” in capturing (Brugeilles

& Cromer, 2009, p. 40) include the “rising rates of women earning income” (Blumberg, 1997, p. 34) and “dramatic” growth (Brush, 1992, p. 1) in the number of women entrepreneurs (Chapman, 2017). Therefore, a study exploring the representation of M and F in business English textbooks and studying such changes over a span of time was considered vital for understanding how textbooks adapt to societal changes over their various editions.

1.2 Aim of the Study

The present study examines presentation of F and M in the first and latest editions of a business English textbook called *Market Leader Course Book: Intermediate Business English* (Cotton, Falvey & Kent, 2000) and *Intermediate Market Leader: Business English Course Book* (Cotton, Falvey & Kent, 2010) respectively. The aim is to explore change within a span of 10 years in an English for Specific Purpose textbook, used at university level, to teach a subject which is considered male-dominated because of its involvement with money and power (Cox, 2017; Robinson & Dechant, 1997). Blumberg (2007, p. 3) observed that “textbooks may still be contributing to gender stereotypes” about girls’ and boys’ “unsuitability” for studying certain subjects such as girls’ inaptness for studying mathematics and science and boys’ inability to excel in reading and language skills. Brugeilles and Cromer (2009, pp. 30-31) emphasized the need for “deconstruct[ing] the naturalization of skills” with reference to subjects that are “particularly discriminatory against women”, and unravelling gender discrimination in business English textbooks might be considered a crucial step towards that aim.

To study the representation of the genders in selected books, the present study developed an eclectic framework which used codes derived deductively from existing literature and inductively from scrutiny of the textbook. As suggested by Blumberg (2007, p. 35), an attempt to measure “the intensity of gender bias” has also been made while qualitatively analyzing the images presented in the textbooks.

1.3 Research Questions

The investigation was carried out at the three main levels of images, text and speech with focus on visibility, importance, power positions, stereotypical representation and attributes of male and female speech in the books. The research questions were as follows:

1. Is the representation of F and M different in images? If yes, has the difference increased or decreased over time?
2. Is the representation of F and M different in textual parts? If yes, has the difference increased or decreased over time?
3. Is the speech of F and M different? If yes, has the difference increased or decreased over time?

1.4 Overview of the Dissertation

The dissertation is divided into six chapters. The present chapter introduces the aim, significance and rationale of the study. It also states the research questions and presents a summary of the six chapters. Chapter 2 reviews empirical studies carried out in the field of gender representation in textbooks used across the world, highlights the predominant themes commonly found in the studies and shows how the present study fills gaps in literature by carrying out a longitudinal analysis of two editions of a business English textbook. Chapter 3 describes the sample, the framework developed for analysis and procedure for data analysis along with providing the rationale for all decisions made. Chapter 4 presents the results of data analysis as per the research questions. Chapter 5 discusses the most significant findings with reference to the arguments presented in literature. It also explains how the findings add to the understanding of gender representation in textbooks. Chapter 6 summarizes the findings, discusses their implications for teachers, textbook developers and researchers, and recapitulates the limitations of the study.

Chapter 2 - Literature Review

If we continue to speak the same language to each other, we will produce the same story. Begin the same stories all over again.

Irigaray (1980, p. 69)

2.1 Gender and Stereotypes

Gender could be defined as a social category related to “qualities, tastes, aptitudes, roles and responsibilities associated with men and women in a society” and is different from sex which “refers to the biological differences between males and females” (Brugeilles & Cromer, 2009, p. 27). Gender stereotyping, or the propagation of fixed notions about masculinity and femininity, leads to allocation of a dichotomous set of standards about verbal and social behaviour to M and F without much scope for ambiguity or difference (Christie, 2000). This creation of stereotypes or “fixed images” of people involves “simplification, reduction, and naturalization” of “physical, mental, cultural and other features” (Talbot, 2003, p. 470).

Common examples of F stereotyping are portrayals of F as objects of desire (Plakoyiannaki & Zotos, 2009), as aggressive femme fatales (Bronfen, 2004; Sully, 2010) or as virtuous angel[s] in the house (Patmore, 1854) who are loving, nurturing, modest and self-sacrificing (Bakhtiari & Saadat, 2015; Barton & Sakwa, 2012; Beauvoir, 1982; Filak, 2002; Ghorbani, 2009). Brugeilles and Cromer (2009) asserted that such stereotypical representations are harmful for both M and F as they restrict people’s vision of their possible future identities and of their relationships with people of the other gender. For example, stereotype of macho M (Cole, 2000; Thompson & Pleck, 1994) might make boys indulge in “social behaviour associated with masculinity” such as “drinking, smoking, speeding” and feminine stereotype of angel in the house might govern F’s academic and other “choices” (Brugeilles & Cromer, 2009, p. 27).

2.2 Language and Gender Bias

The influence of language on knowledge and understanding of the world has been discussed by many psychologists and linguists since the early twentieth century (Boroditsky, 2011;

Sapir, 1929; Swoyer, 2003; Whorf, 1940). Within this context, several linguists such as Lakoff (1973, 2004, 2017), Christie (2000) and Spender (1997) brought to the fore certain features of language use which reinforce stereotypical beliefs about gender and relationships between M and F. Lakoff (1973, 2004, 2017) drew attention to commonly used lexical, syntactic and phonological structures of the English language which have been instrumental in relegating F to a position of powerlessness. For example, the use of M generic “he” to refer to both the sexes; pejorative connotations associated with words used to denote F in sex pairs such as master/mistress, sir/madam and bachelor/spinster; and use of trivializing suffixes such as -ess in ‘poetess’, ‘actress’ and ‘seamstress’. She also brought to light the manner in which F are traditionally expected to speak. For example, F are expected to speak politely and therefore use lexical hedges or fillers, tag questions, rising intonation on declaratives and super polite forms which might present them as weak and uncertain (Lakoff, 1973, 2004, 2017).

2.3 Textbooks and Gender Bias

Foucault (1990) advocated the idea that people’s activities and relationships are influenced by several ideological discourses, such as the philosophical, medical and religious. Wollstonecraft (1792) and Showalter (1985) also demonstrated how ideological discourses have segregated M and F into stereotypical dichotomies of active and passive, cerebral and corporeal, and rational and irrational respectively. One such ideological discourse which influences social systems such as gender is related to the educational system (Gray, 2000) and gets manifested in educational settings and classrooms which are considered simulacra of the outside world (Newby, 2000). Thus, several scholars have stressed the far-reaching impact of textbooks on construction of students’ gender identities (Adel & Enayat, 2016; Ansari & Babai, 2003; Aydınoglu, 2014; Barton & Sakwa, 2012; Blumberg, 2007; Brugeilles & Cromer, 2009; Fatemi, Pishgadam & Heidarian, 2011; Lee, 2014; Lewandowski, 2014; Mukundan and Nimehchisalem, 2008; Mustafa, 2013; Otlowski, 2003; Samadikhah & Shahrokhi, 2015; Sunderland, 1992).

Brugeilles and Cromer (2009) observed that printed textbooks are of “paramount importance” because they are the “basic tools for education” (p. 6) and carry great “power of legitimation” which makes students imbibe the “behaviour models”, “collective identities” and “gender-sensitive values” in the textbooks easily (p. 42). This might constrain “girls’ and boys’ vision of who they are and what they can become” (Blumberg, 2007, p. 5). Sunderland (1992), Blumberg (2007), Mukundan and Nimehchisalem (2008), Mustafa (2013) and Lee (2014) observed that underrepresentation or biased representation of girls in textbooks might make F students believe that they are expected to play limited roles in real life. Thus, a link between “girls’ underachievement and textbooks” has also been found (Brugeilles & Cromer, 2009, p. 21). Other reasons suggested by research for such significant impact of textbooks are the amount of classroom time spent on them which usually ranges from 70-95% of the total time (Baldwin & Baldwin 1992; Sadker & Zittleman, 2007) and the repeated use of textbooks both within and without the classroom (Barton & Sakwa, 2012).

2.4 Guidelines

In view of the social impact of textbooks, it is believed that they should be at the “heart of education policy” (Brugeilles & Cromer, 2009, p. 7), and many government bodies in Europe, America, and Asia have published guidelines for establishing gender equality in textbooks. Notable examples include guidelines those by The Ministry of Education, Culture, Sports, Science and Technology in Japan (*Basic Act on Education*, 2006), and by the National Council of Educational Research and Training in India which has been stressing the elimination of gender bias and stereotypes from textbooks since 1982-83 (Ahmed, 2006). Similarly, in 1992 the National Program for the Promotion of Women’s Equal Opportunities in Education in Argentina dictated critical examination of learning materials, removal of all discriminatory and stereotypical depictions and inclusion of influential F figures (Stromquist, 1997). Costa Rica’s government also made similar attempts to bring about gender equality in textbooks (Araya, 2006).

Many noteworthy steps were also taken by United Nations Educational, Scientific and Cultural Organizations’ (UNESCO) human rights programmes to accomplish gender equality in textbooks like commissioning research reviews (Blumberg, 2007) and publishing

guidelines such as Brugeilles and Cromer's *Promoting Gender Equality through Textbooks: A Methodological Guide* (2009). These guidelines made some important recommendations for studying and achieving gender equality in textbooks such as pinpointing "stereotypes and blatant sexism", measuring longitudinal change in "intensity" of stereotypes, and "ensuring that all representations further equality" by maintaining equality in the "casting of hero characters", "position and size of images", "distribution of roles" and highlighting the contribution of F to "politics, science, literature, sport, the arts and economics" (Brugeilles & Cromer, 2009, pp. 35 - 44). Brugeilles and Cromer (2009) also suggested monitoring of all characters separately in "every part of the textbook including lessons, exercises, appendices and illustrations" and provided detailed steps for evaluating gender representation in textbooks using lists, grids and tables (p. 57).

In addition to the guidelines by governmental bodies, publishers and other independent professional and academic groups also published guidelines for avoiding trivialization, objectification and stereotyping of F in instruction materials. Scott, Foresman and Company (*Guidelines for Improving the Image of Women in Textbooks*, 1972) asserted that sexual stereotypes should be avoided, achievements of F should be recognized, and F should be given as much respect as M. Mc Graw Hill (*Guidelines for Equal Treatment of the Sexes*, 1974, pp. 31-33) instructed that "an attempt should be made to break job stereotypes for both women and men", "members of both sexes should be shown as having human strengths and weaknesses, not masculine or feminine ones" and "parallel language should be used for men and women". American Psychological Association (Warren, 1986) also insisted on avoiding the use of masculine generic and sexual stereotyping. National Council of Teachers of English (*Guidelines for Nonsexist Use of Language in NCTE*, 1976, pp. 23-25) added that apart from "sex-role stereotyping" and "omission of women", "under-representation of female writers and scholars" should also be avoided, and "materials by and about both women and men" should be included in teaching units. Another prominent enterprise in this regard was *Linguistic Society of America's Guidelines for Non-Sexist Usage* (1996, p. 68) which postulated discontinuing the use of "gender-stereotyped characterizations" along with that of masculine generic and proposed the use of gender neutral professional terms such as 'server', 'nurse' and 'doctor' instead of 'waitress', 'male nurse' or 'lady doctor'.

Women in EFL Materials, a voluntary British group, published *On Balance: Guidelines for the Representation of Women and Men in English Language Teaching* (Florent, Fuller, Pugsley, Walter & Young, 1991) which suggested that equal gender relationships in ELT materials could be established by presenting an equal number of M and F in line with world population statistics, changing salutations to include both the genders and subverting gender stereotypes by depicting M and F in non-traditional roles. Klein's *Handbook for Achieving Sex Equity through Education* (1985) also prescribed subverting gender stereotypes by showing F and M in non-traditional roles such as M reading and F doing jobs that require high-level thinking.

2.5 Studies Examining Representation of Gender in ELT Textbooks

Despite these guidelines, gender bias in textbooks is extensively present and involves underrepresentation of F and gender-stereotyped depictions of both F and M (Blumberg, 2007). This is also evident in the studies examined below. Of the thirteen studies, nine show excessive bias against F and three show either insignificant bias in favour of M or more bias in a certain textbook than the other. One study, which compares varying textbooks published at different periods of time longitudinally, finds more balanced depiction of the two genders in the new corpus. In the nine studies which found data extremely skewed in favour of M, the most recurring themes were stereotypical depiction of both the genders and underrepresentation of F. Other common observations were related to subordination of F in titles and speech, dominance of M in the professional sphere, restricted range of F activities, more M in subject positions and as doers of strong actions, male firstness, use of generic he, and trivialization of F.

Table 1 provides summary of key features of the studies. Since, the current study focuses on longitudinal improvement two editions of an ESP textbook, table 1 also shows which of the previous studies looked into these areas. A more detailed review of these studies is provided in the sections 2.5.1. – 2.5.3.

Table 1 - Summary of Previous Research Findings

S. No	Study	Categories Analyzed	Longitudinal	Sample - ESP Books
1	Hartman & Judd (1978)	nouns, pronouns, titles, firstness in gender pairs, roles and characteristics	X	X
2	Hellinger (1980)	titles, predicates, verbs, speakers, turn-taking, professional roles and personality traits	X	X
3	Porreca (1984)	visibility in images, jobs, masculine generic, firstness and adjectives	X	X
4	Otlowski (2003)	visibility in text and illustrations, roles	X	X
5	Ansary & Babaii (2003)	visibility in text and illustrations, topic presentation in dialogues, activities, jobs, stereotypes, firstness and masculine generic	X	X
6	Fatemi, Pishghadam & Heidarian (2011)	absence/presence, foregrounding/backgrounding, age, motion/status, name, setting and titles in images; names, characters, markers of respect, pronouns, subject and object positions, verbs, adjectives, adverbs, precedence, roles, popularity of characters in text	X	X
7	Notash & Jahan (2012)	ratio of cross gender and same gender conversations, conversation initiation, mean length of utterances and mean lexical complexity	X	X
8	Barton & Sakwa (2012)	visibility in text and illustrations, male generics and adjectives	X	X
9	Lewandowski (2014)	character traits, emotional states, employment, everyday duties, financial status, habits, addictions, intellectual activity, law and order, relationships, skills and hobbies depicted in text	✓	X
10	Aydinoğlu (2014)	names, visibility, location, jobs in images; visibility, activities and turn taking in text	X	X
11	Samadikhah & Shahrokhi (2015)	visibility, relationships in images; subject position, titles, activities in text; and firstness in dialogues	X	X
12	Adel & Enayat (2016)	visibility through titles, names and pronouns, subject and object positions in text; visibility, gaze, clothing and surroundings in images	X	✓
13	Bataineh (2017)	visibility through nouns and pronouns, firstness and professional roles in text	X	✓

2.5.1. Studies showing discrimination against F

Hartman and Judd (1978) scrutinized texts and images in several American and British ESL textbooks published between 1966 and 1978 for visibility and representation of M and F. A quantitative analysis carried out by counting nouns, proper names, titles and non-generic pronouns revealed that the number of references to F was less than half of that for M. Moreover, M appeared more powerful than F because they carried most of the titles and enjoyed firstness in gender pairs such as M/F, brother/sister, husband/wife, whereas, F were generally referred to by their first names, played stereotypical care-taking roles and were described derogatorily through descriptions such as “as curious as cats”, “as changeable as weather” and “horrible feminists without bras and girdles” (Hartman and Judd, 1978, p. 386). Gender bias was found also in the treatment of children since girls were shown as passive and weak, whereas, boys were portrayed as funny, interesting and highly active.

Hellinger (1980) also conducted a mixed methods study of three English language textbooks used in German schools to assess the representation of gender through a study of story titles, actions and ratio of F and M speakers in the stories. It was found that M were almost nine times more frequently referred to in titles of stories, participated approximately four times more than F in several events, were almost five times more numerous as speakers and took approximately four times more turns than F speakers. Qualitative analysis revealed that M also occupied all the senior positions in professional roles, whereas, F were shown either in domestic roles or in positions subordinate to M. Moreover, most of F’s activities were directed towards M. For example, Queen Elizabeth I was the only woman who was shown performing a prestigious task, which was offering knighthood to a man on a ship.

Porreca (1984) conducted a systematic quantitative content analysis of 15 popular ESL books used at 27 American ESL centres. It was found that the ratio of F to M visibility was approximately 1:2 in both text and illustrations and that of occupational visibility was 1:6 in text and 1:5 in illustrations. Moreover, masculine generic ‘he’ was used 383 times in the

books, M enjoyed firstness three times more than F, and F were described almost three times more than M in terms of appearance and emotionality.

Otlowski (2003) studied depiction of gender in an English language textbook used in Japan. The findings were similar to those of the older studies: F were almost two times less visible than M in illustrations, performed stereotypical roles as homemakers and mothers, such as laundry, cooking and shopping, whereas M mostly worked outside the house.

Ansary and Babaii (2003) explored the prevalence of gender bias in text, illustrations and speech in two ELT textbooks developed in Iran. Quantitative analysis showed that on average M appeared 1.4 times more frequently than F in texts and 1.6 times more frequently in illustrations. Also, approximately 65% of themes in dialogues and reading texts were related to M. Qualitative analysis revealed F subordination through M firstness in gender pairs and restriction of F's professions largely to "occupations such as student and nurse". On the other hand, M "enjoyed a diversity of jobs such as policeman, soldier, dentist, farmer, doctor and teacher" (Ansary and Babaii, 2003, p. 50). F's activities were also mostly restricted to indoor areas, whereas, M played basketball, drove car or rode bicycles.

Fatemi, Pishghadam and Heidarian (2011) also conducted a mixed method content analysis of verbal and pictorial parts of three high school and one pre-university ELT textbooks used in Iran. F were found to be largely underrepresented in both verbal and pictorial parts. F also played mostly domestic roles and were treated as fools, whereas most of the respectfully named characters or famous characters were M. Similar conclusions about ESL/EFL textbooks used in Iran with regards to stereotypical roles played by F and underrepresentation in professional roles were drawn by Ghorbani (2009) and Tajeddin and Enayat (2010).

Barton and Sakwa (2012) analysed one ELT textbook used in Ugandan secondary schools for the presence of gender stereotypes and found underrepresentation of F, exclusion of F from the professional sphere, stereotypical depiction of both the genders, use of masculine generic and degradation of F. The text contained 64.3% M characters and 35.7% F and images

showed only 20.7% F characters and 79.3% M characters. Similarly, 73% of the professional positions were held by M and only 27% by F. Qualitative analysis also depicted F largely restricted to home as home makers. In professional settings, M were superior to F in images which showed M doctor, F nurse, M party guest and F waitress. M superiority also was reflected through frequent use of masculine generic to refer to people with unspecified gender. Finally, nine out of the eleven adjectives used to describe F were emotive such as “unhappy”, “trouble- some”, “strange”, “grumbling”, “jealous”, “sly”, “kind”, “attentive”, and problematic whereas only five out of 21 adjectives describing M were emotive (Barton & Sakwa, 2012, p. 183). The researchers also carried out lesson observations and conducted semi-structured interviews with the teachers. They found that teachers dealt with gender stereotypes in the texts uncritically and focussed only on developing language skills of the learners.

Samadikhah and Shahrokhi (2015) conducted a detailed critical discourse analysis of two series of ELT textbooks, the *Top Notch Series* with four books and the *Summit Series* with two books. In *Summit* series males were found significantly more than F at subject positions. Also, M were significantly more present than F in pictures in *Top Notch* series. Regarding firstness in dialogues, bias was found in favour of M in both *Top Notch* and *Summit* series with significant differences. Assessment of titles showed that Mr was used 65% of times, Mrs 25%, Miss 8% and Ms 2% in *Top Notch*. In *Summit* series Mr was used 60% of times, Mrs 36%, Miss 4% and no instance of the use of Ms could be found. Thus, it was observed that importance of marital status for F, which is a form of gender discrimination, was prevalent in both series. Also, in both the series, F indulged in social activities significantly more than M. It was concluded that *Top Notch* was biased towards M in pictorial representation, whereas, *Summit* was biased towards M in textual representation. Both the series were biased towards M in firstness in dialogues and titles except social activities which was largely F’s domain in both the series.

Adel and Enayat (2016) examined images and text in four ESP textbooks from the *Oxford English for Careers* series for Commerce, Nursing, Technology and Tourism. Images were analysed using categories provided by Goffman’s *Gender Advertisements* (1976) and Kress

and van Leeuwen's *Reading Images* (2006) and text through systematic quantitative content analysis. Categories based on which discrimination was established were visibility in nouns and pronouns, subject/object of action, character's gaze towards the viewer/away from the viewer, clothing and outdoor/indoor activities. Visibility was assessed by counting nouns, pronouns, proper names and titled names, and considerable bias was found in Technology book ($M = 227$ and $F = 46$ appearance). Further, Technology and Tourism books were the most discriminatory as far as difference between M and F as active participant in images was concerned. The difference in Technology which is considered a hard science was ($\chi^2=15.783$, $p=.001$) whereas in Tourism which is considered a "soft science" was less but still significant ($\chi^2= 10.423$, $p < 0.05$) (Adel & Enayat, 2016, p. 102). Study of characters' gaze in images showed that in Technology book 84.8% of M and 64.7% of F looked away from the viewer which is considered a sign of authority (Dyer, 1992), whereas only 15.2% of M looked at the viewer and 35.3% of F looked at the viewer signifying weakness. The differences between male and F gaze were $\chi^2= 10.703$ ($p < 0.01$) and $\chi^2= 10.432$ ($p < 0.01$) in technology and tourism books respectively. The only difference which was significant in all the books was in clothing. F were more lightly clothed than M in Commerce ($\chi^2= 10.861$, $p < 0.01$), Nursing ($\chi^2= 7.651$, $p < 0.05$), Technology ($\chi^2= 11.724$, $p < 0.01$), and Tourism ($\chi^2= 7.401$, $p < 0.05$) which showed that F were considered the object of desire (Berger, 1973). Regarding indoor and outdoor spaces, more M were shown in outdoor spaces in Commerce ($\chi^2= 11.995$, $p < 0.05$); Nursing ($\chi^2= 11.558$, $p < 0.01$) and Technology ($\chi^2= 15.153$, $p < 0.01$) books respectively. Since Technology book was found to be the most biased, Tourism second and Nursing the least, the researchers concluded that more discrimination was found in fields which are dominated by M.

2.5.2. Studies showing relatively balanced representation of M and F

Notash and Jahan (2012) studied gender bias in three books from the *New Interchange Series* by statistically analysing significance of difference between M and F speech. The findings revealed that difference between M-M conversations and F-F was not significant (0.93). Similarly, the ratio of conversation initiation by both genders, difference between mean turn length, and difference between mean lexical complexity i.e. type-token ratio of M and F

speech were also not significant. As none of the differences were significant it was concluded that both genders were represented equally in the textbooks.

A noteworthy study by Aydınoğlu (2014), used a mixed method analysis of gender representation in verbal data and illustrations in three textbooks published in 2013 and used in Turkey for 2nd and 4th grade. Books 2 and 3 were published by the Turkish Ministry of National Education but Book 1 was not. In Book 1 the distribution of M and F in images was found to be highly skewed because 94.2% percent of animal characters and 77.8% of human characters were M, but the distribution was more balanced in the other two books with 54.58% M and 45.41% F. Similarly, with reference to location, jobs and activities of F and M characters, the books published by Turkish Ministry of National Education presented M and F images in a balanced way, whereas, the representations in Book 1 were highly biased in favour of M. As far as verbal data was concerned, Books 2 and 3 again had balanced division of F and M names, instructions given, and turn taking in speech. The researcher thus concluded that the textbooks published by the Turkish Ministry seemed to make an effort towards gender equality. However, qualitative analysis showed that the attempt to avoid stereotypical images of M and F led to awkwardness at times since the supposedly gendered locations such as kitchens and armchairs were found to be empty in images. According to the researcher, “[t]his shows that writers feel obliged to be sensitive in gender issues” and “this awareness and sensitivity is a natural result of the researches and publications that study gender representation” (p. 238).

Bataineh (2017) through his mixed method content analysis examined the representation of gender in pre-intermediate level international business English textbook called *Pre-Intermediate Market Leader: Business English Practice File* (2012) by analysing gender visibility, firstness and professional roles. It was found that M and F were almost equally visible since there were 181 M nouns and pronouns and 178 F ones. Surprisingly, F outnumbered M in occupational roles (M = 12, F = 17), but M were foregrounded more through firstness as M names appeared 13 times more than F names, whereas F names appeared only eight times before M's.

2.5.3. Study showing longitudinal improvement in representation of M and F

Lewandowski (2014) conducted mixed method contrastive analysis of two corpora, consisting of six EFL grammar textbooks published in the UK. This longitudinal study set out to find whether or not the images of M and F have changed after the “dissemination of guidelines for non-sexist language and equal treatment of the two genders in English language educational materials” (Lewandowski, 2013, p. 83) by bodies advocating equal treatment of M and F. Corpus 1 consisted of sentences from three ESL/EFL grammar textbooks published in the 1970 and 1980s, and corpus 2 was made of sentences from three 21st century EFL grammar books. Three hundred sentences were collected from each of the six textbooks. The three older textbooks were labelled as TB1, TB2 and TB3 and the new textbooks as TB4, TB5 and TB6. Categories analysed were visibility, professional/domestic roles and attributes such as character traits and appearance. It was found that total visibility was skewed in favour of M in the old corpus but balanced in the new. Likewise, in the older books, M were employed much more frequently than F, whereas F were six times more frequently engaged in domestic chores/everyday duties than M. This difference was only 1.18 and 1.3 times respectively in the newer books. Likewise, the financial status of M was described nine times more than that of F in the old books but only 1.18 times more in the new ones. Moreover, on one hand, the appearance of F was described three times more than that of M in the older books and character traits of M were mentioned 1.8 times more than those of F. In the new corpus, maximum bias was found only in attributes since F were described in terms of their appearance much more than M. Thus, it was concluded that the representation of M and F appears more balanced and less stereotypical in the new corpus. However, qualitative data suggested the presence of covert bias even in the new books since all the high-status jobs or political positions of power were occupied by M, and F were still described more in terms of their emotional states and appearance than M. Interestingly, both the corpora showed M as unethical but not F: the ratio of violent M to F was 38: 0 in old books and 26:9 in the new ones. Also, none of the F in either of the corpus were shown as having an addiction such as smoking and drinking, but sixteen M in old books and two in new were shown as drinking or smoking.

2.6. Rationale for the Current Study

As can be seen from above studies, literature on textbook analysis is replete with findings related to biased and unequal representation of F and M. However, an overall improvement has been observed with less stereotypical portrayal reported in recent studies such as Aydınoğlu (2014) and Adel and Enayat (2016), compared to earlier studies by for example Hartman and Judd (1978), Hellinger (1980) and Porreca (1984). Though these studies suggest an overall pattern of longitudinal improvement, there is a paucity of studies comparing old and new textbooks. In the literature reviewed above, only one study out of thirteen conducted a comparative analysis of books published at different times. However, it could be argued that selection of books by different authors and publishers undermined robustness of Lewandowski's (2014) findings related to longitudinal change. Therefore, the need to compare two editions of one book published at different times is apparent.

Another gap in literature is the lack of studies on English for Specific Purposes (ESP) textbooks related to fields dominated by M, which could have higher degree of bias against F, as was found in Adel and Enayat's (2016) study. The world of business is considered M dominated due to its relationship with money and power in contrast to healthcare and education (Cox, 2017; Robinson & Dechant, 1997). According to the Association to Advance Collegiate Schools of Business, though F outnumber M in many tertiary courses, there are only four F in every 10 MBA graduates in the United States ("Gender Imbalance", 2016). A survey conducted by Peterson Institute for International Economics found that "60% of the firms surveyed did not have a F employee on their board, and half of those firms did not have an F C-level executive in C-suite" ("Gender Imbalance", 2016, para 3). Robinson and Dechant (1997, p. 25) observed that in the corporate world, F are being discriminated against by being "placed in unchallenging jobs" and "limited by sexual bias in promotion opportunities". A research by consultancy firm called Mercer reported that "the proportion of women diminishes on the journey from the cubicle to the corner office", so even if one third of managers were found to be F, at the senior manager level there were only one F for every three M ("Gender Imbalance", 2016, para.3). Babcock, Laschever, Gelfand and Small (2003, p. 1) found that F were not only under-represented in "top-jobs" but were also paid less than

M for the same job, and Cox (2017) observed that F were much less likely to start a business than men.

The apparent bias against F in the field of business warrants an extra effort on the part of authors and publishers to ensure that business English textbooks do not reflect the real-world gender bias. Research in this domain could thus assist the authors to mitigate gender bias in their books. However, only one study (Bataneh, 2017) analysed business English textbook. Accordingly, this study aims add to the corpus of studies on gender bias in business English textbooks.

Chapter 3 – Methodology

This section provides justification for the selection of *Market Leader Course Book: Intermediate Business English* (Cotton, Falvey & Kent, 2000) and *Intermediate Market Leader: Business English Course Book* (Cotton, Falvey & Kent, 2010) as sample. It also explains the development of framework for examination of gender representation in images, text and speech and describes the methods used for data analysis. Limitations of methodology have also been summarised.

3.1. Overview

The present study explored longitudinal change in representation of F and M in two editions of a business English course book with the aim of filling existing gaps in literature as discussed in the previous section. Thus, a systematic content analysis was carried out to objectively and methodically examine the selected material based on pre-defined framework.

The investigation was done at the three main levels of images, text and speech. Data collection was done manually for images and text. Data for evaluating speech were collected from speech corpora which were created from audio scripts using Optical Character Recognition (OCR) software and converted to editable Word documents which were manually checked for accuracy.

3.2. Rationale for Case Selection

The studies discussed in Chapter 2 selected the sample based on different criteria such as popularity, newness, representativeness, and local use. As the present study aimed to longitudinally explore gender representation in popular and globally-used business textbooks, the criteria used for sample selection were:

1. Wide reach of the publisher, to ensure it is used in global contexts
2. Popularity of the book, as a measure of its impact on English language learners
3. Sustained international use, to allow a longitudinal investigation of its content

In consultation with available business textbooks, *Market Leader Course Book: Intermediate Business English* (Cotton, Falvey & Kent, 2000) or 1stEd and *Intermediate Market Leader: Business English Course Book* (Cotton, Falvey & Kent, 2010) or 3rdEd were purposively selected. In terms of the publisher, the series was created in collaboration with the *Financial Times* and published by Pearson Longman. In terms of popularity, a forthcoming study by Rose and Galloway (in press) infers that the *Market Leader* series is one of the most influential business English texts used globally. The researchers based this assessment in consultation with an expert panel of 20 experienced teachers working in 19 different global contexts. The extensiveness of the international use of the series could also be gauged by the fact that in the Middle East alone four known institutes use it as textbook: “Bahrain Institute of Banking and Finance, Sohar University, Qatar University and Hamdan Bin Mohammed Smart University” (personal communication with Chloe O’Malley, Regional Development Manager ELT Gulf, Pearson Education). In terms of its sustained international use, 1stEd of textbook was produced in 2000 and 3rdEd was produced in 2010, allowing the exploration of developments in global representativeness to be studied over a ten-year period. Thus, 1stEd and 3rdEd were chosen keeping in mind the longitudinal nature of the study and international popularity of the book. Since the selection of sample was based with a specific aim in mind, the sampling technique used here could be called purposive (Patton, 2002).

To compare both the editions equitably, four units in 1stEd which were dropped in the 3rdEd, namely “Globalization”, “Innovation”, “Strategy” and “Quality”, were excluded from analysis. Also, four additional sections in 3rdEd called “Working Across Cultures” along with the revision units, which are not present in 1stEd, were not studied. However, two units called “Employment” and “Trade” whose titles were changed to “Human Resources” (HR) and “International Markets” (IM) in the 3rdEd were analysed.

Table 2 presents those sections which are common in both the editions and were thus analysed in the present study.

Table 2 - Sections of the Books Analysed

S. No.	1 st Ed	3 rd Ed	Selected for Study
1	Globalization	-	X
2	Brands	Brands	✓
3	Travel	Travel	✓
4	Advertising	Advertising	✓
5	Employment	Human Resources (HR) (title changed)	✓
6	Trade	International Markets (IM) (title changed)	✓
7	Innovation	-	X
8	Organization	Organization	✓
9	Money	Money	✓
10	Ethics	Ethics	✓
11	Change	Change	✓
12	Strategy	-	X
13	Cultures	Cultures	✓
14	Leadership	Leadership	✓
15	Competition	Competition	✓
16	Quality	-	X
17	-	Working Across Cultures	X
18	-	Revision Units A, B, C, D	X
19	Audio Scripts	Audio Scripts	✓

3.3. Methodological Approach

Gender bias in ELT textbooks has been analysed using quantitative, qualitative or mixed method research in previous studies. Quantitative analysis or “manifest level analysis” mainly involves numerical data analysed statistically and leads to “an objective and descriptive account of the surface meaning of the data” (Dörnyei, 2007, pp. 245-6). On the other hand, qualitative analysis or latent level analysis involves mainly non-numerical data analysed by non-statistical methods such as critical discourse analysis (Fairclough, 1995) and image analysis (Berger, 1973) and leads to “a second-level, interpretive analysis of the underlying deeper meaning of the data” (Dörnyei, 2007, pp. 245-6).

Mixed method research, which combines qualitative and quantitative methods at the same time or one after the other during analysis, amalgamates the strengths of quantitative analysis such as precision, control and reliability with those of qualitative methods such as flexibility, openness and ability to find reasons behind complex phenomenon (Dörnyei, 2007). Mixed method research also mitigates the weakness of quantitative and qualitative methods such as simplistic generalizations and reductionist tendencies of the former (Brannen, 2005) and lack of objectivity of the latter (Denizen & Lincoln, 2005; Holliday, 2004). Therefore, though the main methods of study for content analysis of textbooks have been both quantitative (Adel & Enayat, 2016; Lewandowski, 2014; Samdikhah & Shahrokhi, 2015; Notash & Jahan, 2012) and mixed (Andinoglu, 2014; Ansari & Babai, 2003; Barton & Sakwa, 2012; Bataineh, 2017; Fatemi, Pishghadam & Heidarian, 2011; Otlowski, 2003), the present study used mixed method or quantitative analysis followed by qualitative scrutiny to develop comprehensive understanding of gender representation in the sample.

3.4. Research Questions and Coding

To analyse the sample accurately, detailed multiple-level analysis including various aspects of images, text and speech was conducted. Illustrations and textual parts were analysed separately in line with Brugeilles and Cromer's (2009) recommendation who suggested that such analysis might reveal pieces of information which either add up or contradict each other. Also, increase in the volume of speech from 43 tracks in 1stEd to 82 in 3rdEd provided grounds for detailed comparative enquiry. Images, text and speech were studied at chapter level, apart from overall textbook level, to find whether there were differences in gender representation based on themes of the chapters.

To answer the three research questions presented in chapter 1 of the study, codes were deduced from literature and a few were inductively drawn from examination of the sample, as outlined in Table 3.

Table 3 - Codes Used

Research Questions	Codes	Inductively Coded or Deduced from Literature
Is the representation of F and M different in illustrations? Has the difference increased or decreased over time?	Total representation	Ansary and Babaii (2003), Fatemi, Pishghadam and Heidarian (2011), Samadikhah and Shahrokhi (2015), Adel and Enayat (2016)
	Subject of profile feature article	Inductive coding
	Subject expert giving opinion	Inductive coding
	Named images	Fatemi, Pishghadam and Heidarian (2011)
	Unnamed images	Fatemi, Pishghadam and Heidarian (2011)
Qualitative analysis	Gender-stereotyped roles	Adel and Enayat, 2016; Ansari and Babai, 2003; Aydınoğlu, 2014; Lewandowski, 2014; Samadikhah and Shahrokhi, 2015
Is the representation of F and M different in textual parts? Has the difference increased or decreased over time?	Total representation	Otlowski (2003), Ansary and Babaii (2003), Fatemi, Pishghadam and Heidarian (2011), Aydınoğlu (2014), Samadikhah and Shahrokhi (2015), Adel and Enayat (2016), Bataineh (2017)
	Writers of epigraphs of chapters	Inductive coding
	Writers of authentic news articles	Inductive coding
	Representation in professional roles	Otlowski (2003), Ansary and Babaii (2003), Aydınoğlu (2014), Samadikhah and Shahrokhi (2015), Bataineh (2017)
Qualitative analysis	Subordination through subject/object positions and use of strong/weak verbs	Fatemi, Pishghadam and Heidarian (2011), Samadikhah and Shahrokhi (2015), Adel and Enayat (2016)
Is the speech of F and M different? Has the difference increased or decreased over time?	Total F and M speakers	Hellinger (1980)
	Single gender tracks	Notash and Jahan (2012)
	Number of F and M speakers in F-M tracks	Notash and Jahan (2012), Aydınoğlu (2014)
	Dialogue initiation in F-M tracks	Hellinger (1980), Ansary and Babaii (2003), Notash and Jahan (2012), Samadikhah and Shahrokhi (2015)
	Average F and M words in single gender and F-M tracks	Notash and Jahan (2012)
	Mean turn length in all tracks and F-M tracks	Hellinger (1980), Notash and Jahan (2012), Aydınoğlu (2014)
	Speech traits in F and M utterances: question tags, hesitation markers and ellipses	Lakoff (1973, 2017)
Qualitative analysis	Gender stereotyped roles	Ansari and Babai, 2003; Aydınoğlu, 2014; Samadikhah and Shahrokhi, 2015

3.4.1. Justification for inductively derived codes

According to Kress and Van Leeuwen (2006) all images are ideological, and it has been argued that text as well as images in textbooks should represent the roles played by F and M in an equal and unprejudiced manner (Laakkonen, 2007).

Thus, development of two codes for analysis of images, which are ‘subject of profile feature article’ and ‘expert giving opinion’, is justified because qualitative inspection of the textbooks showed the characters in these images to be more powerful than those in the other images, named or unnamed. Moreover, these two powerful categories of images, which represent prominent characters in the textbooks, are foregrounded by long narratives built around the characters, describing their attitudes, opinions, likes and dislikes and professional competence. Thus, coding of these categories was in line with Brugeilles and Cromer’s (2009, p. 144) guidelines which advised that while studying gender representation in textbooks “hero characters and minor figures” should be counted separately to ensure representation of F in these areas of importance.

Same argument could be extended to justify the coding of two categories in text which are ‘authors of epigraphs’ and ‘writers of authentic news articles’. Since all the chapters begin with an epigrammatic statement which serves as epigraph for that chapter, the need to study gender representation at this privileged position was felt. Also, most of the reading comprehension texts in the books are authentic news articles which are frequently studied sections of the books. Test for gender parity in selection of ‘epigraphs’ and ‘authentic news articles’ by F and M authors could also be supported by NCTE Guidelines (*Guidelines for nonsexist use of language in NCTE*, 1976, pp. 23-25) which proposed including “materials by [...] both women and men” in teaching units.

Further, no concrete description of ‘senior titles’, a sub category of ‘professional roles’ was found in the literature. Therefore, C-level executives, heads of departments, directors and presidents were considered senior (see appendices C and D).

3.5. Data Analysis

Binomial Exact Test of Goodness-of-Fit was used to find significance of differences in the representation of F and M in images and text because the data were nominal, and the sample sizes were very small. The theoretical expectation for F to M visibility ratio was determined to be 1:1 for the test. Mann-Whitney U test was used to detect significance of differences in speech transcripts. This test was two-tailed to test the probability of either M or F being significantly more than the other. T-test couldn't have been applied on speech samples because the data did not appear normally distributed even after removing outliers, which were calculated using boxplots. Q-Q plots also showed non-normality of speech data (see appendices I and J). Tests were mostly run in Microsoft Excel.

3.6. Methodological Limitations

Though utmost care was taken to develop sound methodology, this study has a few limitations. To begin with, inductive coding of certain categories such as 'SPFA', 'expert giving opinion', 'authors of epigraphs' and 'writers of authentic news articles' along with determination of criterion for segregation of 'senior titles' from 'professional roles' could raise an argument about the influence of researcher's sensibilities leading to possible lack of objectivity in the coding process (Denizen & Lincoln, 2005; Dörnyei, 2007; Holliday, 2004). However, all the inductively derived codes have been supported by theory and rationale for their selection has been provided.

Further, since only names could be found in text for writers of epigraphs and authentic news articles, so gender of the writers was detected by their names. Likewise, gender of images was identified by names, if given, and appearance. Gender of speakers was determined by both names and sound of voice. It could be argued that this method of identification might not be entirely fool proof. Therefore, gender of the characters was decided only after careful examination and characters with unisex names or ambiguous appearance such as unidentifiable cartoons and silhouettes were excluded from analysis. Similarly, though the process of the manual counting of F and M appearance in images and text was carried out

with utmost discretion and was repeated thrice for accuracy, the reliability of the method could be challenged.

Finally, though the analyses in the present study was comprehensive, because of the use of a pre-decided framework, the findings could not be considered generalizable to other business English textbooks. Moreover, the use of other methods of analysis such as critical discourse analysis or feminist theory might have revealed different results. Thus, further research employing different modes of analyses is required to supplement the findings of this study.

Chapter 4 – Results

This section analyses and summarises differences in F and M representation in images, text and speech. For ease of interpretation, the data with higher M representation has been highlighted in blue and that with higher F representation is highlighted in yellow. All statistically significant differences in findings have been highlighted in green.

4.1. Images

Images were analysed to find any significant difference in number of F and M images appearing in each chapter and in the overall books. The F and M images were further analysed to find any significant differences in their relative power positions.

Tables 4 and 5, present frequency of occurrence of F and M images in each chapter. The tables also present chapter-wise classification of those images according to four levels of importance associated with the images, namely, images of ‘subjects of profile feature articles’ (SPFA), ‘experts giving opinion’ (expert), ‘named images’ and ‘unnamed images’.

As can be seen from the tables, 8 out of 12 chapters in 3rdEd and 10 out of 12 in 1stEd have high M representation. In 3rdEd, “Money”, “Ethics” and “Competition” have high F to M ratios of 1:3, 1:4 and 0:6 respectively. Similarly, in 1stEd, “Money”, “Cultures” and “Competition” have high F to M ratios of 2:13, 1:5 and 0:5 respectively. Interestingly, chapter “Competition” had no F images in either of the books despite having 5 M images in 1stEd and 6 M images in 3rdEd.

Table 4 - Chapter-Wise Representation of F and M in Images (1stEd)

S.No.	Chapter Title	Overall			Relative Power Position of Images							
		F	M	Total	SPFA		Expert		Named Images		Unnamed Images	
					F	M	F	M	F	M	F	M
1	Brands	2	2	4	-	-	1	-	-	-	1	2
2	Travel	3	6	9	-	-	-	1	-	-	3	5
3	Change	-	4	4	-	3	-	1	-	-	-	-
4	Organization	2	6	8	-	-	-	-	-	-	2	6
5	Advertising	2	4	6	-	-	-	1	-	1	2	2
6	Money	2	13	15	-	-	-	1	-	-	2	12
7	Cultures	1	5	6	-	-	-	-	-	-	1	5
8	Employment / HR	10	13	23	-	1	-	1	2	2	8	9
9	Trade / IM	-	1	1	-	-	-	1	-	-	-	-
10	Ethics	2	2	4	-	-	-	-	-	1	2	1
11	Leadership	3	7	10	-	1	-	-	-	-	3	6
12	Competition	-	5	5	-	-	-	-	-	-	-	5
TOTAL		27	68	95	-	5	1	6	2	4	24	53

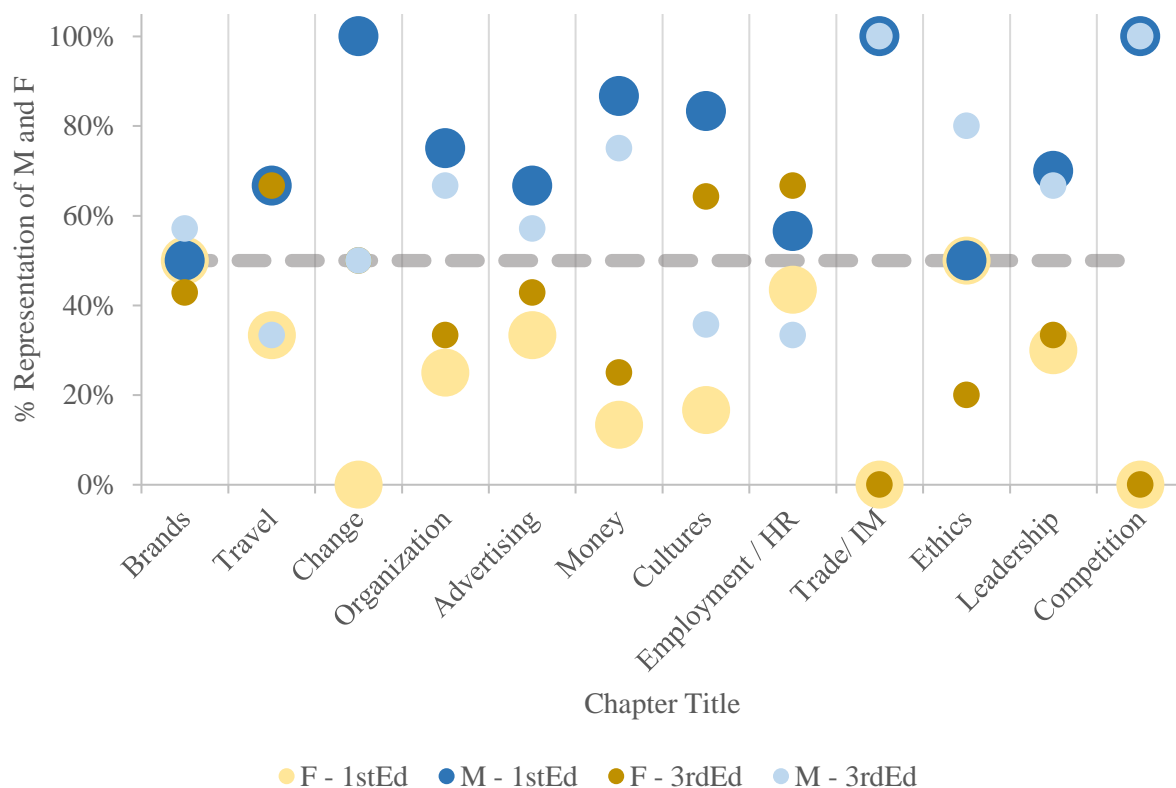
Table 5 - Chapter-Wise Representation of F and M in Images (3rdEd)

S.No.	Chapter Title	Overall			Relative Power Position of Images							
		F	M	Total	SPFA		Expert		Named Images		Unnamed Images	
					F	M	F	M	F	M	F	M
1	Brands	3	4	7	-	1	-	1	2	2	1	-
2	Travel	2	1	3	-	-	-	1	1	-	1	-
3	Change	1	1	2	-	-	1	-	-	-	-	1
4	Organization	1	2	3	-	-	-	1	1	1	-	-
5	Advertising	3	4	7	-	-	-	1	-	-	3	3
6	Money	2	6	8	-	1	-	1	-	-	2	4
7	Cultures	9	5	14	-	-	-	1	1	-	8	4
8	Employment / HR	6	3	9	1	-	1	-	3	2	1	1
9	Trade / IM	-	1	1	-	-	-	1	-	-	-	-
10	Ethics	1	4	5	-	-	-	1	-	1	1	2
11	Leadership	1	2	3	-	1	1	-	-	-	-	1
12	Competition	-	6	6	-	-	-	1	-	-	-	5
TOTAL		29	39	68	1	3	3	9	8	6	17	21

Graph 1 shows proportionate representation of F and M in each chapter, calculated as number F or M images in chapter divided by the total number of images in that chapter. Proportion of F in chapters is represented in yellow dots (light yellow for 1stEd and dark yellow for 3rdEd) and proportion of M is represented in blue dots (dark blue for 1stEd and light blue for 3rdEd). The sizes of the dots were kept different to ensure that all data points

are visible in the graph. The grey line depicts the ideal proportion of 50% M and 50% F images. As is evident from the graph, most of blue dots are above the grey line and most of the yellow dots are below the grey line highlighting that M has a higher proportionate representation in all chapters in both the editions except in “Travel”, “Culture” and “Employment/ HR” in 3rdEd.

Graph 1 - Proportionate Representation of F and M Images in Chapters



Further statistical analyses to find the level of significance of these differences in F and M representation was conducted. Exact Test of Goodness-of-Fit was used for statistical analysis, due to small sample size in each chapter. Table 6, summarises the findings. P-values lower than 0.05, implying statistical significance, have been highlighted in green.

Table 6 - Exact Test of Goodness-of-Fit for Chapter-Wise Representation of F and M in Images

S. No.	Chapter Title	1 st Ed				3 rd Ed			
		Observed No.		Total	P Value	Observed No.		Total	P Value
		F	M			F	M		
1	Brands	2	2	4	0.69	3	4	7	0.50
2	Travel	3	6	9	0.25	2	1	3	0.50
3	Change	-	4	4	0.06	1	1	2	0.75
4	Organization	2	6	8	0.14	1	2	3	0.50
5	Advertising	2	4	6	0.34	3	4	7	0.50
6	Money	2	13	15	0.00	2	6	8	0.14
7	Cultures	1	5	6	0.11	9	5	14	0.21
8	Employment / HR	10	13	23	0.34	6	3	9	0.25
9	Trade/ IM	-	1	1	0.50	-	1	1	0.50
10	Ethics	2	2	4	0.69	1	4	5	0.19
11	Leadership	3	7	10	0.17	1	2	3	0.50
12	Competition	-	5	5	0.03	-	6	6	0.02
TOTAL		27	68	95	0.00	29	39	68	0.14

As can be seen in the total row of table 6, the overall difference in F and M images is significant ($p = 0.00$) in 1stEd but not in 3rdEd. Chapter “Competition”, had significant difference in both editions (1stEd: $p = 0.03$; 3rdEd: $p = 0.02$). In 1stEd, “Money” also had significant difference ($p = 0.00$).

However, since Exact Test of Goodness-of-Fit requires minimum sample size of 5 to detect significance, chapters with less than 5 images will not show significant difference even in case of no F or M images in the chapter. This could also imply a Type 2 error in findings where no significant differences were found.

4.1.1 F and M presence at various power positions

Images were further analysed to find the differences in relative importance given to F and M images in the books. Table 7 sums up the representation of F and M in images at four levels of importance.

Table 7 - Relative Power Position of F and M Images

S. No.	Category	1 st Ed			3 rd Ed		
		F	M	Total	F	M	Total
1	SPFA	-	5	5	1	3	4
2	Expert	1	6	7	3	9	12
3	Named Images	2	4	6	8	6	14
4	Unnamed Images	24	53	77	17	21	38
TOTAL		27	68	95	29	39	68

Table above highlights that the ratios of F to M representations in more important ‘SPFA’ and ‘expert’ images are 0:5 and 1:6 respectively in 1stEd. These ratios improved slightly in 3rdEd and were 1:3 for both ‘SPFA’ and ‘expert’.

Like Graph 1, Graph 2 presents proportionate representation of F and M images at the four levels in both books. Also, like Graph 1, most of blue dots are above the grey line and most of the yellow dots are below the grey line highlighting that M has a higher proportionate representation in all types of images except in ‘named images’ in 3rdEd. Also, higher difference was found in the images with more power which are ‘SPFA’ and ‘expert’.

Graph 2 - Relative Power Position of F and M Images

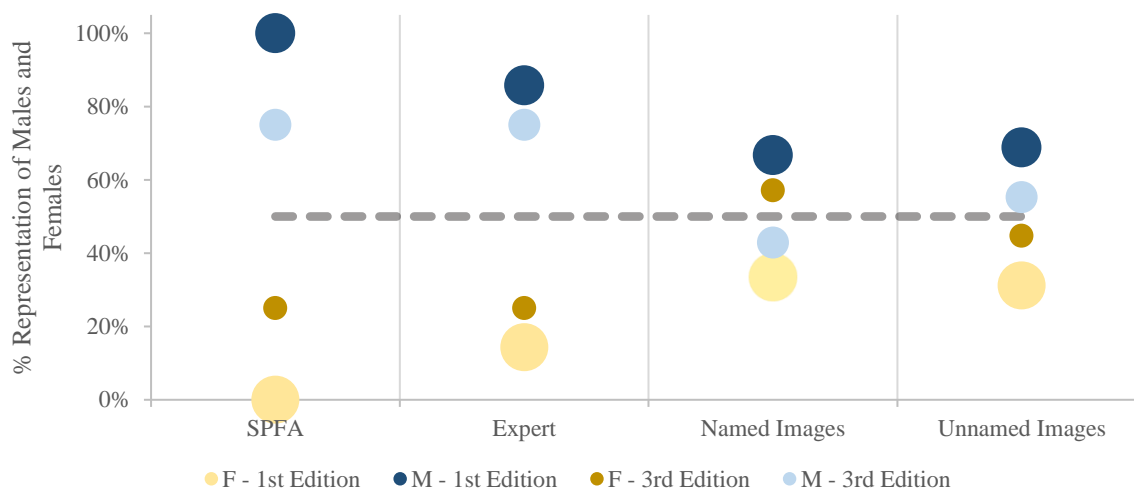


Table 8 reveals significance of these differences in F and M images at four levels of power and highlights bias against F, who are significantly underrepresented in two out of four

categories in the 1stEd (SPFA: $p=0.03$; unnamed images: $p=0.00$). However, this improved in 3rdEd with no significant difference in any of the categories.

Table 8 - Exact Test of Goodness-of-Fit for Relative Power Position of F and M Images

S. No.	Category	1 st Ed				3 rd Ed			
		F	M	Total	P Value	F	M	Total	P Value
1	SPFA	-	5	5	0.03	1	3	4	0.31
2	Expert	1	6	7	0.06	3	9	12	0.07
3	Named Images	2	4	6	0.34	8	6	14	0.40
4	Unnamed Images	24	53	77	0.00	17	21	38	0.31
TOTAL		27	68	95	0.00	29	39	68	0.14

4.1.2 Qualitative analysis of images

Further qualitative evaluation of images brought to light several instances of stereotypical representation of genders in both the textbooks. In 3rdEd, of the four clear head-to-toe images of single characters, three were of M and one of F. The three M images included a tycoon in business suit and tie sitting in a swivel chair with a commanding look on his face (fig. 1), a muscular person working out in a gym (fig. 2) and a bald muscular athlete (fig. 3). The single F head-to-toe image is of a traveller in business suit with an anxious look on her face. She is holding a pull along baggage with one hand and fixing her stiletto heel with the other (fig. 4). This image, on one hand, recalls the dated notion about F wearing heels at work in order to appear pleasant and feminine (Adomaitis & Johnson, 2005; Linder, 1997), and on the other, evokes the damsel in distress stereotype. The three M images vis-à-vis that of the F traveller reinforce the stereotypes of M as athletic, muscular, and powerful and F as struggling and in need of help.



Figure 1
3rdEd (p. 59)

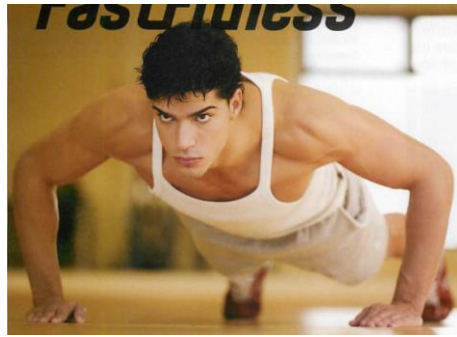


Figure 2
3rdEd (p. 80)

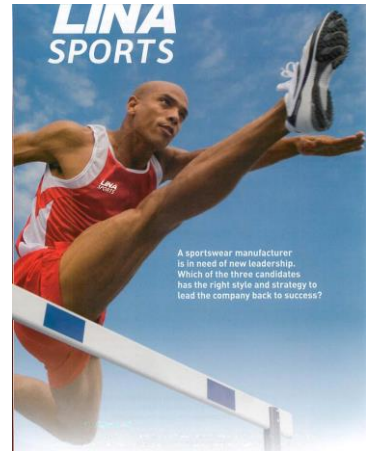


Figure 3
3rdEd (p. 110)



Figure 4
3rdEd (p. 12)

Likewise, in 1stEd, the article about a fashion victim in “Brands” features an F image suggesting that F are usually fashion victims (p. 16). Considering individual chapters, “Advertising” in 1stEd includes maximum stereotypical images of the two genders, for example the advertisement for “Marlboro” includes an M image representing a cowboy with rope on a shoulder, cigarette in mouth and lighter in one hand (p. 30) and “great Steve

McQueen” driving Ford Mustang in a car advertisement (p. 34) which seems to invoke the stereotype of macho M (Cole, 2000; Thompson and Pleck, 1994). On the contrary, some images dwell on the stereotype of F as an object of gaze (Plakoyiannaki and Zotos, 2009), such as an article on outdoor advertising, which includes an image of a billboard with one F in a revealing dress, curlers in hair, spoon in mouth and cup in hand (p. 32). Another example is an advertisement of anti-fur trade which features a figure in heels and skirt dragging a fur coat, leaving blood stains on the floor (p. 30) bringing to mind the stereotypical femme fatale (Bronfen, 2004; Sully, 2010). Similarly, in “Cultures” in 3rdEd, though all the six characters who are performing cultural rituals are F, the expert voice in the chapter is that of one M, suggesting that F are carriers of culture, but the authority figures are M.

Several other examples suggesting that F hold less power than M in 1stEd include four out of 5 images of travellers representing M while both the images of flight attendants represent F (pp. 24-26). Similar examples in 1stEd include an image of a panel of interviewers with two M and one F (p. 39) and a collage of world-famous leaders with six M and three F images (p. 110). There are only two images in 1stEd which show more F than M: one represents a group of cleaners including six F and two M (p. 64) and the other shows employees in different sectors without any specific clue to suggest their position in the corporate hierarchy (p. 38).

4.2. Textual Parts

4.2.1. F and M presence in various categories

Text was analysed for number of in-text references to F and M, classified into three sub categories: ‘authors of epigraphs of chapters’ (epigraphs), ‘writers of authentic news articles’ (news articles) and ‘characters in professional roles’ (professional roles).

Table 9 and 10 present total number of in-text references to F and M in each chapter of the two editions classified into the three sub categories described above. Table 11 summarises the total representation of M and F in each of these three categories. Since, ‘epigraphs’ and ‘news articles’ are graphologically foregrounded and most frequently read, they could be considered important areas to ensuring gender parity in text books. The third category,

‘professional roles’, aims to evaluate representation of F in business as shown in the textbooks.

Table 9 - Chapter-Wise Representation of F and M in Text (1stEd)

S.No.	Chapter Title	Overall			Type of Reference					
		F	M	Total	Epigraphs		News Article		Professional Roles	
					F	M	F	M	F	M
1	Brands	3	5	8	-	1	1	-	2	4
2	Travel	4	5	9	1	-	-	-	3	5
3	Change	9	13	22	-	1	1	-	8	12
4	Organization	5	9	14	-	-	-	1	5	8
5	Advertising	-	3	3	-	1	-	-	-	2
6	Money	1	8	9	-	1	-	-	1	7
7	Cultures	2	7	9	-	1	-	1	2	5
8	Employment / HR	1	7	8	-	1	-	1	1	5
9	Trade/ IM	3	8	11	-	1	-	-	3	7
10	Ethics	5	11	16	-	1	-	1	5	9
11	Leadership	2	6	8	-	1	-	-	2	5
12	Competition	2	5	7	-	1	-	1	2	3
TOTAL		37	87	124	1	10	2	5	34	72

Table 10 - Chapter-Wise Representation of F and M in Text (3rdEd)

S.No.	Chapter Title	Overall			Type of Reference					
		F	M	Total	Epigraphs		News Article		Professional Roles	
					F	M	F	M	F	M
1	Brands	3	10	13	-	1	1	-	2	9
2	Travel	3	3	6	-	1	1	-	2	2
3	Change	3	7	10	-	1	-	1	3	5
4	Organization	1	4	5	-	1	1	-	-	3
5	Advertising	-	5	5	-	1	-	1	-	3
6	Money	-	7	7	-	1	-	-	-	6
7	Cultures	1	4	5	-	1	-	-	1	3
8	Employment / HR	5	4	9	-	1	-	-	5	3
9	Trade/ IM	2	10	12	-	1	1	1	1	8
10	Ethics	2	8	10	-	1	-	1	2	6
11	Leadership	2	8	10	-	1	1	1	1	6
12	Competition	-	5	5	-	1	-	1	-	3
TOTAL		22	75	97	-	12	5	6	17	57

Table 11 - Relative Representation of F and M in Three Categories in Text

S. No.	Category	1 st Ed			3 rd Ed		
		F	M	Total	F	M	Total
1	Epigraphs	1	10	11	-	12	12
2	News Article	2	5	7	5	6	11
3	Professional Roles	34	72	106	17	57	74
TOTAL		37	87	124	22	75	97

As can be seen from the tables 9 and 10, at an overall level, in 1stEd all the 12 chapters represent more M than F. In 3rdEd, 10 chapters out of 12 represent more M than F suggesting some longitudinal improvement. However, as shown in table 11, 2 of the 3 sub-categories of representation, namely 'epigraphs' and 'professional titles', suggested a decline in overall representation of F over time. While only one chapter in 1stEd begins with an epigraph by F, none of the chapters in 3rdEd begins with an epigraph by F. Likewise, the ratio of F to M in professional roles is 17:36 in 1stEd and declined to 17:57 in 3rdEd. The ratio of F to M writers of news articles, however, increased from 2:5 in 1stEd to 5:6 in 3rdEd.

F representation in senior titles, a sub-set of professional roles, was analysed separately. Titles which were considered senior included chief executives, heads of departments, directors and presidents (see appendices C and D). The numbers of senior professional roles of F and M in the two books are presented in table 12.

Table 12 - Chapter-Wise Representation of F and M in Senior Titles in Text

S. No.	Chapter Title	1 st Ed			3 rd Ed		
		F	M	Total	F	M	Total
1	Brands	-	1	1	-	3	3
2	Travel	1	1	2	1	2	3
3	Change	2	6	8	2	3	5
4	Organization	-	2	2	-	2	2
5	Advertising	-	-	-	-	2	2
6	Money	1	4	5	-	3	3
7	Cultures	-	4	4	-	2	2
8	Employment / HR	-	1	1	3	-	3
9	Trade/ IM	-	2	2	-	4	4
10	Ethics	1	5	6	-	3	3
11	Leadership	2	5	7	1	6	7
12	Competition	-	1	1	-	2	2
TOTAL		7	32	39	7	32	39

As can be seen from the table, the representation of both the sexes in senior professional titles, is even more lopsided with F to M ratio being 7:32 in both the editions. Interestingly all 3 senior titles in “Employment/ HR” chapter in 3rdEd were held by F suggesting a possibility of higher preference of F in senior roles in this field.

Tables 13, 14 and 15 illustrate the significance of differences in F and M representation in text at an overall level, in each chapter, in the three categories analysed above and in senior professional titles. Because of small sample sizes, binomial Exact Test of Goodness-of-Fit was applied.

As can be seen in the total row of table 13, F is significantly underrepresented ($p = 0.00$) in both 1stEd and 3rdEd at overall textual level. Interestingly, 3rdEd has five chapters with significant underrepresentation of F while 1stEd has only 2. Chapter “Money”, had significant difference in both editions (1stEd: $p = 0.02$; 3rdEd: 0.01). In 1stEd, “Employment/ HR” also has significant difference ($p = 0.04$). In 3rdEd, in addition to “Money”, chapters “Competition” ($p = 0.03$), “Brands” ($p = 0.05$), “Advertising” ($p = 0.03$) and “Trade/ IM” ($p = 0.02$) also have significantly more M representation.

Likewise, ‘epigraphs’ (1stEd: $p = 0.01$; 3rdEd: 0.00), ‘professional roles’ in general (1stEd: $p = 0.00$; 3rdEd: 0.00) and ‘senior titles’ (1stEd: $p = 0.00$; 3rdEd: 0.00) have significantly less F representation in both the textbooks.

Table 13 - Exact Test of Goodness-of-Fit for Chapter-Wise Representation of F and M in Text

S. No.	Chapter Title	1 st Ed				3 rd Ed			
		Observed No.		Total	P Value	Observed No.		Total	P Value
		F	M			F	M		
1	Brands	3	5	8	0.36	3	10	13	0.05
2	Travel	4	5	9	0.50	3	3	6	0.66
3	Change	9	13	22	0.26	3	7	10	0.17
4	Organization	5	9	14	0.21	1	4	5	0.19
5	Advertising	-	3	3	0.13	-	5	5	0.03
6	Money	1	8	9	0.02	-	7	7	0.01
7	Cultures	2	7	9	0.09	1	4	5	0.19
8	Employment / HR	1	7	8	0.04	5	4	9	0.50
9	Trade/ IM	3	8	11	0.11	2	10	12	0.02
10	Ethics	5	11	16	0.11	2	8	10	0.05
11	Leadership	2	6	8	0.14	2	8	10	0.05
12	Competition	2	5	7	0.23	-	5	5	0.03
TOTAL		37	87	124	0.00	22	75	97	0.00

Table 14 - Exact Test of Goodness-of-Fit for Relative Representation of F and M in Three Categories in Text

S. No.	Category	1 st Ed				3 rd Ed			
		F	M	Total	P Value	M	F	Total	P Value
1	Epigraphs	1	10	11	0.01	-	12	12	0.00
2	News Article	2	5	7	0.23	5	6	11	0.50
3	Professional Roles	34	72	106	0.00	17	57	74	0.00
TOTAL		37	87	124	0.00	22	75	97	0.00

Table 15 - Exact Test of Goodness-of-Fit for Relative Representation of M and F in Senior Titles in Text

S. No.	Category	1 st Ed				3 rd Ed			
		F	M	Total	P Value	F	M	Total	P Value
Senior Titles		7	32	39	0.00	7	32	39	0.00

4.2.2. Qualitative analysis of textual parts

Like images, qualitative analysis of the textual parts also revealed biased representation of the two genders. For example, M were much more frequently depicted as competent and well-educated through the use of descriptive phrases such as “took a firm from bankruptcy to success” (p. 9), “graduate[d] from Harvard Business School” (p. 28), “genius” who “single-handedly ran a company” (p. 106) in 3rdEd; and “trained at Harvard University” (p. 92) and “successfully led General Electric through a period of great change” (p. 87) in 1stEd. Though descriptive phrases suggesting competence were also used sometimes for F such as “successful” (p. 76) in 3rdEd; and “clever and successful” (p. 45) and “America’s most powerful business woman” (p. 115) in 1stEd, the descriptions given for F’s competence were less frequent and less detailed.

As far as stereotypical representation of the two genders is concerned, a notable finding was the presence of negative stereotype of corrupt and abusive M. In 1stEd, several descriptions of unethical M are found such as an abusive M traveller who when “frustrated by a delayed flight”, “stormed onto the runway, took out a pistol and shot out the aircraft’s front tyre” (p. 26), one M who leaked confidential information (p. 85) and was blamed for harassing an F colleague (p. 84). There is also one F employee who has been making “bad mistakes” at work “recently” in 1stEd but that too because “she has a serious illness” (p. 79). Likewise, in 3rdEd, there is a salesman who bribes doctors (p. 100); another M who is a “real problem” because he sends out false sales reports, puts fake expense claims, and is “rude”, “uncooperative” and “a nightmare to work with” (p. 163); and third who is jailed for six months (p. 116). However, there is only one F who does something unethical, which is lying on her CV to get a job (p. 99), but she hasn’t been described in as much detail as her M counterparts.

With regards to power assigned to M and F in textual parts, qualitative examination of sentences with both F and M at different positions in the main clause showed that in 3rdEd there were 4 M and 3 F at subject position in main clauses, and in 1stEd there were 9 M and 7 F at the subject position in the main clauses (see appendices E and F). Though in both the books M are at subject position more frequently than F, the difference does not appear huge

and could be explained by the overall more frequent appearance of M in the textbooks. However, a look at the action words/phrases following the subject provide better insight into the power assigned to F and M characters. For example, in 1stEd, M subjects do actions such as “meeting”, “putting pressure”, being “aggressive and unpleasant”, “giv[ing] too much work”, “set[ing] impossible deadlines”, “criticis[ing]”, “giv[ing] orders”, “never encourage[ing] or prais[ing]”, having “frequent long lunches” and “return[ing] to office late”, whereas, F subjects are “interview[ing]”, “report[ing]”, “say[ing]”, “meeting”, assisting, “having difficulties”, sending message, and “negotiating”. The difference seems less stark in 3rdEd where M subjects indulge in actions such as “communicat[ing]”, “travel[ing]” and “introduc[ing]” and F subjects are “be[ing] helpful” to, “negotiating with” and “ask[ing]” M “for advice” (see appendices E and F). Thus, an exploration of verbs used with F and M subjects indicates that in both the books M hold more power than F, more so in the older version of the book.

4.3. Speech

F and M speech in both the editions was analysed for gender bias using several parameters as given in chapter 3:

- number of F and M speakers;
- number of tracks with F only or M only speakers or single gender tracks;
- number of F and M speakers in mixed gender tracks;
- dialogue initiation by F or M in mixed gender tracks;
- average number of words spoken by each F and M speaker;
- average number of words spoken by F and M in each utterance or mean turn length and
- difference in speech traits of F and M speakers, measured as number of times tag questions, ellipses or hesitation markers were used per 100 words spoken by F and M speakers.

Detailed track-wise speech profiles of F and M speakers in both books (see appendices G and H) provide the number of F and M speakers, F and M turns, and total F and M words in each

track. It also provides number of times hesitation markers such as ‘mmm’, ‘um’, ‘er’ and ‘erm’, tag questions and ellipses were used by F and M speakers in each track. The data (see appendices G and H) were used to evaluate the possible gender bias in F and M speech in categories stated in above paragraph.

4.3.1. F and M speakers

Table 16 summarises chapter-wise distribution of F and M speakers in the books along with statistically significant differences in F and M representation found through Exact Test of Goodness-of-Fit.

As can be seen in table 16, in both the editions number of M speakers is more than double the number of F speakers with highly significant differences ($p = 0.00$). “Competition” is the only chapter which shows significant bias in both the editions (1stEd: $p = 0.02$; 3rdEd: $p = 0.00$). Other chapters with significant differences in F and M speakers is “Employment” ($p = 0.02$), in 1stEd, and “Advertising” ($p = 0.00$) and “Money” ($p = 0.01$) in 3rdEd.

Table 16 - Chapter-Wise Exact Test of Goodness-of-Fit - Speech (Number of Speakers)

S. No.	Chapter Title	1 st Ed				3 rd Ed			
		Observed No.		Total	P Value	Observed No.		Total	P Value
		F	M			F	M		
1	Brands	3	1	4	0.31	5	10	15	0.15
2	Travel	5	4	9	0.50	7	8	15	0.50
3	Change	2	8	10	0.05	6	6	12	0.61
4	Organization	-	4	4	0.06	10	18	28	0.09
5	Advertising	4	7	11	0.27	-	8	8	0.00
6	Money	2	6	8	0.14	2	12	14	0.01
7	Cultures	2	1	3	0.50	12	17	29	0.23
8	Employment / HR	3	12	15	0.02	7	11	18	0.24
9	Trade/ IM	1	5	6	0.11	5	12	17	0.07
10	Ethics	6	6	12	0.61	3	8	11	0.11
11	Leadership	1	1	2	0.75	3	4	7	0.50
12	Competition	-	6	6	0.02	-	16	16	0.00
TOTAL		29	61	90	0.00	60	130	190	0.00

4.3.2. Single gender tracks

The results of chapter-wise comparison of single gender tracks are summarized in table 17. Of the 43 tracks analysed in 1stEd, 20 have M speakers only (M tracks) and 7 have F speakers only (F tracks). Of the 82 tracks analysed in 3rdEd, 38 are M tracks and 6 are F tracks.

Exact test of goodness of fit was applied to check the significance of differences between the numbers of M tracks and F tracks. Table 27 shows that the difference in total number of M only tracks and F only tracks is highly significant in both the editions (1stEd: $p = 0.01$; 3rdEd: 0.00). At chapter level, in the 3rdEd, the difference reached significance in “Competition” ($p = 0.03$). However, the apparent insignificant nature of difference at chapter level in 1st edition could be because of very small sample size in each chapter. None of the chapters in 1stEd and only 3 chapters in 3rdEd had sample size of five or more, which is the minimum required to detect significance in an Exact Test of Goodness-of-Fit. This could imply presence of Type 2 error leading to absence of significant differences at chapter level.

Table 17 - Chapter-Wise Exact Test of Goodness-of-Fit - Speech (No. of Single Gender Tracks)

S. No.	Chapter Title	1 st Ed				3 rd Ed			
		Observed No.		Total	P Value	Observed No.		Total	P Value
		F	M			F	M		
1	Brands	2	-	2	0.25	-	3	3	0.13
2	Travel	2	2	4	0.69	3	3	6	0.66
3	Change	-	2	2	0.25	-	-	-	1.00
4	Organization	-	2	2	0.25	1	3	4	0.31
5	Advertising	-	2	2	0.25	-	4	4	0.06
6	Money	1	2	3	0.50	1	6	7	0.06
7	Cultures	1	-	1	0.50	-	3	3	0.13
8	Employment / HR	-	4	4	0.06	1	3	4	0.31
9	Trade/ IM	-	2	2	0.25	-	3	3	0.13
10	Ethics	1	1	2	0.75	-	4	4	0.06
11	Leadership	-	-	-	1.00	-	1	1	0.50
12	Competition	-	3	3	0.13	-	5	5	0.03
TOTAL		7	20	27	0.01	6	38	44	0.00

4.3.3. Mixed gender tracks

Sixteen tracks out of 43 in 1stEd and 38 tracks out of 82 in 3rdEd were found to have both M and F speakers. An analysis of frequency of F and M speakers in these mixed gender tracks was conducted. The aim was to create a subset of tracks in which F and M have similar representation and analyse this subset separately for more fine-grained analysis of speech initiation, word count and turn length. As table 18 shows, the overall ratio of F to M in mixed gender tracks is 6:7 in the 1stEd and 5:6 approximately in 3rdEd. Due to purposive selection of the sample, the insignificance of differences between F and M speakers at overall and chapter level is unsurprising and provides a subset of tracks with almost equal F and M representation for further analysis.

Table 18 - Chapter-Wise Exact Test of Goodness-of-Fit - Speech (Speaker frequency in mixed gender tracks)

S.No.	Chapter Title	1 st Ed				3 rd Ed			
		Observed No.		Total	P Value	Observed No.		Total	P Value
		F	M			F	M		
1	Brands	1	1	2	0.75	5	5	10	0.62
2	Travel	-	-	-	1.00	1	2	3	0.50
3	Change	2	4	6	0.34	6	6	12	0.61
4	Organization	-	-	-	1.00	9	13	22	0.26
5	Advertising	4	3	7	0.50	-	-	-	1.00
6	Money	1	2	3	0.50	1	3	4	0.31
7	Cultures	1	1	2	0.75	12	12	24	0.58
8	Employment / HR	3	4	7	0.50	6	6	12	0.61
9	Trade/ IM	1	1	2	0.75	5	6	11	0.50
10	Ethics	4	4	8	0.64	3	3	6	0.66
11	Leadership	1	1	2	0.75	3	3	6	0.66
12	Competition	-	-	-	1.00	-	-	-	1.00
TOTAL		18	21	39	0.37	51	59	110	0.25

4.3.3.1. Dialogue initiation in mixed gender tracks

While significant differences were not found between number of F and M speakers in mixed gender tracks, the ratio is very different for dialogue initiation by F and M. As shown in table 19, the F to M ratio for speech initiation in mixed gender tracks is 1:3 in 1stEd and 3:5

approximately in 3rdEd. Not only this, statistical analysis using exact test of goodness-of-fit shows that there is a significant difference ($p = 0.03$) between number of speeches initiated by F and M in 1stEd.

Table 19 - Chapter-Wise Exact Test of Goodness-of-Fit - Speech (Speech Initiation F-M tracks)

S. No.	Chapter Title	1 st Ed				3 rd Ed			
		Observed No.		Total	P Value	Observed No.		Total	P Value
		F	M			F	M		
1	Brands	-	1	1	0.50	1	2	3	0.50
2	Travel	-	-	-	1.00	-	1	1	0.50
3	Change	1	1	2	0.75	2	3	5	0.50
4	Organization	-	-	-	1.00	1	5	6	0.11
5	Advertising	-	2	2	0.25	-	-	-	1.00
6	Money	-	1	1	0.50	-	1	1	0.50
7	Cultures	-	1	1	0.50	4	1	5	0.19
8	Employment / HR	1	2	3	0.50	1	5	6	0.11
9	Trade/ IM	1	-	1	0.50	4	1	5	0.19
10	Ethics	1	3	4	0.31	2	1	3	0.50
11	Leadership	-	1	1	0.50	-	3	3	0.13
12	Competition	-	-	-	1.00	-	-	-	1.00
TOTAL		4	12	16	0.04	15	23	38	0.13

4.3.4. Mean word count of F and M in tracks

The single gender and mixed gender tracks were further evaluated to find any differences in the average number of words spoken by each M and F speaker in the tracks. However, due to small sample sizes in some cases (F single gender tracks: 1stEd = 7; 3rdEd = 6) and large differences in mean word count across tracks the data was tested for normality to evaluate if t-test or Mann-Whitney U test should be applied to test statistical significance of the differences. Table 20 summarises the results of various tests conducted for normality. In addition, box plots and Q-Q plots were visually analysed to check for normality of data (see appendices I and J). Normality of data was checked after removing the outliers calculated using boxplot and removing all values greater than 1.5 box-lengths from the edge of the box. As can be seen from table 20, box plots and Q-Q plots (see appendices I and J), the test of

normality gave mixed results with some data sets appearing normal while others appearing non-normal. Accordingly, Mann-Whitney U test was considered more appropriate for the analysis.

Table 20 - Word Count in Tracks - Test of Normality

Edition	Category	Skewness		Kurtosis		Shapiro Wilk (P Value)	
		F	M	F	M	F	M
1 st Ed	Single Sex Tracks	(0.04)	0.60	(1.01)	(0.51)	0.72	0.30
	M-F Tracks	1.26	0.84	1.62	(0.27)	0.05	0.10
	Overall	1.02	0.72	1.24	(0.05)	0.05	0.04
3 rd Ed	Single Sex Tracks	0.55	0.02	0.10	(0.22)	1.00	0.70
	M-F Tracks	0.58	0.86	(0.19)	(0.30)	0.10	-
	Overall	0.44	0.24	(0.15)	(0.89)	0.18	0.01

Not only are M speakers more than F speakers and M speak in more tracks than F, but as can be seen from table 21, the mean number of words in single gender tracks, were also higher for M than for F (1stEd: M = 247 and SD = 113, F = 125 and SD = 58; 3rdEd: M = 197 and SD = 87, F = 133 and SD = 63). However, the difference appeared significant ($p = 0.01$) only in 1stEd but not in 3rdEd. Interestingly, the mean number of words in mixed gender tracks was higher for F than for M (1stEd: M = 101 and SD = 75, F = 143 and SD = 96; 3rdEd: M = 111 and SD = 100, F = 125 and SD = 78). However, these differences were insignificant in both 1stEd and 3rdEd.

Table 21 - Differences in Average Number of Words Spoken by F and M

Edition	Category	Descriptive Stats						Mann-Whitney U Test			
		No. of Tracks		Mean		Stan. Dev		Z (abs)	P Value	U Min	U Critical
		F	M	F	M	F	M				
1 st Ed	Single Gender Tracks	7	20	125	247	58	113	2.7	0.01	22	34.0
	F-M Tracks	16	16	143	101	96	75	1.5	0.14	89	75.0
	Overall	23	36	138	182	85	121	1.4	0.16	323	NA
3 rd Ed	Single Gender Tracks	6	38	133	197	63	87	1.7	0.08	63	NA
	F-M Tracks	38	38	125	111	78	100	1.3	0.20	599	NA
	Overall	44	76	114	168	76	103	1.3	0.21	1,442	NA

4.3.5. Average turn length of F and M utterances

The mixed gender tracks and all the tracks were further evaluated to compare the average number of words spoken in each utterance by F and M. As earlier, data was tested for normality after removing outliers. Table 22 summarises the results of various tests conducted for normality. As could be seen from box plots and Q-Q plots (see appendices I and J), and table 22, most of the data sets were non-normal and accordingly, Mann-Whitney U test was used for the analysis.

Table 22 - Turn Length of F and M Utterances - Test of Normality

Edition	Category	Skewness		Kurtosis		Shapiro Wilk (P Value)	
		F	M	F	M	F	M
1 st Ed	F-M Tracks	1.05	1.05	0.66	(0.52)	0.08	-
	All Tracks	1.02	1.03	0.80	0.64	0.04	-
3 rd Ed	F-M Tracks	0.93	0.72	0.13	(0.49)	0.01	0.01
	All Tracks	1.06	0.91	0.37	(0.09)	-	-

Table 23 shows that though the mean turn length of M speech in all tracks (1stEd: 65, SD = 75; 3rdEd: 85, SD = 70) is higher than F speech (1stEd: 55, SD = 45; 3rdEd: 56, SD = 69) in both the books, the differences were not statistically significant. On the other hand, the differences between mean turn length of F and M speech in mixed gender tracks (1stEd: M = 34, SD = 113 and F = 51, SD = 38; 3rdEd: M = 28, SD = 24 and F = 63, SD = 69) were found to be significant in both the books (1stEd: $p = 0.01$; 3rdEd: $p = 0.02$) in favour of F indicating that in M-F tracks F speak significantly longer in each turn than M in both the books. This appears to be inconsistent with most other findings and has been analysed further qualitatively.

Table 23 - Differences in Average Turn Length of F and M Speakers

Edition	Category	Descriptive Stats						Mann-Whitney U Test			
		No. of Tracks		Mean		Stan. Dev		Z (abs)	P Value	U Min	U Critical
		F	M	F	M	F	M				
1 st Ed	F-M Tracks	16	16	51	34	38	113	2.77	0.01	55	75.0
	All Tracks	23	36	55	65	45	75	0.07	0.94	410	NA
3 rd Ed	F-M Tracks	38	38	63	28	69	24	2.32	0.02	499	NA
	All Tracks	44	76	56	85	69	70	0.62	0.54	1,559	NA

4.3.6. Speech traits of F and M utterances

Three speech traits namely hesitation markers such as ‘umm’, ‘mmm’, ‘er’ and ‘erm’; questions tags and ellipses were studied in F and M speech on the basis of linguist Robin Tolmach Lakoff’s (1973, 2004, 2017) argument that F tend to use these more in their speech which presents them as weak and uncertain.

Table 24 summarizes the findings of scrutiny of F and M speech for the three traits: tag questions, hesitation markers and ellipses. Since majority of tracks did not have such speech traits, the data was highly skewed with more than 60% of data set in all categories being 0 (see appendices G and H). This implied non-normal distribution of data sets and accordingly, only Mann-Whitney U test was run.

The mean scores per 100 words show that, in both the editions, M use more tag questions (1stEd: M = 0.24, SD = 0.63 and F = 0.00, SD = 0.00), hesitation markers (1stEd: M = 0.36, SD = 0.82 and F = 0.12, SD = 0.53; 3rdEd: M = 1.04, SD = 1.5 and F = 0.22, SD = 0.91) and ellipses (1stEd: M = 0.3, SD = 0.62 and F = 0.20, SD = 0.79; 3rdEd: M = 0.28, SD = 0.57; F = 0.27, SD = 0.83) except in one instance i.e. the use of tag questions in 3rdEd (M = 0.02, SD = 0.08; F = 0.26, SD = 0.48). All the differences were found to be insignificant.

Table 24 - Speech Trait Analysis

Edition	Category	Descriptive Stats				Mann-Whitney U Test	
		Mean/ 100 Words		Stan. Dev		Z (abs)	P Value
		F	M	F	M		
1 st Ed	Tag Questions	-	0.24	-	0.63	1.25	0.21
	Hesitation Markers	0.12	0.36	0.53	0.82	0.20	0.84
	Ellipses	0.20	0.30	0.79	0.62	0.16	0.87
3 rd Ed	Tag Questions	0.26	0.02	0.48	0.08	1.13	0.26
	Hesitation Markers	0.22	1.04	0.91	1.50	0.75	0.45
	Ellipses	0.27	0.28	0.83	0.57	0.48	0.63

4.3.7. Qualitative analysis of speech

As in images and text, qualitative analysis of speech also showed that M are in higher professional positions than F. For example, in 1stEd speech tracks, 13 out of 14 interviewers are M and the only receptionist is F. Similarly, in 3rdEd 13 out of 16 interviewers are M and the only receptionist is F. Further, this could explain the higher turn length of F in F-M dialogues. Since the interviewers spoke very few words, the large number of M interviewers could have brought down the mean turn length of M speech vis a vis that of F in F-M tracks.

Moreover, as in images, an example of portrayal of F as object of gaze was also found in 1stEd speech:

I liked the French Connection ad where this [really pretty girl walks into the Tube](#) with her French Connection bag and then [begins to undress](#), and she's [looking really cheeky](#), you know, [sort of mischievous](#). [Everyone in the Tube is staring at her and she changes into her French Connection clothes in front of everyone](#), and there's this [really great playful music](#), and she ends up [walking out of the Tube at the next stop leaving everyone behind her](#). It was a really sexy ad, it was great. (p. 159)

Though an example of M as object of gaze was also found as given below, the one with F appears much more detailed than the one with M:

The one I liked was Levi Strauss, when a [very good looking boy dives into a pool](#). And [everyone thinks he looks marvellous](#). And there's a great tune they play — 'Mad about the boy' (p. 159)

4.4. Summary of Statistically Significant Findings

Table 25 summarizes significant findings of the present study. All significantly higher representations have been tick marked.

Table 25 – Summary of Statistically Significant Results

			1 st Ed		3 rd Ed	
			F	M	F	M
Images	Relative Power Position	Overall		✓		
		SPFA		✓		
		Expert				
		Named Images				
		Unnamed Images		✓		
Text	Representation in	Overall		✓		✓
		Epigraphs		✓		✓
		Authentic News Articles				
		Professional Roles		✓		✓
		Senior Titles		✓		✓
Speech	Overall	Number of Speakers		✓		✓
		Speaker Frequency in F-M Tracks				
		Speech Initiation in F-M Tracks		✓		
		Number of Single Gender Tracks		✓		✓
	Word Count in	Single Sex Tracks		✓		
		M-F Tracks				
		Overall Word Count				
	Turn Length	All Tracks				
		F-M Tracks	✓		✓	
	Speech Traits	Question Tags				
Hesitation Markers						
Ellipses						

Chapter 5 – Discussion

This section outlines how the present study adds to the understanding of gender representation in textbooks by providing insights into longitudinal changes that the sample had undergone such as more improvement at superficial level, reduction in the intensity of stereotypes and impact of bias in real-world on textual representation of gender. This section also discusses the findings critically in relation to the research questions and compares them with conclusions drawn from studies summarized in literature review.

5.1. Longitudinal Improvement at Surface Level

As given in chapter 4 (see table 25), M significantly dominated F at 11 out of 22 main and sub levels and F dominated M at only one level in 1stEd. In 3rdEd, M dominated F in only six out of 22 levels and F continued to surpass M at one level. The reduction of M dominance from 11 levels in 1stEd to 6 levels in 3rdEd indicates longitudinal improvement in the equality of gender representation. A noteworthy finding of the study is that the gap between F and M visibility at image level, which was significant in three levels out of five in 1stEd, became insignificant in all the levels in 3rdEd. The gap between F and M representation remained significant in all the four categories of textual parts. In speech, significant bias in favour of M at four levels in 3rdEd got reduced and was found at two levels in 1stEd. It has been noted that images are more easily perceptible than other parts of textbooks which require closer scrutiny for detection of gender bias (Brugeilles & Cromer's, 2009). Therefore, maximum improvement at the level of images and none or less at the levels of text and speech could lead to the conclusion that longitudinal improvement in the sample happened more at surface level than at the deeper levels. This brings to mind Blumberg's (2007: 4) conclusion that "gender bias in textbooks turns out to be one of the best camouflaged and hardest to budge rocks in the road to gender equality in education".

Continued under-representation of F in text and speech at several levels such as 'professional roles' including 'senior roles', 'authors of epigraphs', 'number of speakers', 'number of single gender tracks' and in 'overall textual representation' adds to Blumberg's (2007: 33)

finding about “under-representation of females” in textbooks “in strikingly similar form, on every continent”.

5.2. Reduction in Intensity of Stereotyping

Despite several guidelines about elimination of gender-stereotypical roles (Blumberg, 2007; Brugeilles & Cromer, 2009; Florent et al., 1991; Klein, 1985; LSA Guidelines for Non-Sexist Usage, 1996; Stromquist, 1997), instances of stereotypical representations of F and M were found in both the editions. However, stereotypical depictions of M and F appear to be less intense in 3rdEd as compared to those in 1stEd. For example, images of M tycoon or athlete in 3rdEd recall the stereotype of M power, but these representations appear less intense than the stereotype of macho M presented through the image of M cowboy with cigarette, lighter and rope in 1stEd. Likewise, the anxious F traveller in 3rdEd reminds one of the damsel in distress stereotype. However, the stereotype of F as object of gaze in 1stEd depicted by two F portrayals, one wearing revealing clothes in a soft drink advertisement and another changing her clothes in a train full of people, appear more extreme. Objectification of F gets further intensified in 1stEd through descriptions of M who “pu[t] pressure” on F junior colleague “to have a personal relationship” and became “aggressive and unpleasant” when she “showed no interest” (p. 84). Similar instances of objectification of F are not found in 3rdEd. Also, complete absence of F ‘SPFA’ in 1stEd and inclusion of one F ‘SPFA’ in 3rdEd edition indicates a step in the direction of introducing F in the position of importance and power which has been allocated stereotypically to M. Furthermore, the negative stereotypical representation of M in 1stEd as aggressive and abusive, who shoots an aircraft’s tyre or abuses an F colleague for not showing interest in having a personal relationship with him, was not found in 3rdEd.

Regarding gender-stereotypical roles, the 1stEd on one hand has the collage of world leaders with 6 M and 3 F which suggests that M are leaders more frequently than F, and on the other hand has an image of a group of cleaners with 6 F and only 2 M suggesting that F are more suitable to do domestic chores. Further, 1stEd has images of five travellers, four of whom are M, whereas, both the images of flight attendants are of F. Thus, though 1stEd includes images of F and M in gender-stereotypical roles, similar images were not found in 3rdEd.

Regarding gender-stereotyped representations in textbooks, Blumberg, (2007) made a recommendation about measuring the “relative intensity” of bias in textbooks as the intensity of stereotypes might be “diminishing faster than the prevalence of sexist learning materials.” Though the intensity of stereotypes appear to have diminished from 1stEd to 3rdEd, in light of Lafky, Duffy & Berkowitz’s (1996, p. 379) argument that even “brief exposure” to stereotypical depictions could reinforce “stereotypes about gender roles”, it could be said that stereotypical representations in 3rdEd though milder need further improvement.

5.3. Reflections of Real-World Prejudices

One possible reason for this persistence of gender bias in business textbooks could be the presence of gender bias in the real business world where M dominate F (Cox, 2017; Robinson & Dechant, 1997; “Gender Imbalance”, 2016). Competitiveness and pursuit of money have commonly been described as traits which are not only prescribed stereotypically for M but are also considered somewhat undesirable in F (Gneezy, Niederle & Rustichini, 2003; Niederle & Vesterlund, 2007 and Prentice & Carranza, 2002). Interestingly, larger bias was found in chapters “Competition” and “Money” seems to corroborate the above assumption. This is similar to the conclusion of Lewandowski’s (2014) study which found that financial status of M was described nine times more than that of F in a corpus.

Table 26 presents significant differences in F and M representation in individual chapters at various levels.

Table 26 – Summary of Statistically Significant Differences in F and M Representation in Chapters

S. No.	Chapter title	1 st Ed						3 rd Ed					
		No. of Images	Ref. in Text	No. of Speakers	Single Gender Tracks	Speech Initiation	Speaker Freq. M-F Tracks	No. of Images	Ref. in Text	No. of Speakers	Single Gender Tracks	Speech Initiation	Speaker Freq. M-F Tracks
1	Brands							✓					
2	Travel												
3	Change												
4	Organization												
5	Advertising							✓	✓				
6	Money	✓	✓					✓	✓				
7	Cultures												
8	Employment / HR		✓	✓									
9	Trade / IM							✓					
10	Ethics												
11	Leadership												
12	Competition	✓		✓				✓	✓	✓	✓		

It could be seen that in 3rdEd, M dominate F at four levels in “Competition” and at three levels in “Money”. Further, significant differences in chapters “Competition” and “Money” support Adel and Enayat’s (2016, p. 111) claim with reference to English for Specific Purposes textbooks that “women are more likely to be discriminated against in contexts and fields where men are considered to be the dominant party”.

Similarly, in 1stEd maximum number of stereotypical images related to objectification of F were found in “Advertising”. For example, an F in revealing dress with curlers in hair and spoon in mouth and another changing her clothes in a train in front of everyone. This objectification of F in “Advertising” seems to reflect the status quo of the real-world of advertising where F are usually presented in decorative roles (Plakoyiannaki and Zotos’s, 2009).

Interestingly, all three senior roles in “Employment/ HR” in 3rdEd were held by F, and the possibility of preference for F in this field in the real-world needs further exploration.

Thus, it appears that there is a symbiotic relationship between textbooks and the real-world: textbooks are influenced by the status quo of the real-world and in turn influence the real-world by legitimizing social structures (Brugeilles and Cromer, 2009, p. 42). In this case, it should be the responsibility of textbook developers and publishers to avoid reflecting the biases of the real-world and to use textbooks as agents of “social reform” by “counter[ing] the prejudices which students bring with them into the classroom” (Barton and Sakwa, 2012, p. 187) and “promot[ing] the kind of social situation to which our communities aspire” (Lee and Collins, 2010, p. 134).

5.4. Answers to Research Questions

In light of the above arguments, the findings of the present study with regards to the three research questions, are discussed below.

5.4.1. Is the representation of F and M different in images? Has the difference increased or decreased over time?

Significantly higher representation of M in the total number of images in 1stEd concurs with findings by Ansari and Babaii (2003), Barton and Sakwa (2012) and Aydınoğlu (2014). Though in 3rdEd the differences between M and F representation were insignificant at all the levels suggesting considerable longitudinal change, the ratios of F to M were still unequal with M dominating F in three levels out of four. It is noteworthy that F to M ratio in both ‘SPFA’ and ‘expert’ categories was 1:3 even in 3rdEd. More bias against F was found at higher levels of power, and this finding corroborates previous observations that gender discrimination increases with levels of power in business (“Gender Imbalance”, 2016). ‘SPFA’ were usually well-known and successful business personalities whose stories served as examples for others to imitate. These people could thus be categorized as “hero” characters, who Brugeilles and Cromer (2009, p. 30) suggested should be counted separately in textbooks. It could also be said that excessive underrepresentation of F as ‘SPFA’ and ‘experts’ undermines the contribution of F to economic growth of countries.

5.4.2. Is the representation of F and M different in the textual parts of the chapters? Has the difference increased or decreased over time?

Overall textual representation of the gender was found to be significantly biased in favour of M in both editions which concurs with conclusions of studies reported in the literature review (Adel & Enayat, 2016; Ansari & Babaii, 2003; Barton & Sakwa, 2012; Hartman & Judd, 1978; Otlowski, 2003; Porreca, 1984). Regarding longitudinal change, not only was improvement absent in these textual parts, but bias was found to increase at chapter level with significantly higher M presence in three chapters in 1stEd and in seven chapters in 3rdEd.

All the epigraphs which served as opening lines for chapters were authored by M in 3rdEd. As with images, a greater gender divide was also found in this more privileged and authorial role than in other texts where the author did not hold a prestige position, such as ‘authentic news articles’ appearing in the middle of chapters. Similarly, in both the editions, the gap in F and M visibility was larger in ‘senior professional roles’ as compared to overall ‘professional roles’, a finding which resonates with the conclusions drawn by Ansari and Babaii (2003), Aydınoğlu (2014), Barton and Sakwa (2012), Lewandowski, (2014) with regards to gender representation in textbooks. According to the *Equal Opportunity Commission of Hong Kong’s* report (2001, p. 60), which reviewed literature on gender bias in textbooks, “women lose out to men on both horizontal (the range of occupations) and vertical (the status of the profession) dimensions of occupational roles”. As discussed earlier, these findings could be attributed to discrimination against F at senior management level in the real-world as found by several researchers (Babcock et al., 2003; “Gender Imbalance”, 2016; Robinson & Dechant, 1997). According to Bloomberg’s (2018) *Gender-Equality Index Survey*, which studied 104 companies across all work sectors, F “had a 33.5% increase in executive level positions from fiscal year 2014 to 2016”, but still hold only “26% of senior leadership positions and 19% of executive officer roles”. However, since textbooks can affect girls’ “academic achievement and choices” (Brugeilles & Cromer, 2009, p. 27), improving F depiction in business textbooks, particularly in senior executive roles, might assist in

breaking the status quo and in creating a virtuous circle between textbooks and the world of business.

Surprisingly, with respect to unequal depiction of F and M in textual parts and professional roles the findings of the present study are unlike Bataineh's (2017), who studied pre-intermediate level *Market Leader: Business English Practice File* (2012) and found that F and M were almost equally visible in textual parts and F outnumbered M in occupational roles. These differences in Bataineh's (2017) findings and those of the present study could have resulted from one or more of the following factors:

- 1) Both the studies looked at different books from *Market Leader* series.
- 2) The book studied by Bataineh (2017) was published 12 years after the publication of 1stEd and two years after the publication of 3rdEd examined in the present study. Thus, the difference could be a result of longitudinal improvement in the *Market Leader* series as found in the present study.
- 3) Bataineh's (2017) study did not test the statistical significance of the differences which limited the comparability of his findings with those of the present study.

5.4.3. Is the speech of F and M different? Has the difference increased or decreased over time?

Speech showed significant longitudinal improvement at two levels namely 'speech initiation in F-M tracks' and 'word count in single gender tracks', and continuation of bias at three which were 'number of speakers', 'single gender tracks' and mean turn length in F-M tracks. Out of the three levels in which bias was found in 3rdEd, two were in favour of M and one in favour of F.

Absence of longitudinal improvement in the ratios of F to M presence in total number of speakers and total number of single sex tracks shows that the audio files in both editions are densely populated with M voices. Moreover, a significantly higher number of M-M tracks than F-F tracks might imply that though M can meet, discuss and make decisions among themselves in business contexts, F usually do not do so without M's involvement. In 1stEd,

not only were M more numerous than F, and M-M tracks more numerous than F-F tracks but even the mean number of words in M-M tracks were significantly more than those in F-F tracks, highlighting excessive focus on M speech at the cost of F speech. However, improved ratio of average F to M word count in single gender tracks in 3rdEd signifies an effort towards increasing the amount of space given to F.

An examination of a more gender balanced sample of F-M conversations also showed a longitudinal increase in F initiated F-M dialogues pointing towards improvement in F's position in mixed gender discussions. Interesting findings were revealed regarding mean turn length of F and M speakers in F-M tracks since this was the only area in which F surpassed M. However, one reason behind longer F turns in F-M tracks could be that interviewers were mostly M. These M interviewers usually asked brief questions and their high frequency could have brought down mean turn length of overall M speech.

Another interesting finding in speech was the absence of significance in the use of 'question tags', 'ellipses' and 'hesitation markers' by F and M, which was calculated per 100 words spoken by both the groups. The absence of difference in speech traits calls for a re-evaluation of Lakoff's (1973, 2004, 2017) theory about the differences between F and M speech in contemporary business contexts. A likely explanation of this could be that in the present multicultural business contexts, question tags, ellipses and hesitation markers, might be considered desirable pragmatic features of both F and M's speech as they might be suggestive of flexibility and openness instead of lack of knowledge or of confidence as suggested by Lakoff (1973, 2004, 2017) herself.

Chapter 6 - Conclusion

The study investigated the representation of F and M in images, textual parts and speech of 1stEd and 3rdEd of a business English coursebook. It also explored the presence and nature of longitudinal change in gender representation in the textbooks over a period of ten years. The study found that regardless of several guidelines advocating gender equality in textbooks, F are underrepresented even in the latest edition of Intermediate Market Leader Business English Coursebook, particularly at higher positions of power. Though there has been some improvement at surface level such as in images and in the intensity of gender stereotypes, much remains to be done to meet the standards of gender parity proposed in guidelines such as those published by UNESCO (Brugeilles & Cromer, 2009) and Women in EFL (Florent, Fuller, Pugsley, Walter & Young, 1991).

Although it could be argued that unequal representation of F and M in the textbooks reflects gender bias in the real-world, this scenario only warrants an extra effort by textbook developers to improve the status quo by including role models for F to draw inspiration from and for M to learn patterns of thought and behaviour which are consistent with current and forthcoming societal changes. In this regard, policy makers should perhaps encourage textbook developers to include an inventory of F and M characters with their frequency counts and roles, in teachers' resources to assist the teachers in evaluating the suitability of textbooks for pedagogical purposes. Also, there is a need for an independent certifying body which can rate textbooks for gender equality.

6.1. Recommendations for Improvement in Future Editions of Market Leader

With regards to Intermediate Market Leader Business English Coursebook, a more balanced representation of F and M in future editions should involve ensuring visibility of F at important positions such as writers of epigraphs for chapters and subjects of profile feature articles. Other suggestions for improvement include the following:

- Including more F as experts giving opinion
- Showing more F in professional roles, especially the senior executive ones
- Including more F in chapters related to M dominated fields such as “Competition” and “Money”

- Showing both F and M in gender stereotypical situations and performing gendered activities
- Including more images of F leaders in “Leadership”
- Placing F in subject positions with strong verbs in clauses
- Including more F speakers in audio tracks
- Including more F-F tracks

6.2. Pedagogical Implications

Till the textbooks remain unchanged, teachers can play an important role in undermining biased gender representations in textbooks. To begin with, teachers should carefully inspect textbooks and choose those which have minimum gender bias (Holmvist & Gjorup, 2007). Since creation of a checklist which is relevant in all contexts might not be possible, teachers can prepare their own list based on equality and non-stereotypical representation of F and M. Thus, methods of textbooks analysis could be made a part of teacher training to enable teachers to choose materials skilfully.

Furthermore, if a certain textbook with biased gender representation is already in use at an institute and it is impracticable to change the curriculum, teachers should delegitimize those representations by discussing them critically with the learners and sensitizing them for the social impact of such depictions (Ansari & Babaii, 2003; Fairclough, 1992; Giaschi, 2000; Renner, 1997). For example, overrepresentation of M characters in certain roles could be critically examined and ideas about suitability of F in those roles in different socio-cultural contexts explored. In this regard, Renner (1997) has suggested examining whether characters’ actions, attitudes and thought processes are related to their being F or M and exploring whether F and M role reversals would appear appropriate in the given situations.

Some researchers went a step further and recommended teachers to adapt or censor the content of textbooks to avoid dealing with discriminatory or stereotypical representations (Barton & Sakwa, 2012; Gray, 2000; Rifkin, 1998; Sunderland, Cowley, Abdul- Raheem, Leontazakou & Shattuk, 2001). For example, teachers can replace M names or characters with F ones particularly while discussing gendered roles such as those related to leadership or

subordinate positions. Similar, while role playing or reading out loud, teachers can make girls play the part of boys and vice versa. Moreover, it could be argued that instead of censoring or adapting the materials, exposing and sensitizing the learners about the existence of bias might be more beneficial for them in real-world scenarios.

6.3. Limitations of the Present Study

While both editions of the book were analysed in detail at multiple levels, the findings could not be generalized to other business English textbooks, especially due to partially inductive nature of the framework used for analysis.

Development of the framework for analysis involved understanding of various forms of gender bias, listing pre-established categories of gender discrimination in literature, selecting codes which were applicable to the sample and inductively deriving some of the codes based on examination of the texts under scrutiny. Also, it could be argued that deriving of codes such as ‘writers of epigraphs’ and ‘subjects of profile feature articles’ inductively along with deciding the criterion for segregation of ‘senior titles’ from all ‘professional roles’ might have called into play the sensibility of the researcher (Dörnyei, 2007).

The analysis was based on statistical assessment of significance of difference in images, text and speech related to F and M, and qualitative scrutiny of relative importance of F and M representations including stereotypical portrayals. However, other methods of analysis such as critical discourse analysis or use of feminist theory might have revealed different results.

Though manual counting of textbook features was carefully and repeatedly done, the possibility of minor errors could not be disproved. Similarly, utmost care was taken to correctly identify the gender of characters from names, pronouns, appearances and sound of voice and ambiguous cases including unidentifiable silhouettes, cartoons, voices and names were excluded from analysis. However, this form of identification is not unsusceptible to challenge.

Finally, one of the biggest shortcomings of the study is the absence of information about how these books are used. Since the present study does neither informs one about the attitudes of

the teachers towards the textbooks nor about the effect of gender representation on students, it could be argued that the assumptions about the possible impact of textbooks on students could not be generalized (Harwood, 2014).

6.4. Further Research

Longitudinal studies which use a bigger sample of business English textbooks might reveal more reliable findings about changes in textbooks vis a vis changes in gender relationships in the business world. ESP textbooks related to other gender-stereotyped fields such as technology and nursing where F and M are the most underrepresented respectively, both as students and as employees, could also reveal important findings.

Research aimed at developing a standard assessment framework which could be used by publishers and teachers alike for evaluating gender bias in textbooks could play a vital role in promoting gender equality in textbooks.

Finally, to overcome the limitations of the present study, research on how discriminatory texts are used/adapted in classrooms by teachers and learners could provide important insights. Also, research that measures the impact of stereotypical and biased representations of F and M in textbooks on F and M learners might also be useful. Quasi-experimental designs involving measuring the impact of eliminating gender bias in textbooks longitudinally or comparing the results with those of a control group using surveys or semi-structured interviews might also produce findings which can inform policy makers and textbook developers. Similar research on the impact of gender representations in teacher training materials could also be an interesting field of study.

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Appendix A

Textual Parts - Gender of Authors of Epigraphs

S. No.	Chapter Title	1 st Ed			3 rd Ed		
		Writer	F	M	Writer	F	M
1	Brands	P. Kotler		✓	Walter Landor		✓
2	Travel	Anne Morrow Lindbergh	✓		Bob Hope		✓
3	Change	Heraclitus of Ephesus		✓	Giuseppe Tomansi di Lampedusa		✓
4	Organization	-			Peter Drucker		✓
5	Advertising	Marshall McLuhan		✓	William Bernbach		✓
6	Money	Cary Grant		✓	Steven Wright		✓
7	Cultures	Ludwig Wittgenstein		✓	Clint Borgen		✓
8	Employment / HR	Henry Ford		✓	Elbert Hubbard		✓
9	Trade/ IM	Woodrow Wyatt		✓	Robert Louis Stevenson		✓
10	Ethics	Groucho Marx		✓	Elbert Hubbard		✓
11	Leadership	Michael Caine		✓	Kenneth Blanchard		✓
12	Competition	David Sarnoff		✓	Robert Holmes a Court		✓
TOTAL			1	10		-	12

Appendix B

Textual Parts - Gender of Writers of Authentic News Article

S. No.	Chapter Title	1 st Ed			3 rd Ed		
		Writer	F	M	Writer	F	M
1	Brands	Alice Rawthorn	✓		Vanessa Friedman	✓	
2	Travel	-			Jill James	✓	
3	Change	Janet Lowe	✓		Richard Milne		✓
4	Organization	Alan Tillier		✓	Sarah Murray	✓	
5	Advertising	-			Andrew Edgecliff-Johnson		✓
6	Money	-			-		
7	Cultures	Ian Hamilton Fazey		✓	-		
8	Employment / HR	Adrian Furham		✓	-		
9	Trade/ IM	-			Andrea Hopkins	✓	
		-			Xin Zhiming		✓
10	Ethics	Roger Boyes		✓	Clinton D Korver		✓
11	Leadership	-			Jenny Wiggins	✓	
		-			Eric Schmidt		✓
12	Competition	Michael Porter		✓	James Quinn		✓
TOTAL			2	5		5	6

Appendix C

Textual Parts - Gender Representation in Professional Roles (1stEd)

S. No.	Chapter Title	F			M				
		Professional Role	Senior Title	No.	Professional role	Senior Title	No.		
1	Brands	Marketing specialist	X	1	Memo receiver	X	1		
		Memo writer	X	1	Model	X	1		
					Business student	X	1		
					Managing director	✓	1		
2	Travel	Sales director	✓	1	Frequent business flyer	X	2		
		Fashion buyer	X	1	Sales manager	X	1		
		In-flight service manager	X	1	Director	✓	1		
					Customer service personnel	X	1		
3	Change	Head of department	✓	2	Manager	X	1		
		Member of the staff	X	6	President of the US	✓	2		
					Management consultant	X	1		
					Chairman	✓	1		
					Head of department	✓	1		
					Chief executives	✓	2		
4	Organization	Member of the staff	X	4	Member of the staff	X	4		
		Owner of companies	X	2	Management guru	X	1		
		Manager	X	3	Project manager	X	1		
					Finance director	✓	1		
					Owner of firm	X	1		
					General manager	✓	1		
5	Advertising				Manager	X	3		
					Marketing manager	X	1		
6	Money				Famous actor	X	1		
		Financial director	✓	1	Prince	X	1		
					Artist	X	1		
					President	✓	1		
					Sales director	✓	1		
					Executive director	✓	1		
7	Cultures				Governor of company	✓	1		
		External affairs manager	X	1	Chairman	✓	1		
		Designer	X	1	Chief executive	✓	3		
							Head	✓	1
							Manager	X	1

Appendix C (continued)

Textual Parts - Gender Representation in Professional Roles (1stEd)

S. No.	Chapter Title	F			M		
		Professional Role	Senior Title	No.	Professional Role	Senior Title	No.
8	Employment / HR	Employee - Advertising	X	1	Sales manager	X	1
					Lorry driver	X	2
					Marketing director	✓	1
					Fitness instructor	X	1
9	Trade/ IM	Bank employee	X	1	Expert	X	1
		Manager	X	1	Sales director	✓	1
		Buyer for a company	X	1	Executive vice-president	✓	1
					Writer	X	2
					Owner of a company	X	2
10	Ethics	Employee	X	3	Employee	X	1
		Personal assistant	X	1	Contractor	X	1
		Marketing director	✓	1	Chairman	✓	2
					Associate professor	X	1
					CEO	✓	1
					General manager	✓	1
					Personal assistant	X	1
					Senior manager	X	1
11	Leadership	Chief executive	✓	2	CEO	✓	3
					Chief executive	✓	2
12	Competition	Super model	X	2	Vice-president	✓	1
					Sales manager	X	1
					Tennis player	X	1
TOTAL			7	34		32	72

Appendix D

Textual Parts - Gender Representation in Professional Roles (3rdEd)

S. No.	Chapter Title	F			M		
		Professional Role	Senior Title	No.	Professional Role	Senior Title	No.
1	Brands	Designer	X	1	Managing director	✓	1
		Marketing executive	X	1	Chief executive	✓	1
					Marketing executive	X	3
					Main shareholder	X	1
					Sponsor	X	1
					Head of department	✓	1
					Designer	X	1
2	Travel	Sales director	✓	1	Sales director	✓	1
		Fashion buyer	X	1	Chairman and chief executive	✓	1
3	Change	Head of department	✓	1	Head and chief executive	✓	1
		Manager	X	1	Manager	X	2
		Director	✓	1	Chairman and chief executive	✓	1
					Vice-president	✓	1
4	Organization				Manager	X	1
					Vice-presidents	✓	2
5	Advertising				Sales director	✓	1
					Marketing manager	X	1
					Head of department	✓	1
6	Money				Investment director	✓	1
					Analyst	X	2
					Former head	✓	1
					Former president	✓	1
					Entrepreneur	X	1
7	Cultures	Client	X	1	Marketing director	✓	1
					Head of department	✓	1
					Advisor	X	1

Appendix D (continued)

Textual Parts - Gender Representation in Professional Roles (3rdEd)

S. No.	Chapter Title	F			M		
		Professional Role	Senior Title	No.	Professional Role	Senior Title	No.
8	Employment / HR	General director	✓	1	English teacher	×	1
		Director	✓	1	gym instructor	×	1
		Job applicant	×	1	Employee - HR Department	×	1
		Sports organiser	×	1			
		General manager	✓	1			
9	Trade/ IM	Buyer - depart. store	×	1	Expert	×	1
					Executive director	✓	1
					Chairman	✓	1
					Sales director	✓	1
					Writer	×	1
					Business partner	×	1
					President	✓	1
10	Ethics	Sales manager	×	1	Director	✓	3
		Employee	×	1	Salesman		3
11	Leadership	Managing director	✓	1	Chairman	✓	2
					Chief executive	✓	3
					CEO	✓	1
12	Competition				Chief executive	✓	1
					Founder and chairman	✓	1
					Media relations manager	×	1
TOTAL			7	17		32	57

Appendix E

Subject/Object Positions and Verbs in Text (1stEd)

- Annie (F Subject) interviewed him (p. 42)
- Daria Bressan (F Subject) reports to Manuel Ortega. (p.68)
- Sonia Hunt (F Subject) says that Peter Martin is always interfering in their office (p. 68)
- Peter Bingham (M Subject) is in meeting with [...] Kate Simmons. (p. 73)
- Valerie Harper (F Subject) is personal assistant to Carl Thomason. (p. 84)
- She (F Subject) has been having difficulties working with Carl. (p. 84)
- Joan Knight (F subject) sent Nikos a message. (p. 85)
- Bella Ford (F Subject) [...] is negotiating with Pierre Hemard. (p. 50)
- Mr Thomson (M Subject) has been putting pressure on me (F) to [...]. (p.84)
- When I (F) showed no interest, he (M Subject) became aggressive and unpleasant. (p. 84)
- He (M Subject) gave me (F) too much work, set impossible deadlines, criticised me (F) in front of the other staff. (p. 84)
- Mr Thomson (M Subject) gives order to me rather than polite instructions. (p. 84)
- He (M Subject) never encourages me (F) or praises me. (p. 84)
- He (M Subject) has frequent long lunches with female staff. (p. 84)
- He (M Subject) returns to the office late in the afternoon, then expects me (F) to work overtime [...]. (p. 84)
- He (M subject) overheard conversation between female employees. (p. 85)

Appendix F

Subject/Object Positions and Verbs in Text (3rdEd)

- “He (M Subject) [...] communicates with [...] jewellery designer Victoire de Castellane”. (p. 9)
- “He (M Subject) always travels with his wife, who worked with him until recently”. (p. 17)
- “What expression does Frank (M Subject) use to introduce Mary?” (p. 41)
- How could Nathalie (F Subject) be helpful to Christoph in his work? (p. 41)
- She (F Subject) asks Enrique [...] for advice [...] (p. 73)
- My husband (M Subject) always respects my opinions. (p. 76)
- Naoko Nakamura (F Subject) [...] is negotiating with Li Bai [...]. (p. 86)

Appendix G

Speech Track Data (1stEd)

Chapter	Track No.	No. of Speakers		Speech Initiation		No of Turns		Word Count		Speech Traits					
										Question Tags		Hesitation Markers		Ellipses	
		M	F	M	F	M	F	M	F	M	F	M	F		
Brands	2.1	1	1	1	0	1	1	9	56	0	0	0	0	0	0
	2.2	0	1	0	1	0	1	0	54	0	0	0	0	0	0
	2.3	0	1	0	1	0	1	0	53	0	0	0	0	0	0
Travel	3.1	0	3	0	1	0	14	0	152	0	0	0	0	0	0
	3.2	0	2	0	1	0	11	0	208	0	0	0	0	0	0
	3.3	2	0	1	0	4	0	328	0	0	0	0	0	0	0
	3.4	2	0	1	0	2	0	127	0	0	0	0	0	0	0
Change	11.1	2	0	1	0	2	0	102	0	0	0	0	0	0	0
	11.2	2	0	1	0	2	0	339	0	0	0	0	0	0	0
	11.3	3	1	1	0	15	3	253	81	1	0	1	1	1	0
	11.4	1	1	0	1	3	4	130	77	0	0	0	0	0	0
Organisation	8.1	2	0	1	0	4	0	257	0	0	0	0	0	0	0
	8.2	2	0	1	0	6	0	477	0	0	0	1	0	4	0
Advertising	4.1	2	3	1	0	2	3	70	177	0	0	0	0	0	0
	4.2	2	0	1	0	8	0	140	0	0	0	2	0	1	0
	4.3	2	0	1	0	2	0	413	0	1	0	0	0	0	0
	4.4	1	1	1	0	1	1	238	69	0	0	0	0	0	0
Money	9.1	0	1	1	0	0	1	0	170	0	0	0	0	0	0
	9.2	2	1	1	0	4	2	156	75	0	0	0	0	0	0
	9.3	2	0	1	0	2	0	161	0	0	0	0	0	0	0
	9.4	2	0	1	0	4	0	243	0	0	0	0	0	0	0
Cultures	13.1	1	1	1	0	2	2	25	313	0	0	0	0	0	1
	13.2	0	1	0	1	0	1	0	121	0	0	0	0	0	0

Appendix G (continued)

Speech Track Data (1stEd)

Chapter	Track No.	No. of Speakers		Speech Initiation		No of Turns		Word Count		Speech Traits					
										Question Tags		Hesitation Markers		Ellipses	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F
Employment / HR	5.1	2	0	1	0	2	0	247	0	0	0	0	0	0	0
	5.2	2	0	1	0	2	0	181	0	0	0	0	0	0	0
	5.3	2	1	1	0	10	2	180	45	0	0	1	0	4	1
	5.4	1	1	1	0	5	4	75	128	0	0	1	1	0	1
	5.5	2	0	1	0	10	0	362	0	1	0	2	0	1	0
	5.6	2	0	1	0	6	0	234	0	0	0	2	0	2	0
	5.7	1	1	0	1	6	5	75	133	2	0	3	0	2	1
Trade / IM	6.1	1	1	0	1	5	6	84	89	0	0	0	0	0	0
	6.2	2	0	1	0	2	0	216	0	0	0	0	0	0	0
	6.3	2	0	1	0	2	0	438	0	0	0	0	0	0	0
Ethics	10.1	1	1	1	0	2	2	24	214	0	0	0	1	0	0
	10.2	1	1	1	0	3	3	48	175	0	0	0	0	0	0
	10.3	1	1	0	1	5	5	40	175	1	0	1	0	0	0
	10.4	1	1	1	0	4	5	147	96	1	0	0	2	1	3
	10.5	2	0	1	0	6	0	86	0	1	0	0	0	1	0
	10.6	0	2	0	1	0	7	0	115	0	0	0	1	0	0
Leadership	14.1	1	1	1	0	5	5	63	389	0	0	0	0	0	0
Competition	15.1	2	0	1	0	2	0	232	0	0	0	0	0	0	0
	15.2	2	0	1	0	2	0	158	0	0	0	0	0	0	0
	15.3	2	0	1	0	2	0	196	0	0	0	0	0	0	0

Appendix H

Speech Track Data (3rdEd)

CD #	Chapter	Track No.	No. of Speakers		Speech Initiation		No of Turns		Word Count		Speech Traits					
			M	F	M	F	M	F	M	F	Question Tags		Hesitation Markers		Ellipses	
											M	F	M	F	M	F
ONE	Brands	1	1	1	0	1	2	2	77	134	0	0	0	0	0	0
		2	2	0	1	0	2	0	160	0	0	0	6	0	0	0
		3	1	0	1	0	1	0	197	0	0	0	1	0	0	0
		4	2	0	1	0	2	0	318	0	0	0	12	0	0	0
		5	2	2	1	0	5	2	192	53	0	1	0	1	0	1
		6	2	2	1	0	7	3	221	142	0	0	1	0	0	1
	Travel	7	2	1	1	0	2	1	193	63	0	0	0	0	0	0
		8	0	1	0	0	0	1	0	132	0	0	0	0	0	0
		9	2	0	1	0	2	0	139	0	0	0	10	0	0	0
		10	2	0	1	0	2	0	121	0	0	0	7	0	0	0
		11	2	0	1	0	2	0	147	0	0	0	9	0	0	0
		12	0	3	0	1	0	14	0	154	0	0	0	1	0	0
	Change	13	0	2	0	1	0	13	0	189	0	0	0	1	0	0
		14	1	1	1	0	1	1	10	83	0	0	0	0	0	0
		15	1	1	1	0	1	1	13	138	0	0	0	0	0	0
		16	1	1	1	0	1	1	15	96	0	0	0	0	0	0
		17	2	2	0	1	5	10	139	334	0	0	0	1	1	2
		18	1	1	0	1	7	7	169	98	0	1	0	1	1	1
	Organisation	19	4	4	1	0	4	4	50	55	0	0	0	0	0	0
		20	2	1	1	0	2	1	112	53	0	0	0	0	0	0
		21	0	1	1	0	0	1	0	12	0	0	0	0	0	0
		22	2	0	1	0	2	0	199	0	0	0	0	0	0	0
		23	1	0	0	0	1	0	154	0	0	0	0	0	0	0
		24	2	0	1	0	2	0	197	0	0	0	2	0	0	0
		25	1	1	0	1	5	5	57	82	0	1	1	0	2	0
		26	1	1	1	0	5	4	90	44	0	0	0	0	0	0
		27	2	1	1	0	4	1	98	5	0	0	0	0	0	0
		28	3	1	1	0	5	2	283	101	2	1	0	0	0	0
	Advertising	29	2	0	1	0	2	0	201	0	0	0	0	0	0	0
		30	2	0	1	0	2	0	209	0	0	0	0	0	1	0
		31	2	0	1	0	2	0	218	0	0	0	2	0	0	0
		32	2	0	1	0	2	0	189	0	0	0	0	0	2	0
	Money	33	1	0	1	0	1	0	242	0	0	0	0	0	1	0
		34	0	1	0	1	0	1	0	167	0	0	0	0	0	2
		35	2	0	1	0	2	0	76	0	0	0	2	0	0	0
		36	2	0	1	0	2	0	367	0	0	0	2	0	5	0
		37	2	0	1	0	2	0	266	0	0	0	0	0	3	0
		38	1	0	1	0	1	0	172	0	0	0	0	0	0	0
		39	1	0	1	0	1	0	90	0	0	0	0	0	0	0
		40	3	1	1	0	12	4	297	145	0	0	2	0	2	1

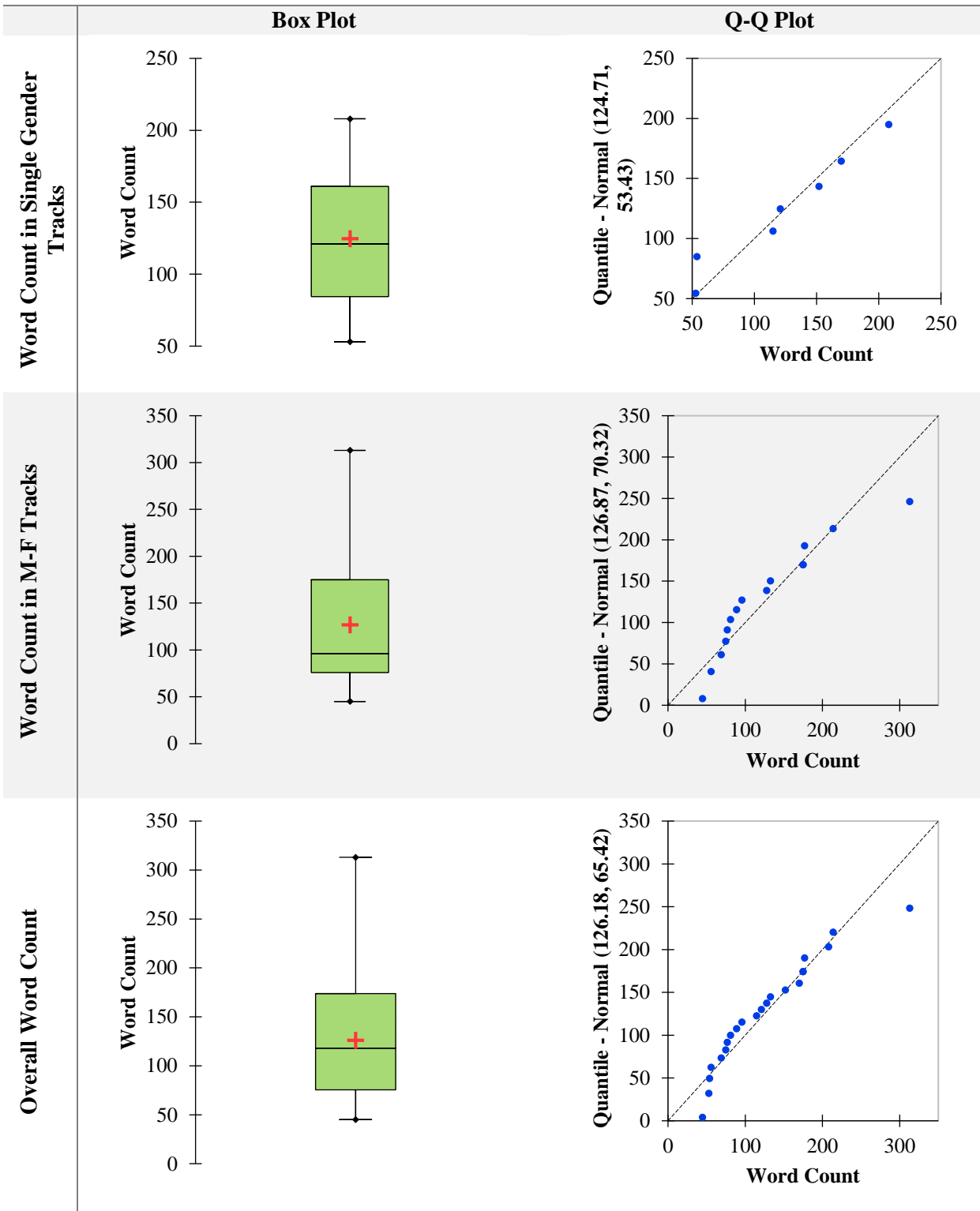
Appendix H (continued)

Speech Track Data (3rdEd)

CD #	Chapter	Track No	No. of Speakers		Speech Initiation		No of Turns		Word Count		Speech Traits					
			M	F	M	F	M	F	M	F	Question Tags		Hesitation Markers		Ellipses	
											M	F	M	F	M	F
ONE	Cultures	41	2	0	1	0	2	0	281	0	0	0	6	0	1	0
		42	2	0	1	0	2	0	166	0	0	0	4	0	0	0
		43	1	0	1	0	1	0	261	0	0	0	8	0	0	0
		44	4	4	0	1	4	4	104	88	0	0	0	0	0	0
		45	1	1	0	1	6	6	15	51	0	1	0	0	0	1
		1	5	5	1	0	5	5	43	69	0	0	0	0	0	0
	Employment / HR	2	1	1	0	1	10	10	89	55	0	0	0	0	0	0
		3	1	1	0	1	6	7	304	152	0	1	0	0	0	1
		4	0	1	1	0	0	1	0	146	0	0	0	0	0	0
		5	1	0	1	0	1	0	10	0	0	0	0	0	0	0
		6	1	1	1	0	1	1	9	215	0	0	0	3	0	0
		7	1	1	1	0	1	1	10	177	0	0	0	0	0	1
		8	1	1	1	0	1	1	11	202	0	0	0	1	0	1
9		1	1	0	1	9	10	151	208	0	0	0	0	0	1	
10		2	0	1	0	8	0	319	0	0	0	2	0	2	0	
11		2	0	1	0	6	0	265	0	0	0	0	0	2	0	
12		1	1	1	0	4	4	32	248	0	0	0	1	0	1	
13		1	1	1	0	3	3	37	185	0	0	0	0	0	1	
TWO		Trade / IM	14	1	1	0	1	1	62	23	0	0	0	0	0	0
	15		1	1	0	1	2	2	136	21	0	0	0	0	1	
	16		1	1	0	1	3	3	303	25	0	0	0	0	0	
	17		1	1	0	1	5	6	131	92	0	0	0	1	0	
	18		2	0	1	0	2	0	247	0	0	0	1	0	0	
	19		2	0	1	0	2	0	148	0	0	0	1	0	0	
	Ethics	20	2	0	1	0	2	0	300	0	0	0	5	0	7	
		21	2	1	1	0	15	4	342	98	0	0	0	0	1	
		44	1	0	1	0	1	0	21	0	0	0	0	0	0	
		45	1	0	1	0	1	0	143	0	0	0	1	0	0	
		46	2	0	1	0	2	0	168	0	0	0	2	0	1	
		47	1	0	1	0	1	0	209	0	0	0	2	0	0	
		48	1	1	1	0	5	5	35	175	0	0	0	0	0	
Leadership	49	1	1	0	1	4	5	207	243	0	0	0	2	0		
	50	1	1	0	1	5	5	146	170	0	0	1	0	1		
	51	1	1	1	0	1	1	9	258	0	0	0	8	0		
	52	1	1	1	0	1	1	11	183	0	0	0	7	0		
	53	1	1	1	0	1	1	9	194	0	0	0	6	0		
	54	1	0	1	0	1	0	373	0	0	0	0	0	1		
	Competition	55	2	0	1	0	2	0	135	0	0	0	5	0	0	
		56	2	0	1	0	2	0	253	0	0	0	7	0	0	
		57	1	0	1	0	1	0	130	0	0	0	2	0	0	
58		2	0	1	0	15	0	327	0	0	0	0	0	0		
59		9	0	1	0	9	0	81	0	0	0	0	0	0		

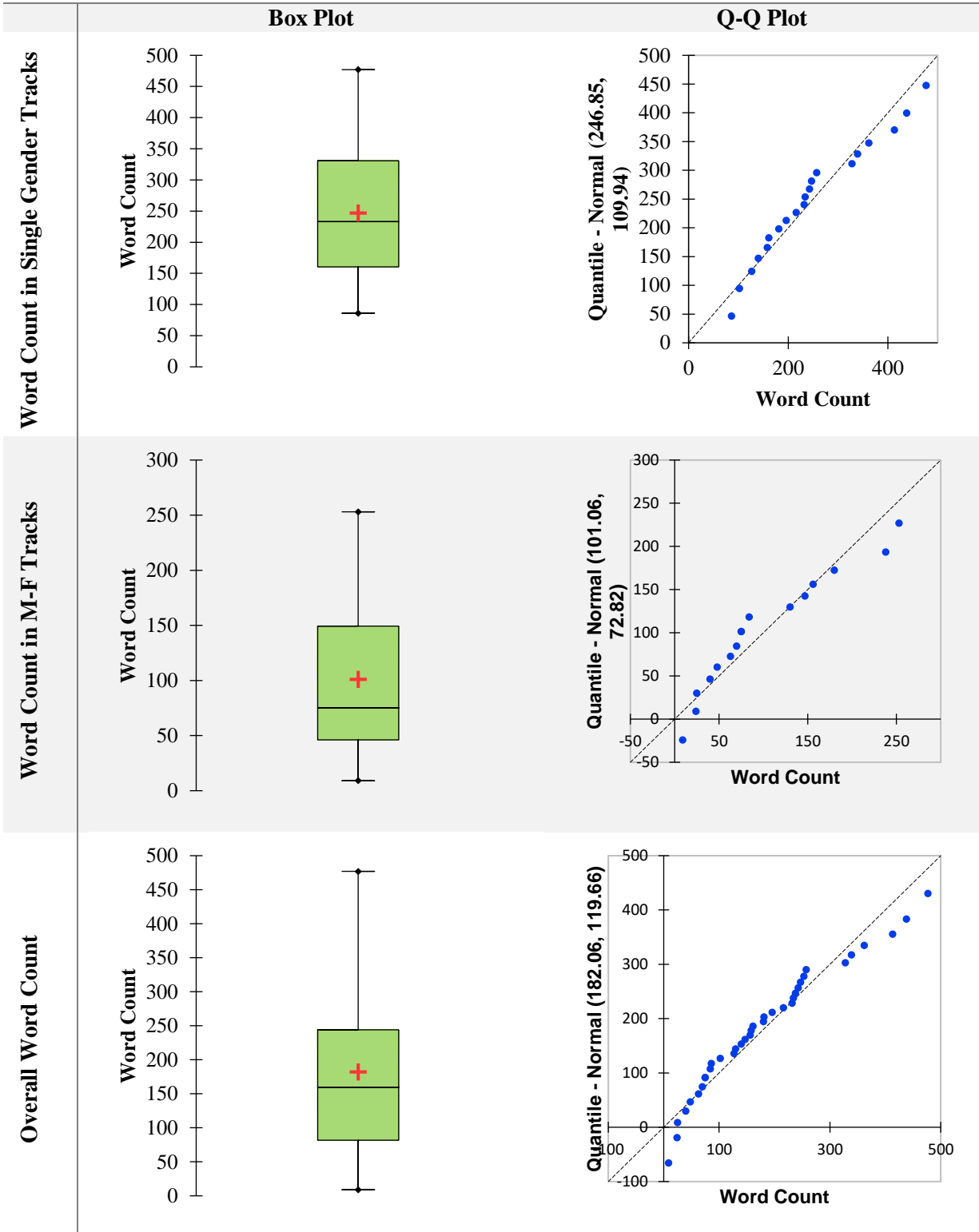
Appendix I 1

Box Plots and Q-Q Plots of Word Count Data – Females (1stEd)



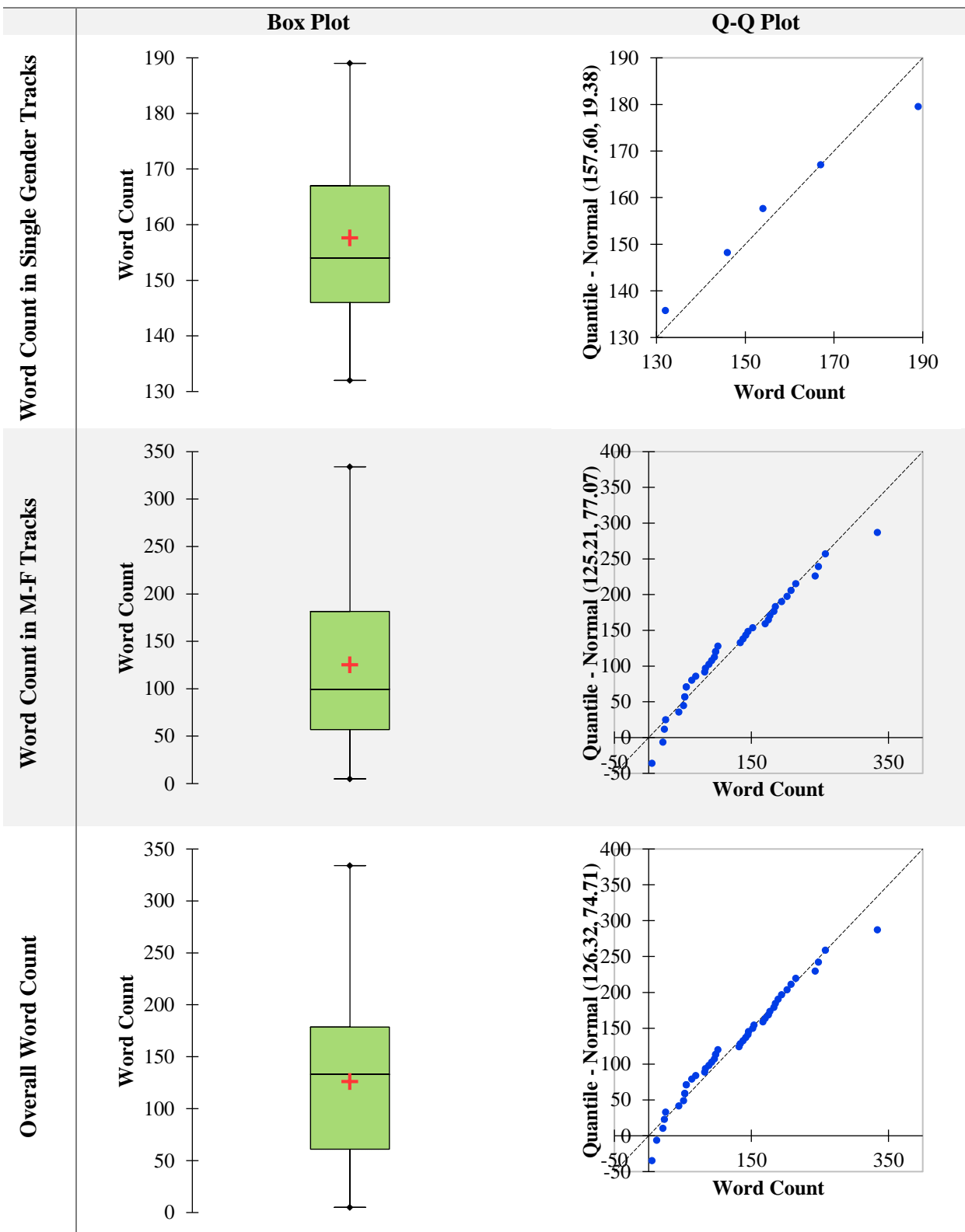
Appendix I 2

Box Plots and Q-Q Plots of Word Count Data – Males (1stEd)



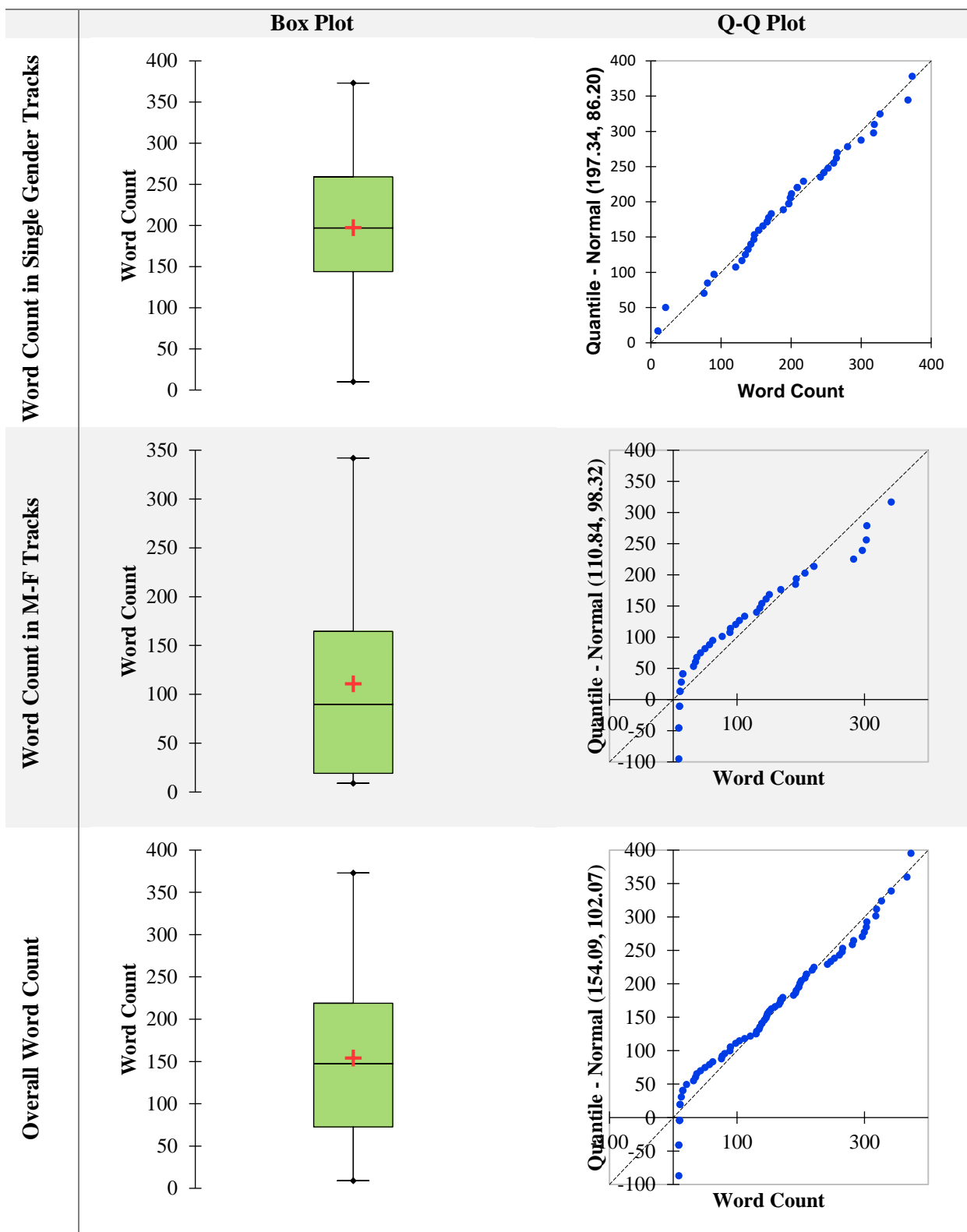
Appendix I 3

Box Plots and Q-Q Plots of Word Count Data – Females (3rdEd)



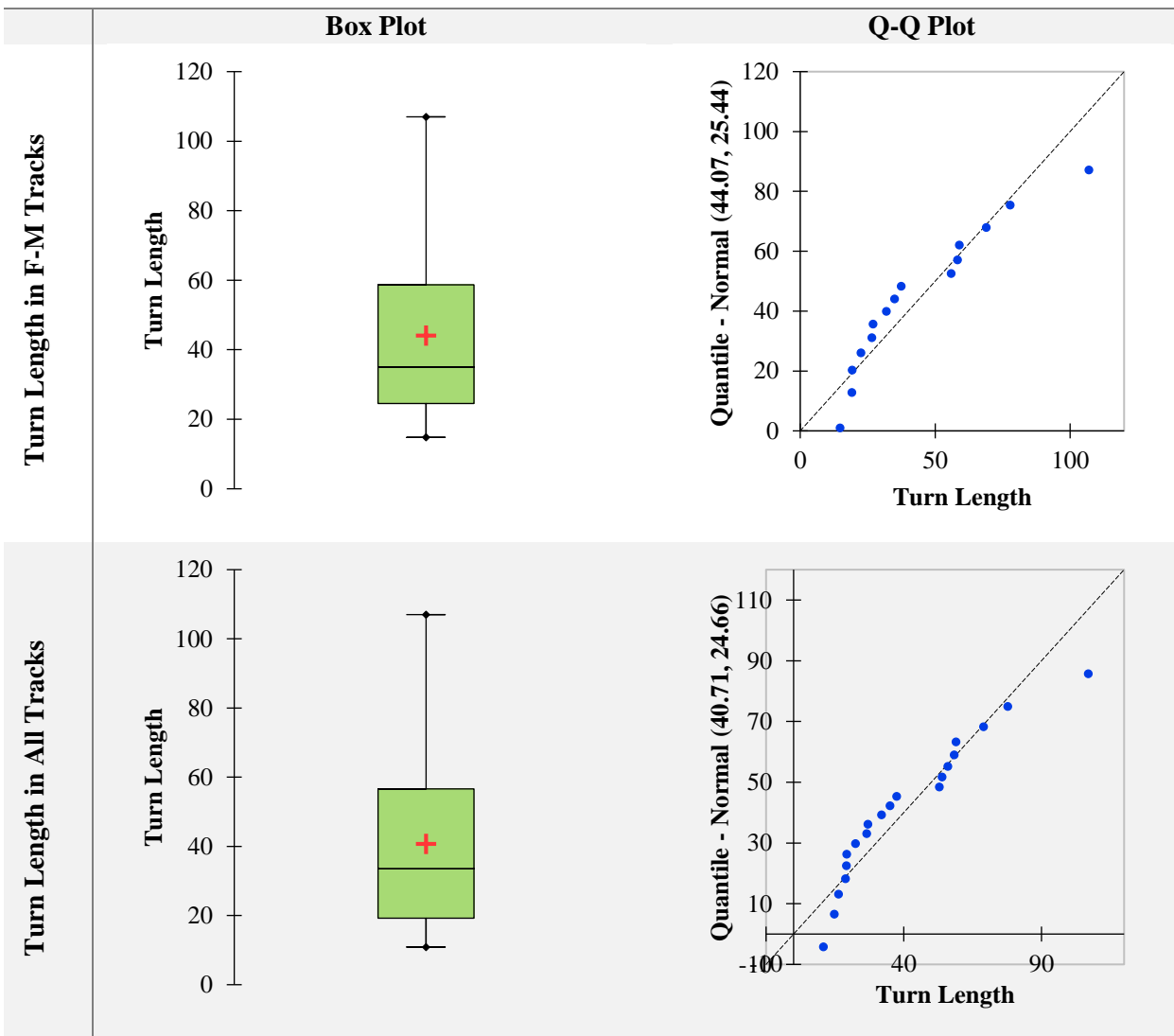
Appendix I 4

Box Plots and Q-Q Plots of Word Count Data – Males (3rdEd)



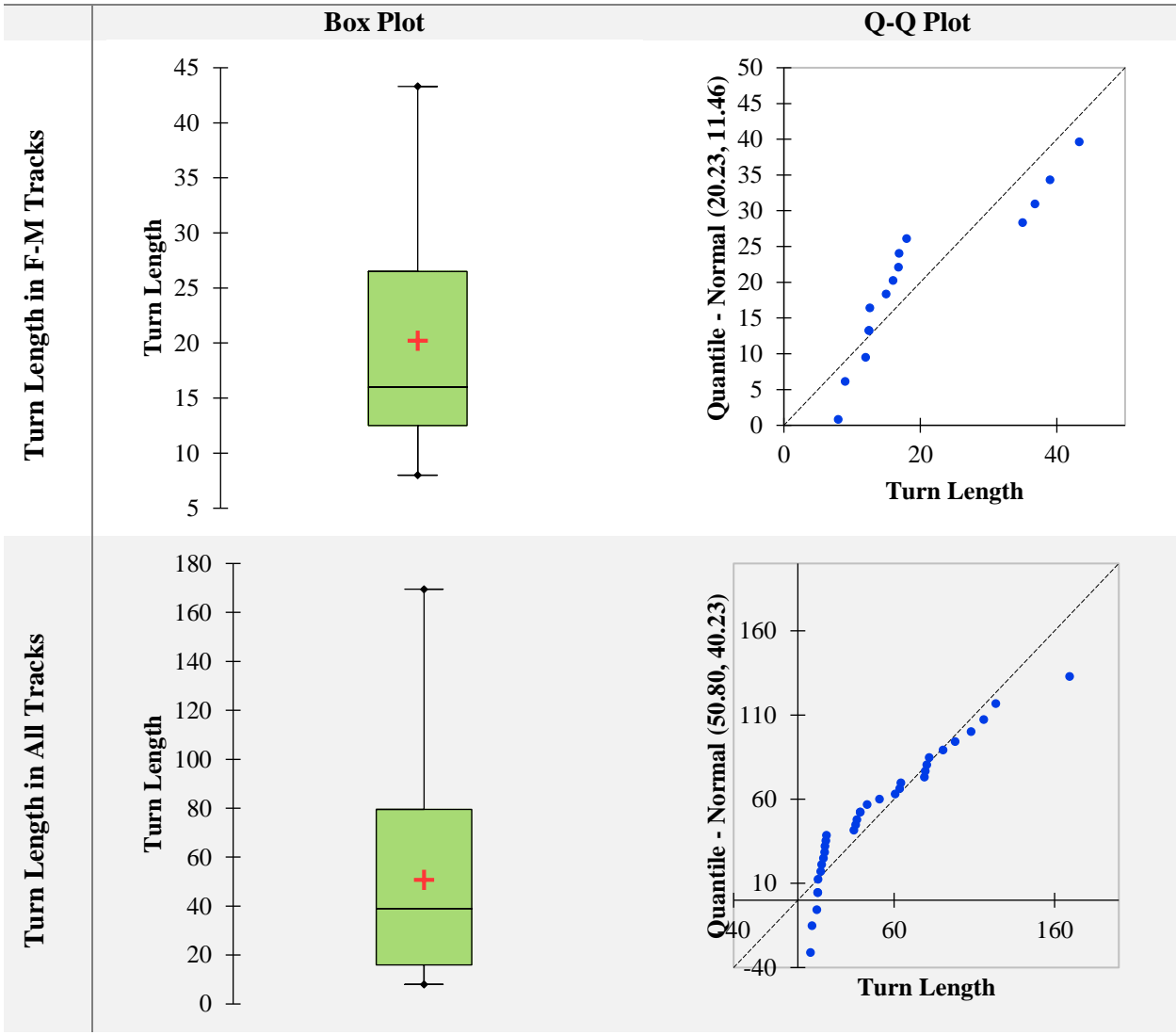
Appendix J 1

Box Plots and Q-Q Plots of Turn Length Data – Females (1stEd)



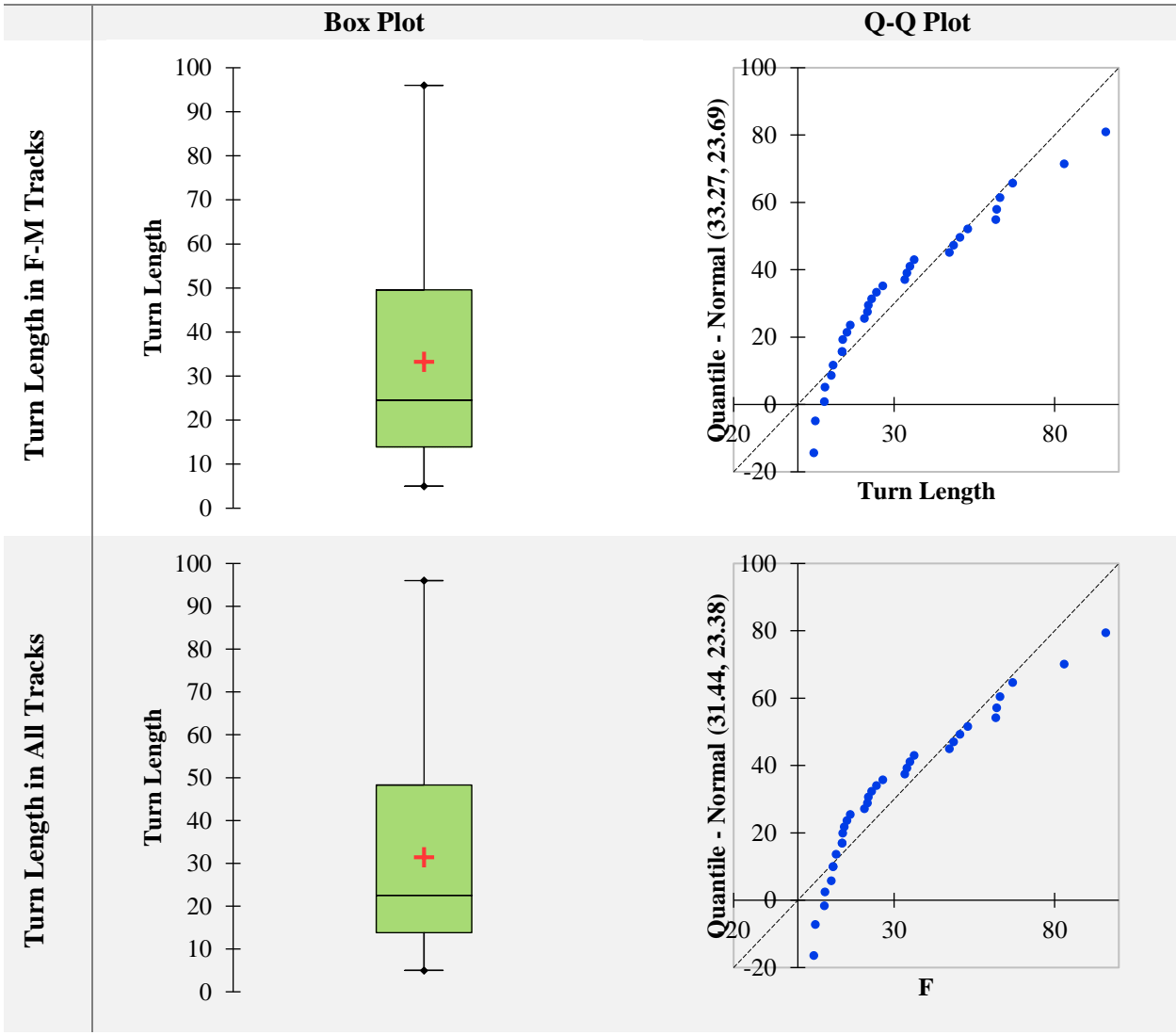
Appendix J 2

Box Plots and Q-Q Plots of Turn Length Data – Males (1stEd)



Appendix J 3

Box Plots and Q-Q Plots of Turn Length Data – Females (3rdEd)



Appendix J 4

Box Plots and Q-Q Plots of Turn Length Data – Males (3rdEd)