

Gendered Language Features Based on Perceptions of Malaysian Millennials in Facebook Communication

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ABSTRACT

The study examined gendered language features based on perceptions of Malaysian millennials in Facebook communication. The data were collected from 60 millennials who were Facebook users living in Malaysia. In the study, the millennials were asked to read 14 comments by other Facebook users and asked to state whether they were written by female or male users and to justify their identification of gender. An analysis framework made based on past findings on gendered language features was used to code the 14 Facebook comments as female or male features. The analysis showed that the accuracy of gender identification was about 50%. Comments identified as written by males were those containing straightforward and short comments, harsh language, male discussion topics, and societal roles. Conversely, comments identified as written by females were those containing advice, expression of emotions, empathy, female discussion topics, and polite language. The findings suggest that some language features are losing a clear gender identification. The gender-neutral features emerge from female users who also use words with profanities and insults, and write in an autonomous or directive manner, and male users who engage in attenuation/experience sharing, and interpersonal orientation/supportiveness. The study indicates that despite the association of Facebook comment features with gender, gender identity lines are getting blurred among millennial Facebook users, making gender identification more difficult.

Keywords: *Gendered language features, Malaysian millennials, Facebook, Facebook communication, online gender identification.*

INTRODUCTION

Social networking sites such as Facebook provide an online space for users to interact with one another. The most active group of Facebook users are those aged 25-34, who are millennials (Brack & Kelly, 2012). Facebook allows users to post updates on their walls or engage in other users' updates by liking, commenting or sharing their updates. Although videos and photos can be uploaded on the platform, communication on Facebook is primarily textual. Facebook also allows users to be anonymous by managing their security settings if users decide not to reveal too much of their personal information.

With the lack of visual and physical cues, there are limited variables that can help discern user identity. Gender is one of the most prominent indicators of differences in Internet usage (van Deursen & van Dijk, 2014). Cheng et al. (2011) investigated author gender identification because of the rising number of impersonations by adults who targeted children using social network sites. These cases subsequently led to legislation, underscoring the importance of investigating text-based gender identification techniques. Research on offline communication has shown that men and women communicate differently (Coates, 2015; Herring, 1993, 1994). Yet, Herring (2013) stated that gender style is the most resistant to technological reshaping. Hills (2000) emphasises the importance of studying patterns of

gender features to provide users with some confidence about predicting the gender of whoever they are communicating with. Research on gendered language features in digital texts may be able to improve the detection accuracy of cyberbullying users (Dadvar et al., 2012) and help with author identification for identity fraud (Cheng et al., 2011) which relates to the rising cases of malicious Facebook communication (Bogolyubova et al., 2018).

Thus far, Malaysian studies on social network sites have focused on code-switching (Ting & Yeo, 2019), slang (Izazi & Tengku-Sepora, 2020), and word or spelling modifications (Hashim, Soopar, and Hamid, 2017; Kadir, Maros, & Hamid 2012; Nazman, Chuah, & Ting, 2020; Stapa & Shaari, 2012; Yeo & Ting, 2017). Only Amir et al. (2012) researched gendered language features on blog sites. Content on blog sites is displayed on various personal websites, whereas content on social networking sites is on the same site and written by many users (Gusiff, 2019). Therefore, social engagement on blog sites and social networking sites differs and would result in different communication styles. By studying social network sites like Facebook, researchers will be able to understand how gender and language interact in interactions between social media users, akin to studies in real-life communities.

This study examined millennials' perceptions of gendered language features in Facebook communication and identified indications of male and female language features. The specific objectives of the study were:

- (1) to determine the accuracy of their gender identification for Facebook commenters, and
- (2) to examine the cues used by participants to identify the gender of Facebook commenters.

LITERATURE REVIEW

Gendered Language Features in Offline Communication

The study of gender and language was pioneered by Lakoff (1975) who focuses on the "weakness" of female spoken language as compared to male spoken language, which was regarded as the norm of communication at the time. Lakoff (1975) surmised that women's language was polite and consisted of hedges, tag questions, adjectives, intensifiers, quantifiers, hedges and polite forms in their speech whereas men's language was assertive and aggressive. Since then, gendered language features came to be known as functional links on how men and women should speak (Cameron, 2010).

Other researchers concur with Lakoff (1975) on female language features such as apologies and tag questions (Holmes, 1989), expressive, tentative, and polite manners (Basow, 2008). The binary opposite of male language features, as found by researchers was assertiveness and dominance in communication style (Basow, 2008) and use of rhetorical questions (Mulac et al., 1990). However, these findings were based on offline communication.

Gendered Language Features in Online Discourse

Hills (2000, p. 12) hypothesised that if an individual's "maleness" or "femaleness" is salient in offline communication, it will become even more obvious in online discourse. This is because online discourse is based on existing social structures and perceptions of offline communication (Yates, 2001).

In online discourse, females preferred intimate ways of maintaining online relationships (Herring, 1993). Females value connection with others and are highly likely to express socio-emotional responses (Miller & Durndell, 2004). They maintain social relationships by showing supportiveness as well as being interpersonally connected with others (Guiller & Durndell, 2006; Hayat et al., 2017; Jackson et al., 2001; Morris, 2013).

Researchers concur on females are polite and expressive (Basow & Rubenfeld, 2003), emphatic and inclined towards sharing personal experiences (Guiller & Durndell, 2007). According to Herring (2003), the inclination of females to apologise for online mirrors their offline stereotypes.

On the other hand, males value status (Miller & Durndell, 2004). Male communication is characterised by strong assertions, dominance and authoritative tones (Guiller & Durndell, 2007; Hayat et al., 2017; Herring, 1993) as well as profanities and insults (Herring, 1994; Thomson & Murachver, 2001). In addition, males were shown to be more self-promoting in their discourse (Herring, 2003; Thomson & Murachver, 2001) and talk more explicitly about sex (Subrahmanyam et al., 2006).

Research has found gendered language features in both offline and online communication, but whether users can detect the gender of the message writers has yet to be studied.

METHODOLOGY

The descriptive study on the use of gendered language features involved 60 Malaysian millennials (30 males and 30 females). More were aged 22-31, that is born in 1980-1989 (53 or 88.33%) than 32-41 years old (7 or 11.67% born in 1990-1999).

The instrument used in this study was an online questionnaire. The first section elicited demographic information which included their gender, Malaysian state of origin, birth year and their frequency of accessing and commenting on Facebook. The second section consisted of 14 Facebook comments (Appendix 1). The participants were required to identify the gender of the 14 commenters based on the text alone and give reasons for the choice. Eight of the commenters were female and six were male.

To collect the data, the first researcher solicited participation in the study by announcing her study in her social network. Online snowball sampling was used to obtain participants from a wider network.

Two types of data analysis were carried out. Firstly, the accuracy of the identification of the Facebook commenters' gender identity was calculated. If the accuracy is over 50%, this was used to indicate the correct identification of the commenter's gender. Secondly, the participants' reasons for identifying a particular commenter as female or male were analysed thematically using Fung, Chuah, and Ting's (2020) framework as shown in Table 1.

Table 1: Framework of analysis of gendered language features by Fung et al. (2020)

Gendered Language Feature	Definition	Previous Studies Showing the Presence of Gendered Language Features
M1 Information Oriented	¹ Engage in informative activities	Bond (2009) Cameron (2010) Guadagno et al. (2011) Jackson et al. (2001) Morris (2013)
M2 Self-promotion	² Focus attention on themselves	Herring (1993) Thomson and Murachver (2001)
M3 Sexual References	Mention sexual themes	Herring (1996) Subrahmanyam et al. (2006)

M4	Insults/ Profanities (Word choice)	³ Use crude language	Herring (2000) Thomson and Murachver (2001)
M5	Directive/ Autonomous	⁴ State explicit and unambiguous statement of the opinion of the sender, or when it was forceful, independent, directive, or explicitly reactive	Postmes and Spears (2002)
M6	Rhetorical Questions	⁵ Use assertive questions not meant to be taken literally	Guiller and Durndell (2006) Herring (1993)
M7	Opposed Orientation	⁵ Make explicit statements of disagreement	Coates (2015) Guiller and Durndell (2006) Herring (2003)
M8	Strong Assertions	⁵ Use absolute and exceptionless adverbials	Guiller and Durndell (2006) Herring (1994)
F1	Interpersonal orientation/ Supportiveness	¹ Engage in more communal activities/ ² Express appreciation, thanking, and community-building activities that make other participants feel accepted and welcome.	Guadagno et al. (2011) Guiller and Durndell (2006) Herring (1994) Morris (2013)
F2	Hedges	⁶ Express doubt or soften speaker's utterance	Amir et al. (2012) Bonvillian (2000) Herring (1993) Walker (2008)
F3	Apologies	Apologising	Herring (2003) Walker (2008)
F4	Polite and emotionally expressive words	⁷ Use expressive, tentative, and polite language	Basow and Rubenfeld (2003)
F5	Questions	Asking questions	Cameron (2010) Herring (1993)
F6	Tag Questions	⁶ Make a statement followed by an interrogative clause	Amir et al. (2012) Cameron (2010) Lakoff (1975)
F7	Aligned Orientation	⁵ Make an explicit statement of agreement; respond positively	Coates (2015) Guiller and Durndell (2007) Herring (2003)
F8	Attenuation/ Experience Sharing	⁸ Contribute ideas in the form of suggestions; ⁵ Refers to speaker's own experience	Guiller and Durndell (2007) Herring (1994)

Note: ¹Guadagno et al. (2011), ²Herring (1993), ³Herring (2000), ⁴Postmes and Spears (2002), ⁵Guiller and Durndell (2006), ⁶Amir et al. (2012), ⁷Basow and Rubenfeld (2003), ⁸Herring (1994)

RESULTS AND DISCUSSION

Accuracy of Participants' Identification of the Gender of Facebook Commenters

The results of the gender identification of Facebook commenters are shown in Table 1. The gender of a majority of the Facebook commenters (7 or 50% out of the 14) was guessed correctly. A breakdown by gender showed that when the commenter is female, it is easier for the participants to detect that they are male (66.67% accuracy), compared to when the commenter is female (37.5% accuracy).

Table 2: Frequency of participants guessing the commenter as male or female

Gender of Facebook Commenter	Number of participants guessing the gender as Male (%)	Number of participants guessing the gender as Female (%)	Majority choice	Correctness of gender choice
1. Female	16 (26.7%)	44 (73.3%)	Female*	Correct
2. Male	54 (90%)	6 (10%)	Male*	Correct
3. Male	34 (56.7%)	26 (43.3%)	Male*	Correct
4. Male	32 (53.3%)	28 (46.7%)	Male*	Correct
5. Female	18 (31.7%)	42 (68.3%)	Female*	Correct
6. Male	41 (68.3%)	19 (31.7%)	Male*	Correct
7. Male	25 (41.7%)	35 (58.3%)	Female	Incorrect
8. Female	33 (55%)	27 (45%)	Male	Incorrect
9. Male	26 (43.3%)	34 (56.7%)	Female	Incorrect
10. Female	51 (85%)	9 (15%)	Male	Incorrect
11. Female	24 (41.7%)	35 (58.3%)	Female*	Correct
12. Female	47 (78.3%)	13 (21.7%)	Male	Incorrect
13. Female	43 (71.7%)	17 (28.3%)	Male	Incorrect
14. Female	48 (80%)	12 (20%)	Male	Incorrect

Note: * shows correct guesses by majority

Table 2 shows that the gender of seven Facebook commenters was not guessed correctly by most of the participants, that is, Commenters 7, 8, 9, 10, 12, 13 and 14. Further analysis revealed that wrong guesses of the Facebook commenters' gender are due to the presence of a mixture of gendered language features or usage of language features of the other gender.

Among these seven commenters, the female gender of Commenter 10 was the least obvious to the participants because 85% of them thought that the comment was written by a male. Table 3 shows that she had written her comment like a male in that there were insults/profanities in the word choice (M4) and the manner was directive/autonomous (M5). Next, the gender of the other two commenters (no. 7-8) was guessed inaccurately because the comments had a mixture of male and female language features (see Table 3). The wrong

guessing of the male gender of Commenter 9 is an anomaly. He had Sexual References (M3) in his Facebook comment and yet came across as a female to over 56.7% of the participants (Table 2).

Among the 10 correct guesses of the Facebook commenters' gender, there are also two anomalies, that is, for female Commenters 1 and 5. Despite the typically male characteristic of being Directive/Autonomous (M5) in the comment, Commenter 1's female gender was correctly guessed by 73.3% of the participants (Table 2). Similarly, female Commenter 5 had male language features in her comments, that is, Information Oriented (M1) and Strong Assertions (M8). Yet her female gender was correctly guessed by 68.3% of the participants. The three anomalies suggest that the participants could be responding to features that have not been identified by previous researchers and therefore not found in the analysis framework for gendered language features.

Table 3: Gendered language features of Facebook comments

Gender of Facebook Commenter	Male language features present	Female language features present	Correctness of gender choice
1. Female	Directive/Autonomous (M5)		Correct
2. Male	Insults/Profanities (Word choice) (M4)		Correct
3. Male	Insults/Profanities (Word choice) (M4) Rhetorical Questions (M6)	Interpersonal orientation/ Supportiveness (F1)	Correct
4. Male	Insults/Profanities (Word choice) (M4)	Apologies (F3) Questions (to elicit a response) (F5)	Correct
5. Female	Information Orientation(M1) Strong Assertions (M8)		Correct
6. Male	Directive/Autonomous (M5)		Correct
7. Male	Directive/Autonomous (M5) Strong Assertions (M8)	Attenuation/Experience Sharing (F8)	Incorrect
8. Female	Strong Assertions (M8)	Interpersonal orientation/ Supportiveness (F1)	Incorrect
9. Male	Sexual References (M3)		Incorrect
10. Female	Insults/Profanities (Word choice) (M4) Directive/Autonomous (M5)		Incorrect
11. Female		Interpersonal orientation/ Supportiveness (F1) Polite and Emotionally Expressive words (word choice) (F4)	Correct

12. Female	Insults/Profanities (Word choice) (M4)	Polite and Emotionally Expressive words (word choice) (F4) Attenuation/ Experience Sharing (F8)	Incorrect
13. Female		Polite and Emotionally Expressive words (word choice) (F4) Attenuation/Experience Sharing (F8)	Incorrect
14. Female		Hedges (F2) Polite and Emotionally Expressive words (word choice) (F4) Attenuation/Experience Sharing (F8)	Incorrect

Note: * shows correct guesses by the majority

However, the results on the wrong gender guesses of the participants suggests that the distinction between male and female language features is getting blurred. Table 3 shows that 35.7% (or five out of 14) commenters had both male and female language features in their comments. This is indicative of a changing pattern in the use of conventional gendered language features in social networking communication.

Nevertheless, a larger proportion of the Facebook commenters in this study were still keeping to the language features characteristic of their gender. Table 2 shows that 42.9% (or six commenters) were using only the features characteristic of their gender (male Commenters 2, 6 and 9; female Commenters 11, 13 and 14). The three typically male comments were characterised by insults/profanities in word choice, directive/autonomous manner of writing, and sexual references. On the other hand, the three typically female comments were characterised by Interpersonal Orientation/Supportiveness (F1), Polite and Emotionally Expressive words (F4), Hedges (F2), and Attenuation/Experience Sharing (F8). The typical female commenters made a connection with the recipient of their message through their interpersonal orientation, suggestions and experience sharing (Guiller & Durndell, 2007; Herring, 1994), but the typical male commenters were prone to making forceful, explicit and unambiguous statements of their opinions (Postmes & Spears, 2002). In contrast, female commenters were more likely to consider the feelings and context of the recipients of their message when giving opinions to ensure that they feel accepted (Herring, 1993).

Overall, since 50% of the guesses of the Facebook commenters' gender were correct, this indicates that it is getting harder to detect gender based on text alone.

Gendered Language Features in Facebook Communication

This section delves into the cues that the participants responded to when identifying the gender of the Facebook commenters.

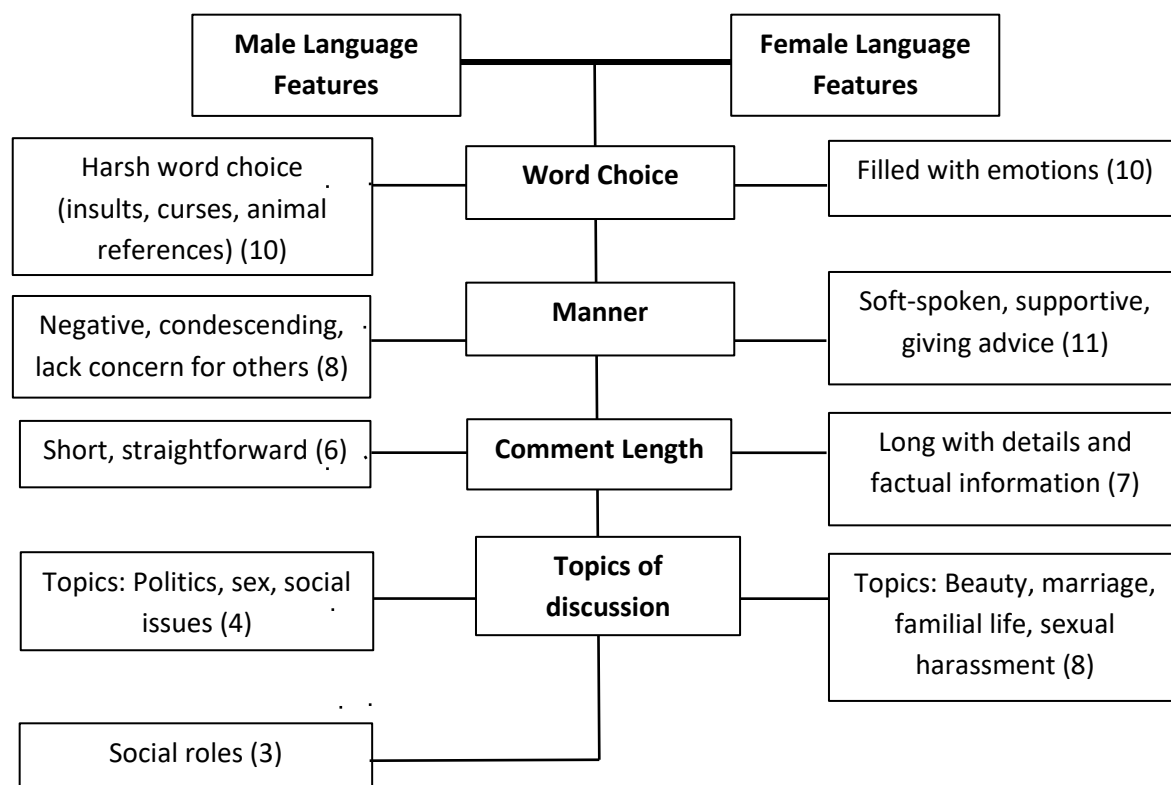


Figure 1: Indications of female and male language features from thematic analysis

The thematic analysis of the participants' reasons revealed that the participants determined the gender of the commenter based on the manner of writing, word choice, comment length, and topic of discussion. The four main features will now be explained starting with the male language features.

The indicators of male language features include harsh word choice, negative manner, straightforward and short comments, certain topics of discussion, and certain social roles. Harsh language is reflective of male comments such as insults, cursing, and reference to animals in their comments. Ten participants stated that male commenters tend to use "dirty words" as mentioned in Excerpt (1). Other participants described the language of male commenters as rough and harsh, as shown in Excerpts (2) and (3).

- (1) Male tends to speak dirty words (Participant 3)
- (2) Sounds rough (Participant 8)
- (3) Quite a harsh comment, could be from the male user (Participant 13)

Other participants pointed out that males were more likely to curse others (Excerpt 4), use cuss words (Excerpt 5) and references to animals, particularly dogs (*anjing* in Malay) (Excerpts 6 and 7).

- (4) Men are more likely to curse people (Participant 25)
- (5) Normally males would openly type out cuss words (Participant 10)
- (6) Males are more open in using animal references as an expression in comparison to females. (Participant 24)
- (7) Males tend to use the word "anjing" more than females (Participant 47)

The participants' observations of the male tendency to use insults, cursing, and reference to animals in their comments are spot on because Table 3 shows that such harsh language is found in the male comments and only in one female comment (no. 10). Female Commenters 10 and 12 had insults/profanities in their comments, but the latter also had typically female features such as polite and emotionally expressive words.

The second male language feature in Facebook comments is the negative manner, as pointed out by eight participants (Figure 1). "Negative manner" sums up what participants said about male commenters being more negative, condescending and showing a lack of concern for other people as compared to female commentators. For instance, Participant 13 mentioned that the word "nerd" was used often by males to describe other males. Participant 24 stated that only males used the word "fella". If the Facebook comments come across as "too caring", then they ruled out the commenter as male.

Thirdly, six participants also associated straightforward and shorter comments that consist of short forms with male commenters. Many responses were similar to Participant 15's view as shown in Excerpt (8).

(8) Harsh and short, seems like a normal utterance by a guy. The male spoke short & straightforward (Participant 15)

The participants did not specify what "short comments" were. An example of a short comment used as one of the comments for participants to guess the gender of the Facebook commenter is shown in Excerpt (9) and this is contrasted with Excerpt (10) from a female commenter:

(9) "*Anjing pun xmcm dorg Jan*" [dog is also not like them Jan]

(10) "*Masalah org Malaysia dan negara2 jiran (asia la senang cerita). Definisi cantik tu mestilah putih cerah kurus mantop tinggi. Menyampah dgn mentaliti mcmni.*" [The problem with Malaysians and neighbouring countries, Asia la, to simplify matters. The definition of beautiful must be fair, thin and tall. Hate such a mentality.]

The fourth male language feature in Facebook comments is the topic of discussion. Four participants noted that males were inclined to talk more about political and social issues as well as sex, but not about beauty. For instance, Participant 44 eliminated the possibility of a comment being written by a female if it was talking about sex before marriage because the participant considered that females would not talk about such topics so publicly as it was not in their nature.

Finally, three participants identified commenters as males when the comment "sounded" as if it was written by a political figure or religious leader. For example,

(11) I can imagine an *Ustaz* [religious Islamic teacher] talking about this (Participant 15)

In Malaysian society, most politicians and religious leaders are males. In view of this, participants used their sociocultural knowledge of social roles found in Malaysian communities to help them to identify the Facebook commenter as male. In addition, the

fatherly role was brought up by Participant 28 who felt that Facebook Comment 1 was written “like a father talking to kids”. But in fact, this comment was written by a female and her use of Directive/Autonomous features in her comment had misled Participant 28. The converse on female social roles did not surface in the reasons given for identifying a Facebook commenter as female.

Overall, social roles, comment length, and topics of discussion are three new additions to markers of male language features found in the present study, which were not found in Fung et al.’s (2020) analysis framework of gendered language features formulated based on previous research.

From male language features, we move on to female language features. From the participants’ perspective, female online discourse is marked by emotive comments, soft-spoken, long comments, and personal topics of discussion.

Firstly, 10 participants were certain that if a comment is filled with emotions, it must be written by a female commenter and the absence of emotion marked male communication. The emotiveness is reflected in the use of exclamation marks (Participant 15) or overuse of letters in words (e.g., extra “s” in the word “assssshole”). As online discourse lacks physical cues, commenters may modify the spelling of words to express emotion. Interestingly, word choices such as “whatever” and “dear ladies”, and some swear words are seen as indicators of female emotive use. Participant 56 pointed out that “No guy will say whatever”.

Secondly, 11 participants detected female commenters based on their soft-spoken. This was reflected in giving advice, sometimes to the point of nagging or lecturing. An example of deductive reasoning on this is shown in Excerpt (12):

(12) Females tend to be more cautious, so advice on being cautious with your words, I think would be advice from a female. Higher probability.
(Participant 24)

Besides giving advice, participants mentioned that female commenters show their supportiveness by being defensive about a girl who was humiliated (mentioned in one of the comments) and showing concern towards others. Other female characteristics in the comments were showing appreciation, praise and encouragement, as illustrated in Excerpt (13).

(13) It is very difficult to decide for this comment, but most probably a female user because the character in the post could be a female also, as the user praises that the character was an engineer. (Participant 13)

However, Excerpt (14) shows that participants have noticed that not all females are soft-spoken and this may be a departure from the previous characterisation of female language features:

(14) *Perempuan boleh aggressive macam ini tapi buat waktu kini lelaki yang nampak menyerlah* [Women can be aggressive like this but at this moment, men are more obvious] (Participant 43)

The third language feature used to identify Facebook commenters as female was long comments with many details or factual information. Excerpt 15 elaborates what Participant 57 put succinctly as “Long, must be a lady”. This is in direct contrast to the short and straightforward comments written by males.

(15) Girls type a more detailed and usually longer sentence, I think.
 (Participant 54)

Finally, the topics of the discussion likely to be discussed by female commenters include skin colour, beauty stereotypes, marriage, family life, children, and sexual harassment issues. In the Malaysian community, women are still generally regarded as caretakers of the family, which is why they talk about family life. While female commenters may be vocal about sexual harassment issues, they do not usually discuss sex. This is “Because females will [be] shy to talk about sex topics in front of Males” (Participant 22). It is expected that topics of discussion can identify the Facebook commenters as female, but this study has also identified longer comment length and specific word choices (with modified spellings or swear words) are markers of female language use.

Comparison of Cues Used by Participants to Identify Gender of Facebook Commenters and Gendered Language Features from Past Findings

The framework for the analysis of gendered language features (Table 1) was formulated based on past research which was conducted at least one decade ago, and mostly on offline communication. Table 4 summarises a comparison of cues used by participants to identify the gender of Facebook commenters and gendered language features from past findings. The comparison revealed that certain language features have remained markers of male and female communication till now and in online discourse. Male communication is marked by sexual references, insults/profanities in word choice, and a directive/autonomous manner manifested in straightforward and short comments. A social role is an additional cue used by millennial participants to identify male Facebook commenters. As for female communication, the markers that are applicable till now are interpersonal orientation/supportiveness, polite/soft-spoken and emotionally expressive words, and attenuation/experience sharing. This study adds personally-oriented topics of discussion and lengthy comments as additional cues used to identify female Facebook commenters.

Table 4: Gendered language features of Facebook comments

Male language features from past findings	Cues used by participants to identify the gender of Facebook commenters	Female language features from past findings	Cues used by participants to identify the gender of Facebook commenters
M1 Information Oriented		F1 Interpersonal orientation/ Supportiveness	Supportiveness
M2 Self-promotion		F2 Hedges	
M3 Sexual References	Topic of discussion (sex)	F3 Apologies	

M4	Insults/ Profanities (Word choice)	Harsh Language	F4	Polite and emotionally expressive words	Emotional expressiveness Soft-spoken
M5	Directive/ Autonomous	Straightforward and Short comments	F5	Questions (to elicit response)	
M6	Rhetorical Questions		F6	Tag Questions	
M7	Opposed Orientation		F7	Aligned Orientation	
M8	Strong Assertions		F8	Attenuation/ Experience Sharing	Giving Advice Personally-oriented topics of discussion (family, beauty)
	None	Social roles			Lengthy comments

Some language features from past studies were not used as cues to identify the gender of Facebook commenters. Table 4 shows that the participants did not mention these male features: information orientation, self-promotion, rhetorical questions, opposed orientation, and strong assertions. Information Orientation is a male language feature from previous studies (Cameron, 2010; Jackson et al., 2001; Morris, 2013). However, in the present study, female commenters were said to have lengthy comments with a lot of details and factual information, but the female commenters balanced the information orientation with an interpersonal orientation. The participants did not mention opposed orientation and strong assertions, but they are only Facebook users and not linguistic researchers; the closest is the characterisation of male comments as straightforward.

Table 4 shows that the participants did not mention hedges, apologies, questions, tag questions, and aligned orientation as cues to identify female commenters. Aligned orientation could be reflected in the supportiveness of the comments, but hedges, apologies and tag questions may no longer be applicable among millennial Facebook users. In fact, female Facebook users may be developing assertiveness and incorporating insults/profanities into their communication.

DISCUSSION AND CONCLUSION

The study on gendered language features shows that millennials can identify the gender of Facebook commenters rather accurately based on word choice, manner, comment length, topics of discussion and social roles. Harsh word choice reflects male users whereas emotional expressiveness reflects female users. As for manner, male Facebook users are inclined towards negative remarks, but female users are inclined towards supportive remarks and soft-spoken. Topics of discussion clearly mark the gender of the Facebook commenters with males inclined towards politics, social issues and sex and females towards personal topics. The length of comments is also telling with males writing straightforward and short comments and females writing lengthy comments.

The results showed that some gendered language features are “perennial”. Markers such as giving advice, presence of emotions, soft-spoken and supportiveness concurred with past findings on female markers in face-to-face communication researchers (Basow &

Rubinfeld, 2003; Guiller & Drundell, 2006; Herring, 1993, 1994; Morris, 2013). As for male markers, harsh and negative language and directive/autonomous manner are still applicable in online discourse now as it was in the past in offline communication (Basow & Rubinfeld, 2003; Herring 1993, 1994).

The results show that the use of male and female language features in social media communication is gradually changing, leading towards gender-neutral features – when compared to the 10 previous findings that make up the framework of analysis (Amir et al., 2012; Guadagno et al., 2011; Guiller & Durndell, 2006; 2007; Herring, 1993, 1994, 1998, 2000, 2003; Postmes & Spears, 2002). The emerging gender-neutral language features are insults/profanities, directive/autonomous manner, interpersonal orientation/supportiveness, and attenuation/experience sharing. Six out of the 14 Facebook comment samples shown to participants for them to identify the gender of the commenters had both male and female language features, and there are two female commenters who exhibited only male features. In other words, it is no longer considered taboo or strange when a female commenter uses profanities in their comments or when a male commenter shares his personal experience to give advice. Over time, traditional stereotypical gendered language patterns are no longer applicable in online discourse. Our findings concur with Savicki, Lingenfelter and Kelley's (1996) study which found that a number of messages could not be categorised as being sent by either a male or female. There is a possibility of users accommodating each other's gendered language styles (Thomson, Murachver, & Green, 2001). Gender communication styles are fluid and flexible and are produced according to different communicative situations on Facebook (Nevala, 2015). This explains why more females are adapting to male language features in order to be viewed as dominant figure in society compared to the submissive traditional female roles. The same goes for males who apologise and show supportiveness to other commenters in order to be seen as more understanding and less domineering.

The blurring of distinctions in gendered language features used by Malaysian millennials may stem from the anonymous nature of the Internet. Ellison et al. (2006) mentioned that the anonymity of the Internet has allowed users to present themselves differently than what is considered socially acceptable gender behaviour. Users may choose to use gendered language features which best suit their intended meaning in their discourse. Females may be influenced to speak in a masculine manner to be taken more seriously by other users, especially those of the opposite gender. In some circumstances when users do not know one another offline, the lack of physical cues allows digital users to hide their identities when they are interacting online, even more so if something controversial is said. The accuracy of gender identification of 50% by the millennial participants. Despite the association of Facebook comment features with gender, gender identity lines are getting blurred among millennial Facebook users, making gender identification more difficult.

This study has established the presence of ongoing changes that are reflected in the use of gendered language features. However, the focus has been on the millennial generation and Facebook comments. Further research should investigate whether or not these gendered language features are applicable in other social networking platforms with other groups of users, such as the LGBTQ community and older users.

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REFERENCES

- Amir, Z., Abidin, H., Darus, S., & Ismail, K. (2012). Gender differences in the language use of Malaysian teen bloggers. *GEMA Online® Journal of Language Studies*, 12(1) 105-124.
- Basow, S. A., & Rubinfeld, K. (2003). "Troubles talk": Effects of gender and gender-typing. *Sex Roles*, 48(3), 183-187.
- Basow, S. (2008). Speaking in a "man's world": Gender differences in communication styles. In M. A. Paludi (Ed.), *The psychology of women at work: Challenges and solutions for our female workforce, Vol. 1. Career liberation, history, and the new millennium* (pp. 15–30). Westport: Greenwood Publishing Group.
- Bogolyubova, O., Panicheva, P., Tikhonov, R., Ivanov, V., & Ledovaya, Y. (2018). Dark personalities on Facebook: Harmful online behaviours and language. *Computers in Human Behavior*, 78, 151-159.
- Brack, J., & Kelly, K. (2012). Maximizing millennials in the workplace. *UNC Executive Development*, 22(1), 2-14.
- Cameron, D. (2010). Sex/gender, language and the new biologism. *Applied Linguistics*, 31(2), 173-192.
- Cheng, N., Chandramouli, R., & Subbalakshmi, K. P. (2011). Author gender identification from text. *Digital Investigation*, 8(1), 78-88.
- Coates, J. (2015). *Women, men and language: A sociolinguistic account of gender differences in language* (3rd ed.). London: Routledge.
- Dadvar, M., Jong, F. D., Ordelman, R., & Trieschnigg, D. (2012). Improved cyberbullying detection using gender information. *Proceedings of the Twelfth Dutch-Belgian Information Retrieval Workshop (DIR 2012)*. Ghent, Belgium: University of Ghent.
- Ellison, N., Heino, R., & Gibbs, J. (2006). Managing impressions online: Self-presentation processes in the online dating environment. *Journal of Computer-Mediated Communication*, 11(2), 415-441.
- Fung, K. T. M., Chuah, K. M., & Ting, S. H. (2020) Gender differences in computer-mediated communication: A case study on Malaysian millennials. *Humanities & Social Sciences Reviews* 8(3), 426-433.
- Guiller, J., & Durndell, A. (2006). 'I totally agree with you': Gender interactions in educational online discussion groups. *Journal of Computer Assisted Learning*, 22(5), 368-381.
- Guiller, J., & Durndell, A. (2007). Students' linguistic behaviour in online discussion groups: Does gender matter? *Computers in Human Behavior*, 23(5), 2240-2255.
- Gusiff, A. (2019, September 16). Blogging vs. Social Media: Here's the difference. Issaquah, WA: *Gusiff Marketing Group*. <https://gusiffcoaching.com/blog/blogging-vs-social-media-heres-the-difference>
- Hashim, F., Soopar, A. A., & Hamid, B. A. (2017). Linguistic features of Malaysian students' online communicative language in an academic setting: The case of Universiti Kebangsaan Malaysia. *Akademika*, 87(1), 231-242.
- Hayat, T. Z., Lesser, O., & Samuel-Azran, T. (2017). Gendered discourse patterns on online social networks: A social network analysis perspective. *Computers in Human Behavior*, 77, 132-139.
- Herring, S. C. (1993). Gender and democracy in computer-mediated communication. In R. Kling (Ed.), *Computerization and controversy: Value conflicts and social choices* (pp. 476-489). Orlando, FL: Academic Press.

- Herring, S. C. (1994, June). *Gender differences in computer-mediated communication: Bringing familiar baggage to the new frontier* [Keynote address]. American Library Association annual convention, Miami, Florida.
<http://cpsr.org/issues/womenintech/herring2/>
- Herring, S. C. (2000). Gender differences in CMC: Findings and implications. *CPSR: Computer Professionals for Social Responsibility Journal*, 18(1), 1-9.
<http://cpsr.org/issues/womenintech/herring/>
- Herring, S. C. (2003). Gender and power in online communication. In J. Holmes & M. Meyerhoff (Eds.), *The Handbook of Language and Gender* (pp. 202-228). Hoboken, New Jersey: Blackwell Publishers.
- Herring, S. C. (2013). Discourse in Web 2.0: Familiar, reconfigured, and emergent. *Discourse*, 2, 1-26.
- Hills, M. (2000). *You are what you type: Language and gender deception on the Internet* [Unpublished bachelor's honors thesis, University of Otago]. Natural language server.
<http://nl.ijs.si/janes/wp-content/uploads/2014/09/hills00.pdf>
- Holmes, J. (1989). Sex differences and apologies: One aspect of communicative competence¹. *Applied Linguistics*, 10(2), 194-213. <https://doi.org/10.1093/applin/10.2.194>
- Izazi, Z. Z., & Tengku-Sepora, T. M. (2020). Slangs on social media: Variations among Malay language users on Twitter. *Pertanika Journal of Social Sciences & Humanities*, 28(1), 17-34.
- Jackson, L. A., Ervin, K. S., Gardner, P. D., & Schmitt, N. (2001). Gender and the Internet: Women communicating and men searching. *Sex Roles*, 44(5), 363-379.
- Kadir, Z. A., Maros, M., & Hamid, B. A. (2012). Linguistic features in the online discussion forums. *International Journal of Social Science and Humanity*, 2(3), 276-281.
- Lakoff, G. (1975). Hedges: a study in meaning criteria and the logic of fuzzy concepts. In D. J. Hockney, B. Freed & W. L. Harper (Eds.), *Contemporary research in philosophical logic and linguistic semantics* (pp. 221-271). Dordrecht, Netherlands: Springer.
- Miller, J., & Durndell, A. (2004). Gender, language and computer-mediated communication. In K. Morgan, J. Sanchez, C. A. Brebbia & A. Voiskounsky (Eds.), *Human perspectives in the Internet society: Culture, psychology and gender* (pp. 236-246). Southampton, UK: WIT Press.
- Morris, E. (2013). *She 'likes' it, he doesn't: Gender differences in Facebook communication behavior* [Undergraduate Honors Theses, University of Colorado]. CU Scholar.
<https://scholar.colorado.edu/downloads/r207tp870>
- Mulac, A., Studley, L. B., & Blau, S. (1990). The gender-linked language effect in primary and secondary students' impromptu essays. *Sex Roles*, 23(9-10), 439-470.
- Nazman, N. N. N., Chuah, K. M., & Ting, S. H. (2020). Tryna b Kewl: Textual analytics of distorted words among Malaysian millennials on Twitter. *International Journal of Innovative Technology and Exploring Engineering*, 9(3), 3522-3526.
<http://ir.unimas.my/id/eprint/28937>
- Nevala, N. (2015). *Female style vs. male style or something in between? A case study on gendered communication on the Humans of New York Facebook page* [Master's thesis, University of Jyväskylä Finland]. JYX Digital Repository.
<https://jyx.jyu.fi/handle/123456789/48023>
- Postmes, T., & Spears, R. (2002). Behavior online: Does anonymous computer communication reduce gender inequality? *Personality and Social Psychology Bulletin*, 28(8), 1073-1083. <https://doi.org/10.1177/01461672022811006>

- Savicki, V., Lingenfelter, D., & Kelley, M. (1996). Gender language style and group composition in Internet discussion groups. *Journal of Computer-Mediated Communication*, 2(3), JCMC232. <https://doi.org/10.1111/j.1083-6101.1996.tb00191.x>
- Stapa, S. H., & Shaari, A. H. (2012). Understanding online communicative language features in social networking environment. *GEMA Online® Journal of Language Studies*, 12(3), 817-830.
- Subrahmanyam, K., Smahel, D., & Greenfield, P. (2006). Connecting developmental constructions to the Internet: Identity presentation and sexual exploration in online teen chat rooms. *Developmental Psychology*, 42(3), 395-406.
- Thomson, R., & Murachver, T. (2001). Predicting gender from electronic discourse. *British Journal of Social Psychology*, 40(2), 193-208.
- Thomson, R., Murachver, T., & Green, J. (2001). Where is the gender in gendered language? *Psychological Science*, 12(2), 171-175.
- Ting, S. H., & Yeo, D. (2019). Code-switching Functions in Facebook Wallposts. *Human Behaviour, Development and Society*, 20(3), 7-18.
- Van Deursen, A. J., & Van Dijk, J. A. (2014). The digital divide shifts to differences in usage. *New Media & Society*, 16(3), 507-526.
- Yates, S. J. (2001). Gender, language and CMC for education. *Learning and Instruction*, 11(1), 21-34.
- Yeo, D., & Ting, S. (2017). Netspeak features in Facebook communication of Malaysian university students. *Journal of Advanced Research in Social and Behavioural Sciences*, 6(1), 81-90.

APPENDIX

Appendix 1: Facebook comments presented to participants for them to guess the gender of the commenter

Gender of Commenter	Facebook Comment
1. Female	<i>belajar berkata benda baik2... blajar sebut perkataan positif.. Puasa sebut perkataan negatif.. atur tiap kata sebelum berkata-kata.. tapis perkataan2 yg nk digunakan.. tak boleh main hembur je..</i> [Learn how to say good things... learn how to say positive words.. Fasting while saying negative words.. arrange every word before speaking.. filter words that you are using.. Don't spill out everything]
2. Male	<i>anjing pun xmcm dorg Jan</i> [Dog is also not like them Jan]
3. Male	<i>Beginikah imej yang ditunjukkan oleh pihak yang melaungkan perjuangan utk ummah?Malu..Seharusnya menjadi pengajaran pada pru-14 supaya ubah sikap kepada lebih baik.Tak hairan lah kalau ini puak2 yang makan minun hasil yang syubhah sebab terbukti dari imej yang dibawa</i> [Is this the image of someone who strives for communal unity? Shame.. This should be a lesson to PRU-14 to improve their behaviour to be better. It's not strange if these are the people who eat and drink from suspicious sources as proven from the image they are displaying]
4. Male	Assssssshole! WTF i just watched? Sorry, i don't watch gegarwhatever. He really did that? I hope any lawyer can approach the girl and provide free service to <i>saman malu</i> [slander] to aliffwhatever....
5. Female	<i>Masalah org Malaysia dan negara2 jiran (asia la senang cerita). Definisi cantik tu mestilah putih cerah kurus mantop tinggi. Menyampah dgn mentaliti mcmni.</i> [The problem with Malaysians and neighbouring countries, Asia la, to simplify matters. The definition of beautiful, must be fair, thin and tall. Hate such mentality.]
6. Male	<i>Bodohlah cara market macam tu aibkan org.... Org mcm ni yg aku nak tengok dia jatuh miskin...</i> [This marketing tactic to disgrace someone is stupid.. I want to see this kind of person become poor]
7. Male	Deepest condolence to the family... What i can say is the govt need to imposed very high penalties and punishment to whoever drunk n drive and also taking drugs and drive.. When the govt fix very high punishment then only we can stop this kinda of issue. No matter who but end of the day the other get the impact I, such not fair at all...

8. Female	Rest In Peace Moey. I will pray you for the justice. My deep condolence to your family. Although the fella come for apologize already useless. He can't return a son for the family.
9. Male	Dear ladies, you know what happen when your bf agrees to have sex after marriage.
10. Female	<i>kau p lepak masjid la kalau macam ni PON tak boleh.</i> [You should loiter in the mosque if this isn't even allowed] Boooo. Nerdnerdnerdnerd
11. Female	Oh my god! From your profile, I can see that you have worked for good companies. and you are an engineer. That is something to be proud of. <i>Takpe lah, kulit tanned ke apa. Janji duit gaji masuk banyak!</i> [It's alright, tanned skinned or whatever. As long as the salary you receive is plentiful] Kudos to u!
12. Female	We were happy for the bean bags but then I see some roughing them up until contents spilled all over the place. Would be really sad if library decided to remove them because of a small group of uncivic-minded people.
13. Female	Would be nice that only teenagers and adults accompanying children are allowed in for safety reasons.
14. Female	Sad to hear this but I think it is the best for the time being. I brought my children last sunday and it was a mess, havoc because of irresponsible parents and children. <i>Part menconteng tu paling sedih la...</i> [The scribbling part is the most depressing]