

Two Studies Investigating Gender Differences in Response to Facebook Status Updates

Richard Joiner*, Lina Dapkeviciute*,
Helen Johnson †, Jeff Gavin* & Mark Brosnan*

*University of Bath UK, †University of Brighton UK
r.joiner@bath.ac.uk

Abstract

We conducted two studies to examine gender differences in response to Facebook status updates. The first study surveyed 600 undergraduate students (388 females and 207 males), and analysed males' and females' responses to Facebook status updates. Females were significantly more likely to post a public reply than males, and female public replies also contained higher levels of emotional support. There were no significant gender differences in private replies to Facebook status updates. Males showed significantly higher levels of emotional support in private messages than in public replies. There was no significant difference in terms of level of emotional support between females' public replies and private messages. The second study investigated gender differences in response to Facebook status updates from same gender friends compared to opposite gender friends. We surveyed 522 undergraduate students (216 females and 306 males), and analysed males' and females' responses to two Facebook status updates: one from a same gender close friend and one from an opposite gender close friend. Females showed higher levels of emotional support than males to a Facebook status update from a same gender friend. In contrast, there were no significant gender differences in response to an opposite gender friend. Males showed higher levels of emotional support in private replies than public replies to same gender friends. There was no difference in level of emotional support between females' public replies and private messages. The implications of these findings for explanations of gender differences in language use are discussed.

Introduction

Several large scale nationally representative surveys of the USA have reported that females use social networking sites (SNS) more than males. Duggan & Smith (2013) reported 76% of female internet users used Facebook compared to only 66% of male internet users. Thelwell, Wilkinson and Uppal (2009) explored gender differences in emotional

language in MySpace comments and found that female comments contained more instances of positive emotion and support than males' comments, but there was no difference in terms of negative emotion. It is consistent with findings concerning gender differences in language (Lakoff, 1975; Tannen, 1990). One of the most consistent findings is that females are more likely to use affiliative language (used for connecting to others), whereas males are more likely to use assertive language (used for dominance, and achieving practical goals) - see Leaper (2014) for a review.

There are there a number of explanations for these gender differences in language. The first is the socialisation theory (Matz & Borker, 1982), which emphasises the impact of gender stereotypical activities, and same sex peer groups. By participating in these gender segregated peer groups and their associated activities, males and females develop different norms, social identities and language use. For example, research has shown that girls' interactions are more likely to involve cooperative social dramatic activities, and boys are more likely to participate in more solitary or competitive group play. Matz and Borker (1982), argue that these gender differences in activities lead to gender differences in language. Girls learn to use language to create and maintain social closeness through supportive and inclusive forms of talk, and boys use language to assert their dominance through commands and challenging statements.

The second explanation is the social context theory (Deaux & Major, 1987), which emphasises the social interactive impact of context, rather than individual factors. As contextual factors change, so too would males' and females' language and communication. For example, one important aspect of contextual influence is males' greater status in society. Males may therefore be more likely to dominate social interactions through the use of self-assertive language, whereas females may be more likely to act subordinately through using more affiliative language. Another important aspect of contextual influence is the activity setting. Males and females often engage in differ-

ent activities, which in turn have their associated patterns of language. Affiliative language is more appropriate in self-disclosure tasks (more commonly associated with females), and assertive language is more appropriate in task oriented activities (more commonly associated with males). Finally, another important aspect of context is group size and familiarity. Deaux & Major (1987) showed that people behave in more stereotypical ways in front of larger and unfamiliar groups. These two explanations are not mutually exclusive and could both explain any observed gender differences in language use.

The aim of study 1 was to examine gender differences in language use on Facebook by analysing public and private replies to different Facebook status updates. Public replies to Facebook status updates could be viewed as communication in a larger group context, whereas private messages could be viewed as communication in a small group or one to one context with a familiar person. The socialisation perspective, would predict that gender differences in affiliative language would be evident regardless of whether it is a public reply or private message in response to a Facebook status update. Therefore, the study will test the following two hypotheses.

H1: Females will use more affiliative language than males when replying publically to a Facebook status update than males.

H2: Females will use more affiliative language than males when sending a private message to a Facebook status update than males.

Study 1

Table 1. Coding System for Levels of Support in Facebook Status Responses.

Level	Label	Examples
0	Absence of any supportive elements	'My day is probably worse than yours'
1	Some weak supportive elements	'What's wrong?'
2	Clear supportive elements	'What's wrong babe? :('
3	Multiple supportive elements	'Hey, what's wrong? Give me a call xxx'
4	Overwhelmingly supportive elements	'Ah what's up? Are you ok? Do you want to talk? Big hugs? Xx'

Method

The study involved 600 first year undergraduate students (388 females and 207 males), with a mean age of 19.2 (SD= 2.76). They completed a questionnaire, which was distributed during lectures and contained two Facebook status updates: 'I'm having a really rubbish day' and 'Ooooh my iPhone has arrived! Will pick it up tomorrow

v v v exciting'. The participants were asked would they write a public reply to the Facebook status update, and/or send the close friend a private message. We coded the level of emotional support expressed in the public replies and personal messages by adapting the classification system developed by Thelwall et al. (2009), shown in table 1.

Results

In response to the 'Rubbish Day' Facebook status update, there was a significant gender difference, in terms of the level of emotional support in public replies ($t(57) = -3.43$, $p < 0.005$, $d = 0.70$). Females ($M = 1.54$, $SD = 0.85$) showed higher levels of support than males ($M = 0.98$, $SD = 0.75$). Similarly, for the 'iPhone' Facebook status update, there was a significant gender difference in terms of the level of emotional support in public replies ($t(61) = 3.20$, $p < 0.005$, $d = 0.85$), with females ($M = 0.79$, $SD = 0.63$) showing higher levels of support than males ($M = 0.32$, $SD = 0.48$). In contrast, there was no significant difference between males ($M = 1.45$, $SD = 0.74$) and females ($M = 1.56$, $SD = 0.80$) in terms of the level of emotional support in private messages in response to the 'Rubbish Day' Facebook status update ($t(256) = -1.26$, $p = 0.20$, $d = 0.14$). Similar findings were found for the 'iPhone' Facebook status update. There was no gender difference in terms of level of emotional support provided in private messages ($t(12) = 0.4$, $p = 0.4$, $d = 0.46$), although it has to be noted that the numbers are very small. Next, we compared the level of emotional support in public replies compared to private messages. Males showed significantly higher levels of emotional support in private messages than in public replies, ('Rubbish day', $t(11) = 3.02$, $p = 0.01$, $d = 0.88$), whereas there was no significant difference between levels of emotional support in female public replies and private messages ('Rubbish day', $t(55) = 1.11$, $p = .27$, $d = 0.14$). We did not compare the level of emotional support in male and females' response to the 'iPhone' Facebook status update, as the number of public replies and personal message were too small

Discussion

Study 1 was designed to investigate gender differences in public and private responses to two Facebook status updates. We found support for hypothesis 1. Females showed significantly higher levels of emotional support in their public replies than males, for both Facebook status updates. However we found no support for hypothesis 2. There was no significant difference between males and females in terms of the level of emotional support in private messages for both status updates. Thus study 1 has found support for the social context explanation of gender differences in language.

In study 1, we asked the participants how they would respond to a Facebook status update from a close friend, but we did not specify whether it was a friend of the same or

opposite gender. The different explanations for gender differences in language would make different predictions concerning language in relation to a same or opposite gender friends (Carli, 1989, 1990). The socialization explanation would predict that the greatest gender language differences would arise from same-gendered friend, as both parties would follow the same behavioral norms. In contrast, the social context explanation would predict that the gender differences would be greatest when respondents replied to an opposite gender friend, as gender becomes a status characteristic in mixed gender interactions (Carli, 1989, 1990).

Thus study 2 was designed to test these two conflicting hypotheses by examining gender differences in affiliative language when responding to a same gender close friend compared to when responding to an opposite gender close friend. It tested the following hypotheses.

H3: Gender differences in affiliative language when responding to a Facebook status update would be greatest when participants were responding to a same gender friend (socialization hypothesis).

H4: Gender differences in affiliative language when responding to a Facebook status update would be greatest when responding to an opposite gender friend (social context hypothesis).

Study 2

Table 2. Coding System for Levels of Support in Facebook Status Responses.

Level	Label	Examples
'-1'	Unsupportive elements	'Grow a pair of balls'
'0'	Absence of any supportive elements	'My day is probably worse than yours'
'1'	Some weak supportive elements	'What's wrong?'
'2'	Clear supportive elements	'What's wrong babe? :('
'3'	Multiple supportive elements	'Hey, what's wrong? Give me a call xxx'
'4'	Overwhelmingly supportive elements	'Ah what's up? Are you ok? Do you want to talk? Big hugs? Xx'

Method

Study 2 involved 522 undergraduate students (306 males and 216 were females), with a mean age of 19.01 years (SD = 2.09). They completed a questionnaire which contained two Facebook status updates: "I'm having a really rubbish day" and "It's only midday and today can't get any worse. Need a hug". The procedure was the same as study 1. The order of the Facebook status update and the gender of the close friend were counterbalanced. We analysed the level of emotional support expressed in the public replies

and private messages by adapting the classification system used in study 1 (see table 2).

Results

We first analyzed whether there were any gender differences in response to a Facebook status update from a same gender friend. There was a significant gender difference, in terms of the level of emotional support in public replies ($t(92) = -4.74, p < 0.005, d = 0.83$). Females ($M = 1.49, SD = 0.88$) showed higher levels of support than males ($M = 0.28, SD = 1.46$). Furthermore, there was a significant gender difference, in the level of emotional support in private messages ($t(206) = -4.06, p < 0.005, d = 0.55$). Females ($M = 1.45, SD = 0.73$) showed higher levels of support than males ($M = 1.02, SD = 0.80$). We compared the level of emotional support in public replies and personal messages. Males showed significantly higher levels of emotional support in private messages than in public replies, $t(10) = 3.54, p = 0.006, d = 1.45$, whereas there was no significant difference between levels of emotional support in female public replies compared with their private messages, $t(17) = 0.0, p = 1, d = 0.0$.

Next we analyzed whether there were any gender differences in response to a Facebook status update from an opposite gender friend. There was none, in terms of the level of emotional support in public replies ($t(76) = 0.12, p > 0.05, d = 0.03$). Females ($M = 1.15, SD = 0.90$) showed slightly lower levels of support than males ($M = 1.18, SD = 1.04$). Furthermore, there was no gender difference, in terms of the level of emotional support in private messages ($t(187) = 0.85, p > 0.05, d = 0.12$). Females ($M = 1.29, SD = 0.57$) showed lower levels of support than males ($M = 1.37, SD = 0.73$). Finally, we compared the level of emotional support in public replies and personal messages. There was no significant difference between levels of emotional support in males' public replies compared to their private messages ($t(8) = 0.20, p > 0.05, d = 0.16$) and there was no significant difference between levels of emotional support in female public replies and personal messages, $t(14) = 0.0, p = 1, d = 0.00$, although the small sample size has to be noted.

Discussion

Study 2 was designed to investigate gender differences in response to two Facebook status updates from same gender friends compared to opposite gender friends. There was no significant gender difference between males and females in terms of the level of emotional support in both their public replies and private messages for opposite gender friends, which does not support hypothesis 3. However females showed significantly higher levels of emotional support in both their public replies and private replies than males for same gender friends, which supports hypothesis 4. Thus study 2 found support for the socialization explanation for gender differences in language development.

Interestingly we also replicated the finding found in study 1 where males' level of support was highest in private messages compared to public messages for same gender friends, which supports the social context explanation.

The findings from both these studies support the socialization and social context explanation. The socialization explanation predicts greater gender differences in same gender interactions than in opposite gender interactions, whereas the social context explanation predicts greater gender differences in interactions with the opposite sex (Carli, 1989; 1990) The findings in study 2 that females show higher levels of emotional support than males in response to a Facebook status update from a same gender friend, whereas there is no gender differences in terms of emotional support in response to an opposite sex friend supports the socialization explanation. These findings are consistent with more general research on gender differences in language. Leaper & Ayres (1987) in their meta-analysis reported that there were greater gender differences in same gender interactions than in opposite gender interactions.

However, there are findings in this study which supports the social context explanation. In study 1, males showed higher levels support in private messages compared to public responses and this finding was replicated in study 2 with Males showing higher levels of support to a Facebook status update from a same gender friend in private messages than in public responses. These findings also support previous research, which has shown that people are more likely to behave in stereotypical ways in front of larger unfamiliar groups of people than in front of small familiar groups of people (Deaux and Major, 1987). Public replies to Facebook status updates can be viewed as communication in a large group context in front of unfamiliar people, whereas private messages can be viewed as one to one communications with a familiar person. The Facebook status updates are examples of self-disclosure (a stereotypically female topic), which may be why females appeared to be more comfortable showing public displays of emotional support when responding to these Facebook status update than males, whereas in private, individuals behave in less stereotypical ways and thus the gender differences observed were reduced.

In conclusion, we found that females showed higher levels of emotional support in public replies and private messages than males in response to a Facebook status update from a same gender friend, but that this gender difference disappeared in response to a Facebook status update from an opposite gender friend. Males were more supportive to a Facebook status update from male friend in private than in public. These findings show that gender has an important role to play in the language used on social networking sites.

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