The Writing on the Stall: Gender and Graffiti
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The Writing on the Stall
Gender and Graffiti

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Research looking at toilet graffiti has focused on topic at the expense of a communication perspective and has also suffered from a number of methodological failings. This study sought to remedy this and integrate the research into the social identity and de-individuation model and communication accommodation theory. Graffiti were collected verbatim from adjacent male toilets, female toilets, and study booths. Strong gender differences were found for topic. Graffiti from the female toilets tended to be more polite and interactive, whereas those from the male toilets were more argumentative and negative. Gender differences in language style were more subtle but generally consistent with those found in other contexts. Gendered language was mitigated in the mixed-gender context. Topics in the mixed-gender context were a composite of the topics found in the men’s and women’s toilets but also included the only sexist remarks in the data.

Keywords: gender; language; communication; graffiti

Toilet graffiti is a unique window into the relationship between gender, language, and social context. However, research on toilet graffiti over the last 96 years has focused on topic at the expense of language style and, further, has been plagued with methodological problems. Also, important to our understanding of how women and men communicate, no comparable situation in which both men and women write graffiti has ever been studied. This study sought to set a new benchmark: looking not just at the topic of graffiti but also at the language style in which inscriptions were written, and not only in male and female toilets but also in an analogous mixed-gender context.

Public toilets are a context in which gender is very salient. Cues include the sign on the door, the presence of others of one’s own gender.

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only, and the biological act of going to the toilet. Cubicles also make it private and anonymous. A naïve model would be to argue that toilet graffiti could be a gendered baseline, with no influence of the other gender or of audience effects. However, the social identity and de-individuation (SIDE) model (e.g., Postmes, Spears, & Lea, 1999; Spears & Lea, 1992) suggests that these same conditions, a salient group identity (here gender) and anonymity, would lead to behavior polarization. Spears and Lea (1992) suggested that people,

are more likely to be influenced by it [group identity] under de-individuating conditions because the visual anonymity will further reduce perceived intragroup differences, thereby increasing the salience of the group. (p. 47)

For example, Postmes and Spears (Study 2, 2002) found that in a de-personalized situation with high gender salience and a masculine topic, males dominated the conversation more than situations without de-personalization and/or gender salience. Thus, because of its inherent privacy and gender salience, the toilet is an ideal context for stereotypic gendered behavior to occur. Following Postmes and Spears’s findings, graffiti written by men might engage in argumentative debate, trying to dominate the discourse. For women, the stereotype of female conversation as being supportive and facilitative (e.g., Tannen, 1990) might be exaggerated in the toilet. It is less clear what might happen in a mixed-gender context and would depend on what group cues were salient. Were gender to be salient, for example, it is possible that men could continue to try to dominate. Whether the women would continue to facilitate is a moot point and something the present study can shed light on.

Communication accommodation theory (CAT) (see Boggs & Giles, 1999, for a recent summary) focuses on how people with different language styles adapt to each other, again, especially with relation to group membership. Broadly, accommodation is the process whereby people either match (converge) or fail to match (diverge) the language style and other behaviors of those they are interacting with. In the single-gender context of the toilet, gendered norms are likely to prevail, as the language styles of those interacting are likely to be more similar than different. However, in the mixed-gender context, adaptation is likely to occur.

Previous research on graffiti has primarily focused on quantity and topic differences. Males have been seen to write far more inscriptions in numerous studies (e.g., Kinsey, Pomeroy, Martin, & Gebhard, 1953; Otta, 1993; Schreer & Strichartz, 1997; Sechrest & Flores, 1969). However, Stocker, Dutcher, Hargrove, and Cook (1972) found more graffiti were written by females than males in more liberal universities but the reverse in more conservative universities. Studies in North American high schools have found up to 80% of graffiti written by females...
(Ahmed, 1981; Wales & Brewer, 1976; but see Peretti, Carter, & McClinton, 1977, 40%).

Previous comparisons of the number of inscriptions are problematic, however, as graffiti generally have not been sampled over time, and gender differences in toilet usage have not been accounted for. Two creative attempts have tried to address this problem, but each study has looked at only a single gender. Buser and Ferreira (1980) measured the quantity of toilet paper used in the women's toilets as an indicator of use, whereas Rhyne and Ullmann (1972) had experimenters posing as plumbers check each cubicle after use. Neither of these methodologies was feasible (or desirable) for the current study, so I have not examined quantity difference, either in number of inscriptions or words.

Extreme gender differences in quantity have then posed problems for topic comparisons. Generally speaking, it is desirable to look at proportions rather than absolute frequencies. However, in many studies the utter paucity of graffiti from one gender or the other makes this questionable. For example, Otta (1993) found 15.4% of male graffiti and 14.9% of female graffiti written on a single topic (politics). However, with 80% of the graffiti written by males, this equates to 65 and 14 inscriptions respectively. With a four-fold difference in magnitude in the absolute number of inscriptions, it becomes more dubious to conclude that men and women have a similar focus on politics. A better contrast would occur in a situation where men and women wrote more comparable numbers of inscriptions. Currently, few studies achieve this criterion.

Some previous work has also been difficult to interpret as a result of very specific (and sometimes outrageous) research questions. For example, graffiti have been used to gain insight into human sexuality (Kinsey et al., 1953), phallic expression (Landy & Steele, 1967), and even understanding teenagers (“manifestations of the adolescent personality,” Peretti et al., 1977). However, topic categories such as “idealism” and “references to lips” make little sense out of their theoretical context.

Recent work has taken a more atheoretical approach to analyzing topics in graffiti. However, perhaps because of some of the quantity/usage problems outlined, the most consistent finding is that there is a gender difference, but the valence of differences on a single topic is often not consistent between studies. For example, males have been found to write more graffiti on political topics (e.g., Loewenstein, Ponticos, & Paludi, 1982; Otta et al., 1996), females more (Schreer & Strichartz, 1997) or little difference (Otta, 1993).

Along with politics, sex is one of the most common graffiti topics. Research has found more sexual graffiti written by females (Bates & Martin, 1980), more by males (Schreer & Strichartz, 1997), or no difference (Otta et al., 1996). Some have argued for a qualitative difference,
with males writing more “erotic” inscriptions and females writing more “romantic” inscriptions (Ahmed, 1981; Wales & Brewer, 1976). Wales and Brewer (1976) also found that the quantity of erotic graffiti written by females increased with the socioeconomic status of the population studied. Also, homosexual inscriptions are typically more frequent in male toilets (e.g., Schreer & Strichartz, 1997).

Some topic differences are more consistent. Female graffiti often contains “advice to the love-forlorn and [on] existential issues about life, marriage, and happiness” (Loewenstine et al., 1982, p. 308). This forms a stark contrast with the negative topics associated with male graffiti. These include more racially prejudiced graffiti (e.g., Bruner & Kelso, 1981; Otta, 1993; Schreer & Strichartz, 1997; Stocker et al., 1972), more homophobic graffiti (e.g., Schreer & Strichartz, 1997; Stocker et al., 1972), and more insults (e.g., Bruner & Kelso, 1981; Otta, 1993; but see Bates & Martin, 1980; Solomon & Yager, 1975):

Research Question 1. Are there topic differences in graffiti, depending on whether they are written in an all-male, all-female, or mixed-gender context?

Apart from studies of topic, only one very brief research report has been published on gendered language in graffiti. Loewenstine et al. (1982) found that females used more tag questions, hypercorrect grammar, and empty adjectives in their graffiti, whereas males used more expletives. The report contains little additional information or methodology and was grounded in Lakoff’s (1975) analysis of gendered language. Although hugely influential, Lakoff’s (1975) work does not represent current thinking. Thus, more comprehensive research incorporating recent theory and methodology would increase our understanding of gendered language styles in graffiti.

Research in other media has identified the following as features of gendered language style. Females are more likely to ask questions (Fitzpatrick, Mulac, & Dindia, 1995; Tannen, 1994), disclose personal information (a meta-analysis by Dindia & Allen, 1992), and refer to emotion (Fitzpatrick et al., 1995; Goldsmith & Dun, 1997; Mulac, Studley, & Blau, 1990; but see Anderson & Leaper, 1998). Females also, on average, use a greater frequency of intensifying adverbs (Fitzpatrick et al., 1995; McMillan, Clifton, McGrath, & Gale, 1977; Mulac et al., 1990), modals/hedges (Fitzpatrick et al., 1995; McMillan et al., 1990), and subordinating clauses (Mulac & Lundell, 1986). In contrast, males are more likely to give opinions (Mulac & Lundell, 1986; Mulac et al., 1990), use expletives (Bayard & Krishnayya, 2001; Limbrick, 1991; but only in single-sex groups), and use longer sentences (Mulac, 1989; Mulac et al., 1990; but cf. Mulac & Lundell, 1986).
Research Question 2. Are there language style differences in graffiti, depending on whether they are written in an all-male, all-female, or mixed-gender context?

METHOD

SAMPLE

The University of Otago’s Central Library was selected as the location for this study for the proliferation of graffiti commonly found in university libraries (e.g., Brockie, 1974; Schreer & Strichartz, 1997), the availability of study booths for contrast, and the fairly equivalent amounts of graffiti written by females and males. The toilets selected were adjacent male and female toilets on the first (upper) floor, with the study booths nearby. The study booths were used for the mixed gender situation in preference to desks, as they more closely replicate the context and privacy of a toilet cubicle (being enclosed on three sides). The male and female toilets were fitted with “graffiti boards,” which were intended to deflect writing from the walls onto a more easily cleaned surface. The study booths were lined with linoleum. Both types of surface are easy to write on, even with a pencil or biro.

It can be assumed that participants were predominantly humanities and commerce students at the University of Otago (as there are separate libraries for science, law, and medicine). It is likely to be a largely undergraduate population, but postgraduates and staff may have contributed. Technically, the library is open to the public, but the first floor location makes casual visitors less likely. The close proximity of the study booths and the toilets means it is likely that people writing graffiti in the toilets are the same people writing graffiti in the study booths.

The final sample contained 723 inscriptions, with 189 from the female toilets, 268 from the male toilets, and 266 from the study booths. The female toilets contained fewer inscriptions overall but with 2585 words contained slightly more than the 2398 words from the male toilets and the 2135 words from the study booths. This relative equality in the sample enabled comparison without the absolute- versus relative-frequency problems of previous research.

PROCEDURE

All graffiti, including pictures, were transcribed verbatim by four trained recorders. Different authors were identified through pen and writing style changes and were indicated in a standardized transcription procedure. Graffiti were sampled three times over a month, at 2-
week intervals. Collection took place in the early morning, just after
the library opened, to minimize contact with library patrons.

MEASURES

The number of words in each inscription was counted. It was also
recorded as to whether each inscription was a reply to another inscrip-
tion and whether it contained a verb. They were then coded for topic
and gendered language style.

Topic categories were derived from analysis of the data and were
chosen to retain the greatest amount of meaningful information inher-
ent in the graffiti, rather than being theoretically driven. Categories
were: sex discussions, sex requests, sex descriptions, homosexuality,
rape discussions, politics, tax/student fees/debt, personal advice, rac-
ism, drinking/drugs, humor, religion, insults, love/romance, music,
sport, “alternative” people, academic courses, graffiti about graffiti,
presence (e.g., initials, or “I was here”), sexist remarks, philosophy,
exams/study, body image, placations (e.g., “calm down”), and “other.” A
second individual independently coded 25% of the data, with 89.7%
agreement between coders.

Coded gendered-language features previously associated more with
males were expletives and opinions (e.g., “Tax the Rich, they can afford
it”). Female features were intensifiers, subcoded as either expletive
intensifiers (e.g., “There is no *f*##ing god”) or other intensifiers (e.g., “I
can’t understand why women get so excited about All Blacks and High-
landers”); hedges (e.g., “I’m quite sure”); subordinate clauses (e.g.,
“Student politics is so vicious, because the stakes are so low”); emo-
tional references (e.g., “I really love my man”); personal information
(e.g., “I might be pregnant”); and questions (e.g., “Is anyone else here an
epileptic?”). Additionally, the number of empathic statements (e.g.,
“once I had the same and realized [it] was because of guilty feelings
about sex”) and the total number of adjectives were recorded, subcoded
as attributive adjectives (e.g., “Let the annual pointless hypocritical
religious debates begin”) or predicate adjectives (e.g., “it was good”).
Twenty-five percent of the inscriptions were independently analyzed
by a second coder. Reliabilities were acceptable, with all alphas being
greater than 0.82.

Additionally, the Naïve Bayes classifier (for a detailed explanation
see Mitchell, 1997), a computer-based text analysis tool, was used to
explore gendered language for the first time. The Classifier uses a mod-
ified version of Bayes Theorem to distinguish two different language
styles. It calculates the frequency of every word in each of two texts, in
this case, a file of all the male graffiti and a file of all the female graffiti.
From these frequencies it then calculates a gender probability for each
unique word. A third text can be analyzed, here, a file of all the study
booth data. Again, a frequency for each word is calculated. The
observed frequency of each word in the study booth is then compared to
the gender probability for that word, yielding a probability, on a word
by word basis, that the study booth text is either more likely to be
female or more likely to be male. These probabilities are combined to
yield an overall probability that the text is male and an overall proba-
bility that the text is female. The final “classification” is calculated by
dividing the higher probability by the lower, producing a ratio (e.g.,
likely to be male 10,000:1). An output file of the frequency of each word
is also generated. The most frequently occurring words for each loca-
tion were studied, and the following new categories were formed on
that basis: pronouns, articles, coordinating conjunctions, prepositions,
and conjugations of the verbs be, do, and have.

RESULTS

Research Question 1. Are there topic differences in graffiti, depend-
ing on whether they are written in an all-male, all-female, or mixed-
gender context?

Percentages and frequencies of inscriptions written on different top-
ics in the female toilets, study booths, and male toilets, along with sta-
tistical comparisons are summarized in Table 1. Statistical tests
between locations were pair-wise chi-square comparisons, analyzing
two locations at a time. Where an expected frequency for a cell was less
than five, the Yates correction for small expected frequencies was used.

The most dominant topics in the male toilets were politics, plus dis-
cussions on tax levels and how these relate to tuition fees and student
debt. Together these account for almost 20 percent of the male graffiti,
compared with two inscriptions in the study booths and none in the
female toilets.

The male toilets also contained all of the racist graffiti in the sample.
These were generally very hostile and offensive and included many of
the insults in the male sample. In addition to males writing almost four
times more insults than females, there also appeared to be a qualita-
tive difference. Insults in the female toilets were not always as aggres-
sive or offensive as those in the male toilets. The study booths also con-
tained a large number of insults.

Males drew more pictures than females, including 5 depictions of
sex acts, 6 presence drawings, 5 swastikas, and 12 “other.” The few pic-
tures in the female toilets (5 smiley faces, a sad face, a winking face,
and a love heart) were less elaborate but tended to convey emotive con-
tent. The study booth featured mostly presence (n = 6) and “other”
drawings (n = 12), which included everything from a house with a
picket fence to mushrooms. The male toilets and study booths also con-
tained more “presence” inscriptions than the female toilets (presence
especially meaning “I was here,” e.g., “T.J.,” “CHETWIN”).
In contrast, inscriptions in the women’s toilets were talking about love and romance, soliciting personal advice on health issues and relationships, and discussing what exact act constitutes rape. Women also tried to placate more heated discussions (e.g., “Stop this. There is no reason to say these things. Why so much in-fighting?”). Also, in a more heated discussion, a writer reinterpreted a previous writer’s comment in a face-saving attempt (“I think what she is saying is that chick’s [sic] aren’t being as cautious as they should be”). The use of the term “in-fighting” also implies a sense of belonging to a group. This perceived

<table>
<thead>
<tr>
<th>Topic</th>
<th>Female Toilets</th>
<th>Study Booths</th>
<th>Male Toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 189)</td>
<td>(n = 265)</td>
<td>(n = 268)</td>
</tr>
<tr>
<td>Male-typical topics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insults</td>
<td>5.8,1</td>
<td>16.2,4</td>
<td>11.9,3</td>
</tr>
<tr>
<td>Politics</td>
<td>0,0</td>
<td>0.8,2</td>
<td>9.3,25</td>
</tr>
<tr>
<td>Tax/fees/debt</td>
<td>0,0</td>
<td>0.0,0</td>
<td>9.3,25</td>
</tr>
<tr>
<td>Racism</td>
<td>0,0</td>
<td>0.0,0</td>
<td>7.1,19</td>
</tr>
<tr>
<td>Presence</td>
<td>0.5,1</td>
<td>4.5,12</td>
<td>7.1,19</td>
</tr>
<tr>
<td>Female-typical topics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rape discussions</td>
<td>13.2,2</td>
<td>0.0,0</td>
<td>0.4,0</td>
</tr>
<tr>
<td>Religion</td>
<td>13.2,2</td>
<td>9.8,26</td>
<td>1.5,4</td>
</tr>
<tr>
<td>Personal advice</td>
<td>10.6,20</td>
<td>1.1,3</td>
<td>0.0,0</td>
</tr>
<tr>
<td>Love/romance</td>
<td>7.9,15</td>
<td>2.6,7</td>
<td>1.9,5</td>
</tr>
<tr>
<td>Philosophy</td>
<td>5.8,11</td>
<td>9.8,26</td>
<td>1.9,5</td>
</tr>
<tr>
<td>Placation</td>
<td>3.7,7</td>
<td>0.4,1</td>
<td>0.0,0</td>
</tr>
<tr>
<td>Body image</td>
<td>3.2,6</td>
<td>0.4,1</td>
<td>0.4,1</td>
</tr>
<tr>
<td>Sex-related topics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex discussions</td>
<td>19.0,36</td>
<td>4.5,12</td>
<td>0.4,1</td>
</tr>
<tr>
<td>Sex descriptions</td>
<td>0,0</td>
<td>1.1,3</td>
<td>2.6,7</td>
</tr>
<tr>
<td>Homosexuality</td>
<td>0,0</td>
<td>0.0,0</td>
<td>2.6,7</td>
</tr>
<tr>
<td>Sex requests</td>
<td>0,0</td>
<td>2.3,6</td>
<td>9.3,25</td>
</tr>
<tr>
<td>Miscellaneous topics</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humor</td>
<td>5.8,11</td>
<td>16.2,43</td>
<td>10.8,29</td>
</tr>
<tr>
<td>Drinking/drugs</td>
<td>5.8,11</td>
<td>8.7,23</td>
<td>1.1,3</td>
</tr>
<tr>
<td>Course</td>
<td>3.2,6</td>
<td>0.8,2</td>
<td>7.5,20</td>
</tr>
<tr>
<td>Graffiti</td>
<td>3.7,7</td>
<td>2.3,6</td>
<td>0.4,1</td>
</tr>
<tr>
<td>Alternativism</td>
<td>0,0</td>
<td>3.8,10</td>
<td>0.4,1</td>
</tr>
<tr>
<td>Sexism</td>
<td>0,0</td>
<td>1.5,4</td>
<td>0,0</td>
</tr>
<tr>
<td>Exams/study</td>
<td>0.5,1</td>
<td>1.9,5</td>
<td>0,0</td>
</tr>
<tr>
<td>Sport</td>
<td>1.6,3</td>
<td>1.9,5</td>
<td>2.2,6</td>
</tr>
<tr>
<td>Music</td>
<td>1.1,2</td>
<td>0.4,1</td>
<td>1.1,3</td>
</tr>
<tr>
<td>Other</td>
<td>6.3,12</td>
<td>15.5,41</td>
<td>17.5,47</td>
</tr>
</tbody>
</table>

1. Percentages not sharing the same subscript differ at p = .05 calculated from pairwise chi-square comparisons calculated on the raw data, with “a” denoting the lowest percentage.
2. No statistical comparisons were conducted for the “other” category.
sense of group was also found in graffiti about graffiti, which were written more by women than men. For example (in reference to previous graffiti), “Gosh we females need to work on our sense of humor—we are so serious.”

Females discussed body image more than males did. There was also a difference in focus: females listed their height and weight, whereas males listed their penis size.

More debates on religion and philosophy were found in the women’s toilets than the men’s toilets (e.g., “Does anyone know why God created evil?”). When these debates were found in the men’s toilets, they tended to be more spurious and less passionate (e.g., “Let the annual pointless hypocritical religious debates begin for the last time this millennium!”).

There was quite a high incidence of drug and drinking related graffiti in the female toilets and study booths, which was absent in the male toilets. However, the discussion in the female toilets tended to be about the morality of drug use, rather than advocacy of drugs or drinking per se.

Sex-related topics were common in both the male and female toilets. There was a difference in focus, with women typically requesting and giving advice on sex, whereas men were requesting sex, the vast bulk being homosexual (25 out of 26), and often accompanied by descriptions of homosexual sex acts. All references to homosexuality occurred in the male toilets.

Graffiti topics in the study booths generally comprised a combination of those found in the male and female toilets. These included similarities to the male toilets in levels of insults and presence inscriptions and absences of rape discussions, personal advice, love romance, and body image. In between frequencies were found for sex discussions. Topics largely absent in the study booths, similar to low female frequencies, included racism, sex requests, politics, and homosexuality. Topics similar in frequency in the study booths to female toilets included religion, philosophy, and drinking/drugs.

There were also a number of unique topic features in the study booths. These included discussions about “alternatives” (alternative lifestyle). The study booths also contained no comment on academic courses, in sharp contrast to the toilets. Humor was also a pronounced feature of the study booths, with over twice as much as the female toilets and a nonsignificant increase over the male toilets.

Sexist comments were found only in the study booths (although this difference was not significant). Although it is not possible to definitively pick the gender of the author, it seemed that a fairly equal number of inscriptions were made about both males and females (although they all appeared to have been initiated by males) and that these were responded to equally. A number were highly provocative, and females appeared to use harsh insults in response. Additionally, there were
several revolting sex descriptions from the study booths that may have been intended to provoke females.

Finally, there were a number of categories that were talked about occasionally but that did not differ significantly as a function of location. These were music, exams/study, and sport. Given New Zealand's gender stereotypes (e.g., James & Saville-Smith, 1994), it is ironic to note that all male references to do with sport were on soccer, whereas those of the study booths and female toilets were concerned with rugby.

The sample overall contained a high level of inscriptions classified as "other," but this is common for studies of toilet graffiti (e.g., 37% for females, Schreer & Strichartz, 1997; 25% overall, Otta et al., 1996). This category included verb-less inscriptions that defied classification (e.g., “shy,” “Rip Curl”), as well as cryptic verbed inscriptions (e.g., “Don’t tangle with a TIGER!”). Some were initially divided into finer categories, but it simply led to a plethora of meaningless categories with one to three graffiti in each.

Research Question 2: Are there language style differences in graffiti, depending on whether they are written in an all-male, all-female, or mixed-gender context?

Three Naïve Bayesian Classifications were performed. The female graffiti was found to be more like the study booth graffiti than the male graffiti (1.5 x 10^{18}:1), the male graffiti more like study booth graffiti than female graffiti (2.2 x 10^{7}:1), and the study booth graffiti more like female graffiti than male graffiti (3.6 x 10^{12}:1). Taken together, these results suggest that the study booth and female graffiti were most alike, at least at a word occurrence level. The male graffiti, although very unlike the female and study booth graffiti, was slightly more like the study booth graffiti than the female graffiti.

The average length of inscription differed between locations, $F(2, 719) = 13.95, p < .001$. A post-hoc Student-Newman-Keuls comparison showed that the female toilets had longer inscriptions ($M = 13.7$ words) than either the male toilets ($M = 8.9$), or the study booths ($M = 8.1$), whereas there was no difference between the male toilets and the study booths. The female sample (81%) contained more verbs than the male sample (68%) or the study booth sample (70%). Inscriptions in the female toilets were also more likely to be a reply to a previous inscription (74%, $n = 140$) than those in the study booths (51%, $n = 136$), which were more likely to be a reply than those in the male toilets (41%, $n = 109$).

The relative frequencies for each gendered language feature (per hundred words), along with statistical comparisons, are shown in Table 2. Males used a substantially greater number of expletives than females. The gross adjective use of males was also greater than females. However, as can be clearly seen, this difference was due to a far higher usage of attributive adjectives by males, whereas there was
a nonsignificant trend for females to use more predicative adjectives. There was a nonsignificant trend for males to give more opinions than females. No gender difference in the relative use of emotion references, questions, articles, or coordinating conjunctions was found. Females used more hedging devices, subordinate clauses, pronouns, prepositions, and conjugations of the verbs be, do, and have than males. They also disclosed more pieces of personal information and made more empathic references. There was a nonsignificant trend for females to use a greater number of intensifiers overall than males. This is the average of two distinct effects: males used more expletives as intensifiers, whereas females used more nonexpletive words as intensifiers.

In the study booths, the use of hedges and conjugations of be and do was similar to that of females, being higher than that of males. Occurring in the study booths less often than in the female toilets were intensifiers (of the nonexpletive kind), subordinate clauses, pronouns, prepositions, personal information disclosure, and empathic statements. The rates of these features were more similar to the male toilets. Use of expletives as intensifiers was high, similar to males rather than females, with the same male-similar pattern holding for both the total number of adjectives and attributive adjectives. There was a nonsignificant trend for more opinions and less conjugations of have in the study booth compared to females, with usage similar to males. There was another nonsignificant trend for more questions in the study booths than either the male or female toilets. The only feature to have a usage clearly intermediate between the male and female toilets was expletives.

DISCUSSION

Graffiti from the men’s and women’s toilets showed clear differences in topic and more subtle differences in language style. The study booth graffiti contained a combination of topics from both the men’s and women’s toilets, plus some sexist graffiti. The language style in the study booths was broadly in between that of the male and female toilets.

Men wrote more about politics and homosexuality, and the inscriptions contained more insults and racist remarks. The tone in these topics was generally negative and argumentative. In contrast, women wrote more inscriptions discussing sex and relationship issues and about religion and philosophy. Their tone was more positive and supportive and included attempts to calm down more heated discussions. These differences are consistent with the exaggerated gender-stereotypic behavior predicted by the SIDE model.

There were also a number of topics with no gender difference in frequency. Women and men were both likely to discuss and ridicule other courses and to talk about exams/studying, sport, and music. Moreover,
no gender difference in the proportion of inscriptions with humorous intent was found.

Sexist graffiti occurred only in the study booths. This could imply that gender was salient, and consistent with the SIDE model, males continued engaging in a negative fashion (reminiscent of the flaming behavior on the internet that SIDE has been used to explain, e.g., Lea, O’Shea, Fung, & Spears, 1992). However, the return insults from the women imply an adoption of the male norm, not stereotyped female behavior. Generally, however, the topics in the study booth were similar to those in the men’s and women’s toilets.

Differences found in language style mirrored findings in other forms of communication (e.g., Mulac et al., 1990; Thomson & Murachver, 2001). A strong exception was the presence of almost no expletives (n = 5) in the women’s toilets. This is surprising, as two recent studies of spoken language in the same Otago student population found only very slight gender differences in expletives (Bayard & Krishnayya, 2001; Limbrick, 1991). Bayard and Krishnayya (2001) had expletive

Table 2
Frequencies of Each Linguistic Feature per 100 Words for Female Toilets, Study Booths, and Male Toilets

<table>
<thead>
<tr>
<th></th>
<th>Female Toilets</th>
<th>Study Booths</th>
<th>Male Toilets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 2,585 words)</td>
<td>(n = 2,135)</td>
<td>(n = 2,398)</td>
</tr>
<tr>
<td>Total adjectives</td>
<td>3.87&lt;sup&gt;a&lt;/sup&gt;</td>
<td>5.11&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6.34&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Attributive</td>
<td>1.47&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.51&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.67&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Predicative</td>
<td>2.4</td>
<td>1.59</td>
<td>1.67</td>
</tr>
<tr>
<td>Expletives</td>
<td>0.19&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.11&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.88&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Opinions</td>
<td>1.74</td>
<td>2.72</td>
<td>2.63</td>
</tr>
<tr>
<td>Emotion references</td>
<td>0.15</td>
<td>0.23</td>
<td>0.25</td>
</tr>
<tr>
<td>Questions</td>
<td>1.93</td>
<td>2.25</td>
<td>1.67</td>
</tr>
<tr>
<td>Articles&lt;sup&gt;†&lt;/sup&gt;</td>
<td>5.3</td>
<td>6.09</td>
<td>6.38</td>
</tr>
<tr>
<td>Coordinating conjunctions&lt;sup&gt;†&lt;/sup&gt;</td>
<td>2.98</td>
<td>2.48</td>
<td>2.25</td>
</tr>
<tr>
<td>Total intensifiers</td>
<td>2.05</td>
<td>1.55</td>
<td>1.42</td>
</tr>
<tr>
<td>Expletive intensifiers</td>
<td>0.12&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.61&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.46&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Other intensifiers</td>
<td>1.93&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.94&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.96&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Hedges</td>
<td>0.62&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.52&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.17&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Personal information</td>
<td>1.24&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.56&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.54&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Subordinate clauses</td>
<td>3.33&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.92&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.96&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Empathic statements</td>
<td>0.54&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.05</td>
<td>0.04&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Pronouns&lt;sup&gt;†&lt;/sup&gt;</td>
<td>12.38&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9.09</td>
<td>7.26&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Prepositions&lt;sup&gt;†&lt;/sup&gt;</td>
<td>10.87&lt;sup&gt;b&lt;/sup&gt;</td>
<td>8.85</td>
<td>8.76&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Conjugations of be&lt;sup&gt;†&lt;/sup&gt;</td>
<td>6.69&lt;sup&gt;b&lt;/sup&gt;</td>
<td>7.17&lt;sup&gt;c&lt;/sup&gt;</td>
<td>4.96&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Conjugations of do&lt;sup&gt;†&lt;/sup&gt;</td>
<td>1.78&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.83&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.83&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Conjugations of have&lt;sup&gt;†&lt;/sup&gt;</td>
<td>1.70&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1.03&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.96&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

1. Percentages not sharing the same subscript differ at p = .05 calculated from pairwise chi-square comparisons calculated on the raw data, with “a” denoting the lowest percentage.

<sup>†</sup> indicates a feature from the Naive Bayes Classification.
frequencies per hundred words in unstructured conversation of 2.54 for males and 1.45 for females, compared to 3.88 and 0.19 in the present study. This lack of expletives could be a manifestation of an exaggerated stereotype of female politeness.

The effects of a mixed-gender context on language style were harder to assess with the gender of authors unknown. Following CAT, convergence would be the most likely strategy, and the intermediary frequencies for a number of language variables and the results from the Naïve Bayes Classifier give weak support for this.

Imitation provides another explanation that could have fueled extreme gendered behavior. Over half of the inscriptions in the present sample were in response to others. Even where not directly responding to another graffito, toilet cubicles often had themes running through them. For example, one male cubicle contained the bulk of the political graffiti, with a number of different political discussions on different walls. Previous research into graffiti prevention has found that where walls are kept clean, little graffiti is written, but that where there is some graffiti already, the rate of wall-writing is higher (Collins, Leland, Molteno, & Leatham, 1981). An inflammatory graffito may then spawn further inflammatory graffiti. Conversely, a more polite interactive tone may lead to further inscriptions in a similar style. Thus, in the present contexts, where the walls were seldom clean, the graffiti style may have been “bred” over a period of time.

This imitation explanation could be tested empirically by writing the same male- or female-typed graffito in both a male and a female cubicle and analyzing the responses. This would give some indication of the extent to which differences are attributable to localized context (i.e., the surrounding graffiti) or more group level (i.e., gender) processes.

SIDE explanations could be tested by manipulating gender salience, such that lower salience should lead to reduced gender differences, whereas higher salience would lead to greater differences. To test CAT explanations would probably have to involve identifying author gender, which might prove more difficult.

This study of gender and graffiti largely confirmed the findings of previous research but was based on more sound methodology, giving us greater confidence in these results. Gendered language styles, similar to those found in other media were also found. Having built this sound base, the way is open for more theoretical studies to look at this intriguing interaction between gender, language, and social context.

NOTES

1. As no intercategory comparisons were planned, categories were not mutually exclusive, thus retaining a greater degree of information.
2. The LISP source code is available from the author.
3. Due to space constraints and the offensive nature of some graffiti, further examples on a wide variety of topics are available from the author.
4. The sexist inscriptions were the only graffiti from the study booths to which author gender could readily be assigned. It is assumed that males would not derogate themselves from a female perspective, and vice versa.

REFERENCES


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