

WGAF: SWEARING, SOCIAL STRUCTURE AND SOLIDARITY IN AN ONLINE
COMMUNITY

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For Mary, who waited so patiently for me to finish this project.

And for my proud brothers and sisters.

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1. Objectives and Hypotheses

Swearing has been shown to be one linguistic strategy deployed to affirm or enforce in-group solidarity within face-to-face communities of practice or subcultures. Daly et al. (2004) showed how members of a factory work team used swearing within the team to affirm their bond, whereas they reduced or refrained from swearing when communicating with fellow workers outside their team. Kuiper (1991) observed how a rugby team utilized a brutal form of swearing and ritual insult to enforce a hypermasculine ethos among team members.

This study examines in detail the uses and functions of swearing in an online community called Disarm the Settlers (DTS), a rock music and popular culture oriented discussion board organized by fans of the Ohio-based rock band Guided by Voices (GBV) and bandleader Robert Pollard. It will show how the dynamics of solidarity and social status and organization within the online community relate to swearing behavior, in comparison with the types of face-to-face communities studied by Daly et al., Kuiper and others.

Using a sample of 4,558 discussion board posts from 142 discussion threads, along with social network analysis (SNA) techniques to analyze the structure of cliques within the online community, three main hypotheses are tested:

1. Swearing occurs more frequently among members of the same clique.
2. Recognized leaders of the community will swear at a significantly different rate than others.
3. Male participants swear at a higher rate than female participants.

The variety of variables encoded enable additional observations about the social functions of swearing:

- Discourse functions of swear words.
- Topics of discussion where swearing occurs. Do some topics elicit a greater rate of swearing than others?
- The relative frequency of the specific swear words used.

Statistical and social network analysis are supplemented by ethnographic description to help explain aspects of the social organization of the board relevant to this study. For the ethnographic analysis I draw especially on knowledge of DTS community culture based on my participation in DTS.

This project builds on previous research on the solidarity functions of swearing while being the first study to systematically examine this function in relation to the development and social structure of an online community. Generally, the project contributes to knowledge about language usage in computer-mediated communication. Studies of online communities and how they resemble or differ from offline speech communities are increasingly important as language users spend increasing amounts of work and leisure time online.

2. Background Information

The idea for this project originated in two personal experiences. The first was a first outing with a new friend for beers at a local pub. I had met this friend through a preschool attended by our children, and we both served on the board. At a point early in the evening, one of us uttered a form of the word *fuck* and duly noted that “The ‘F-Bomb’” had made its first appearance. We mutually felt this was especially noteworthy to us, as white-collar professionals and fathers of young children who felt constrained to “watch what we say” at home and work. Later in the evening, we struck up a conversation with two automotive mechanics from a shop that specializes in foreign cars, and my friend, who then owned a 1970s-model European sports car, struck up a conversation with them. The mechanics, who obviously knew each other well, made heavy use of swear words in their speech: one of them effectively used the word *cocksucker* as a generic term for any automobile part.

The second experience originated in my musical fandom. Sometime in the year 2005, I “discovered” the Dayton, Ohio, based indie rock band Guided By Voices (GBV). Before formally breaking up in 2004, the band had built a small but intensely loyal following. Many fans had become personal friends of band members. At that point I had never attended a live performance of the band (until it re-formed for a tour in 2010) but there existed a large database of live performances on the Internet. Salient features of

these performances included lead singer Robert Pollard's heavy consumption of alcohol (while performing for three hours or longer without intermission) and prodigious use of swear words. Punk rockers (especially British performers) in the 1970s had essentially shattered the taboo against swearing in live rock performances, completing a process probably started by participants in 1960s protest movements and musical styles associated with it. But in my own experience as a rock fan, Pollard's comprehensive use of profanity in stage banter was unprecedented. His swearing behavior seemed to evolve over time, however. A 1995 performance heard on the streaming audio Internet site www.largeheartedboy.com exhibited virtually no swearing. (The web site, whose name is a reference to a GBV song, no longer streams the band's music.) Shows from the 2000s, by which time GBV's following had solidified, are full of it. It is interesting to speculate whether the unusually close relationship between performer and fans had something to do with Pollard's language use. (By contrast, Pollard has infrequently used swear words in the lyrics of his songs.)

Both experiences raised the question of the relationship between swearing and the process of building solidarity between individuals and within groups. My interest in this question was further reinforced by forays into online social networking at around the same time. Having heard that MySpace had become an online channel for indie bands to distribute their music and interact with fans, I opened an account and soon began interacting with fellow Pollard and GBV fans. After several months the owner of a Pollard fan group recommended the discussion board Disarm the Settlers (DTS) as a place to watch for news about an impending Robert Pollard solo tour.

Prior to joining MySpace and DTS, my previous involvement in online social networking and predominantly been for professional purposes (I work as a librarian and systems administrator). My online networking for leisure purposes had been limited to a bulletin board community at the undergraduate university I attended in the 1980s, and sporadic participation in various musician and music fan groups in the now antiquated Usenet system. These online venues were, for the most part, friendly and non-hostile, where swearing and other “bad language” was rare. The Pollard fan MySpace group and DTS were a different story: swearing was not only common, much of it seemed to be separated from any perceivable anger, frustration or hostility among community members. Continued participation in DTS over the next two years ultimately led to a decision to adopt it as the speech community for this project.

DTS in its current form was founded in August 2004 by GBV fans. DTS is actually one of three existing fan communities dedicated to GBV and Pollard at the time I began working on this project. The other two are the e-mail distribution lists (i.e., “listserves”) known as Postal Blowfish and Strong Lions. One other notable fan group, now defunct, was an all-woman group discussion list called The Girls Named Captain. (The names of all these groups are references to Robert Pollard-written songs.) There is overlapping membership among these communities, although most members seem to concentrate their activity in one of them. I joined DTS in August 2006, but I have not (as of this time) participated in either of the other two existing communities. As noted earlier, GBV fans congregated on MySpace and, since Facebook has become more popular, in that online community as well.

Online discussion boards dedicated to specific musical artists are commonplace and are frequently hosted on artists' official web site. A distinguishing characteristic of DTS, then, is that it is completely independent of the artist, and is administered and financed solely by DTS members ("Settlers") through donations of time, technical expertise and money. Pollard's best friend, tour manager and other close associates participate in DTS and some hold positions as moderators. They naturally hold high social status on DTS due to their relationships with Pollard and their willingness to share their insights about Pollard's music and (with considerable discretion) personal life, but they exercise no more overt control over DTS communications than any other core member.

As of mid-December 2008 – which fell between my two data collection periods – there were approximately 850,000 posts in over 16,600 discussion threads. DTS administrators have created forums in three categories ("Bob/GBV", "Minutiae", and "Events"). Only administrators can create new forums, but any member with ordinary privileges can start a new thread in the appropriate forum (and very few members are denied this privilege). Although the community is primarily dedicated to Pollard and his music, the General Chat forum (part of Minutiae) is by far the busiest, with about 60% of all posts on any topic any member brings up.

New DTS members must register an account and choose a user name and password. Most users also choose an image to use as an "avatar," and can also create a signature. Avatars and signatures display with each message posted by Settlers. In December 2008, there were about 900 registered users on DTS. This is not a precise count, however, for two reasons. First, over time a few Settlers have used and may still

use multiple accounts. Some of these accounts are created as jokes and are used only for a few posts. Others may be new accounts created by former members who had been ostracized or banned. Still others are created out of personal preference to change ones online identity. Second, while administrators have implemented some safeguards against automated registrations by spam bots, spammers still manage to register bogus accounts. The effect of these spammer accounts on DTS activity is negligible, but they mean that statistics on registered users are meaningless. DTS is predominantly a male enclave: of the 100 usernames with the most posts as of December 2008, 92 belonged to male Settlers.

DTS operates on the popular phpBB open source bulletin board software. phpBB offers tools that permit users a range of ways to express themselves. Communication is asynchronous, meaning that participants do not have to be online at the same time to interact with each other. Except in rare cases, old threads and posts are kept online forever, meaning that a Settler can revive a thread years after it has gone inactive and renew discussion. Having said this, rapid, near-synchronous interaction does occur on DTS. One frequent practice is for members to logon at the same time and chat about a recording or sporting event they are experiencing simultaneously in their separate homes.

In addition to displaying avatars (a photo or image) and signatures (text and/or images displayed in message footers), Settlers have access to emoticons, small images used to enhance textual messages with a visual indication of tone or mood. DTS provides many of the well-known emoticons, indicating smiling, laughter, sadness, irony (“greenface”), uproarious laughter (“rotfl” or “rolling on the floor laughing”) and so forth. DTS administrators and other Settlers have also created custom community-

specific emoticons or obtained custom emoticons from other online communities and given them new DTS meanings. Examples include a nodding head wearing headphone (which I like to use to show enthusiasm for music I have heard), and a number of drinking-themed images. Some emoticons are meant to be used in combinations, such as flying bat and pile of feces, meaning *batshit* 'insane'.

While most communication in the DTS community is posted publicly in the forums, Settlers can also communicate using the private message (PM) feature, a form of e-mail. PMs are surely important to building one-on-one relationships within the DTS community, but this project will only consider public postings. This project will also ignore the "NSFW" forum, which is dedicated to posts related to obscenity or other subject matter commonly deemed "not safe for work." Settlers who want access to NSFW must petition an administrator for access. This project, therefore, will only examine public postings which are in principle readable by all members of DTS.

As in many online communities, the administrators of DTS are able to set up "filters" which can be used to censor the language used by community participants. In my first two years on DTS, however, I never witness swearing as such censored in this way. On the contrary, administrators have used their powers from time to time to create filters to harass or tease other members, and they are apt, in fact, to use swear words in the replacement text. For example, one board member who is widely viewed as an interloper (and who is one of the rare members who was ever "banned" from DTS, under at least two usernames), was in the habit of including the phrase "I Love You" in his posts. An administrators set up a filter to replace this text with the phrase "I Fuck Ham." The filter applied regardless of who posted a message containing the original phrase. That is, if

another Settler posted “I love you all!” the filter would automatically change it to “I Fuck Ham all!” Whenever this occurs, savvy Settlers eventually catch on and devise workarounds to defeat the filter, such as entering spaces or apostrophes between letters. I note, however, that this particular use of administrative power is rare and tends to be directed only at posters who commit serious violations of DTS or GBV/Pollard-fan etiquette. Administrative bannings, the ultimate penalty for breaches of community rules, are typically carried out only after much outcry from other Settlers.

Baym (1998) and Gatson and Zweerinck (2004) document the ways in which the online communities they studied (a soap opera fan Usenet group and a “Buffy the Vampire Slayer” discussion board, respectively) overlapped with offline life. In the DTS community, online social life overlaps with offline experience in several ways. Settlers use DTS as a sort of virtual rendez-vous point to meet each other at Pollard’s live performances when he goes on tour. Mutual recognition from DTS activity breaks the ice when Settlers meet in person, and it helps make live shows a social as well as a musical event for fans. After Pollard disbanded Guided by Voices in 2004, he toured less extensively. When he hinted that his Fall 2006 tour would be his last, Settlers organized the first Heedfest, a weekend gathering in June 2007 in Dayton, Ohio, Pollard’s home town. Pollard himself, many members of his family, and a number of former members of Guided by Voices attended as well, and a makeshift version of the band took the stage for a surprise reunion set. Heedfest 2 took place in Dayton in June 2008, and it has been an annual event since then, supplemented since 2009 by an annual midwinter gathering. In October 2007, Pollard’s Dayton friends and family organized a surprise party for his 50th birthday, and fans who could make the trip were invited. (I have attended all the

Heedfests, the birthday party, and two the winter gatherings.) These fan-organized events, in addition to the live shows, indicate that online and offline connections complement each other in this community.

The most obvious online/offline overlap is, in fact, the fans' perceived relationship with the musical artist DTS is dedicated to. A full discussion of Robert Pollard's music is far beyond the scope of this project, but several elements of his musical career and his own approach to performance and interaction with his fans surely contribute to the development of community on DTS, even if he himself does not directly participate. Pollard has released dozens of albums since 1987 and has more than 1,500 songs registered in the BMI catalog, giving fans plenty of music to discuss. In his stage performances, Pollard routinely interacts with fans, exchanging banter, sharing beer and tequila from his on-stage supply, addressing many fans by name, and handing fans his microphone to sing parts of songs. In essence, Pollard does not merely provide entertainment for his fans, he joins them in the celebration. After shows, he frequently mills around and talks with fans, whom he treats as good friends.

Some sociolinguistic elements may also contribute to fan community development. As fans of any musical artist will do, many of Pollard's fans know his songs by heart. Song titles and lyrics have become catch-phrases among fans, and may even serve as shibboleths used by serious fans to identify each other. Most to the point, Pollard himself swears heavily on stage and (somewhat less) off stage as well. Within the overall context of this particular fan-artist relationship, Pollard's swearing can be viewed as affirming solidarity with his fans.

3. Literature Review

3.1 Research on Swearing

The literature on swearing is figuratively bookended by two panoramic histories of the language phenomenon, Ashley Montagu's (1968) *The Anatomy of Swearing* and Geoffrey Hughes' (1998) *Swearing: A Social History of Foul Language, Oaths and Profanity*. These works aim to establish the universality of swearing, even as they rely largely on written primary sources and secondary literature. More in depth recent research on swearing has generally taken three approaches: placing swearing in the larger context of taboo, or socially proscribed behavior judged to be transgressive or offensive; examining swearing as a behavior deployed to express anger or frustration, or to "let off steam"; or, the focus of this paper, as a marker of intimacy or solidarity. Much useful research has also been done to discern the social variables that govern or constrain swearing, such as the gender, social class of interlocutors, the relative social power of speaker and hearer, and the degree of familiarity between communication partners. These concerns have perhaps inevitably overlapped in specific studies. Very few studies have used social network analysis techniques to analyze swearing behavior, and that is what this paper contributes to the research.

In two books Allen and Burrige (1991, 2006) have developed and expanded a three-tiered model of language usage where words (and other products of human

behavior) can be categorized as euphemism, dysphemism or orthophemism. In their model, dysphemism is a dispreferred word or expression that carries some negative emotional or taboo force. This category can of course apply to swearing, but words can also derive dysphemistic quality from the underlying referent that is considered taboo: for instance, excrement and other body products, death, sexuality and sex organs.

Orthophemism refers to the “correct” and ostensibly neutral words to refer to something. Examples include medical terminology. Language users develop euphemisms to avoid both dysphemism and orthophemism. The boundaries between the three categories blur and are sensitive to specific social context. The word *pussy* ‘vagina’ can serve as a euphemism in a context of sexual intimacy, where the dysphemistic option would be *cunt* and the orthophemism would be out of place. A physician might avoid using *vagina* at all to avoid causing emotional discomfort in a patient.

Jay (1992) reported survey and laboratory research to discern categories of language and other behavior that are deemed taboo or otherwise offensive in American culture, with much of his research dating back to the 1970s. These categories include aggression (in language or physical action), sexual content, reference to body parts, reference to body functions or products, racial slurs, and religious references. College students in a 1978 study reported in Jay 1992 ranked these as the top five in terms of “offensiveness”: witnessing murder, witnessing rape, witnessing acts of child abuse, witnessing masturbation, and then, finally, a strictly linguistic stimulus, the word *motherfucker*. Women and men in Jay’s study differed in their ratings of the offensiveness of some terms: women, for instance, rated *cunt* highly offensive, while men rated *fag* or *faggot* (‘homosexual’) highly offensive.

Ability to offend is not the only dimension that categorizes language as taboo. Hirsch and Andersson (1985) suggest that modern metaphorical forms of cursing derive power from remnants of belief that speech acts can function on a supernatural level. They use the example of calling someone a *shithead*. While metaphorical (and absurd), they propose the usage of the word embraces a desire to literally see the target's head turn into excrement, and that its taboo power derives from the implicit threat, as if the speaker could really use it to invoke negative magic.

Taboo has also figured in larger scale social and historical movements. McEnery (2006) documents five centuries of mainly middle class “social panics” about bad language, including swearing, in Great Britain. From Elizabethan times to the present, in McEnery's analysis, middle class activists occasionally led campaigns to discourage or censor swearing, viewing it as detrimental to their own class aspirations for prosperity or as a threat to the social order that supports their affluence. The legacy of such campaigns is alive and well in the United Kingdom. Mary Whitehouse, a notable British activist of the 1950s and 1960s, campaigned against television programs such as *Till Death Us Do Part* and *Steptoe and Son* in the 1960s (models for the American sitcoms *All in the Family* and *Sanford and Son*, respectively) for, among other reasons, frequent use of the intensifier *bloody* on these BBC-produced programs. Whitehouse's anti-obscenity campaign is still mentioned with due reverence (and irony) by BBC 6 Music deejay Marc Riley, himself a veteran of the British punk and post-punk rock music scenes, where the flaunting of linguistic and stylistic taboo was emblematic.

Jay and Janschewitz (2008) include taboo in their definition of swearing when they write, “Swearing is the use of taboo language with the purpose of expressing the

speaker's emotional state and communicating that information to listeners (p. 268).” Their 2008 study of multilinguals’ knowledge and attitudes about swearing in English pointed out that speakers learn rules for swearing as they acquire the pragmatics of their language: when it is appropriate to swear and when it is perceived as offensive. Their laboratory-based findings confirmed Jay’s (1992) earlier research showing that perceptions of appropriateness are highly context-sensitive, and dependent on speaker-listener relationship as well as time and place. For instance, students tended to rate a college Dean swearing as more offensive if heard in the Dean’s Office than in a parking garage. Swearing among students in a dorm tends to be perceived as much less offensive if taking place in a dorm room. (Curiously, these students were asked about offensiveness and likelihood of swearing by a dean in a dorm room. One wonders what they thought about the offensiveness or likelihood of a dean’s *presence* in a dorm room.)

The process of acquiring the pragmatics of swearing carries into the acquisition of second languages. Dewaele (2004) found that confidence in one’s awareness of the emotional force of swearwords diminishes with each successive language learned, leveling off with L4 and L5, with the site of learning being a major influencer, meaning those who learned a second language by a naturalistic method had a stronger awareness than those who learned primarily in the classroom, which those who learned by a hybrid of the two somewhere in between. Some subjects in that study even attested to preferring to swear in a second language to avoid confronting the emotional weight of swearing in their native language.

Jay, in yet other research (1992), places swearing in the larger context of learning social rules for the appropriate expression of anger. Factors such as who provoked the

anger (and their relationship and relative social power with respect to the aggrieved), along with concerns with proportionality of response and the danger of further retaliation serve as variables, according to Jay. Jay's model of anger expression begs the question, though, as to which speech act should be weighted more heavily in the social equation: Is it swearing in and of itself or is it the expression of anger in general? Is swearing to express anger more offensive; or is expressing anger without swearing more offensive? Jay's research is further limited by his constant focus on anger or frustration. He pays no attention, for instance, to swearing as a means to express joy or surprise.

Infante et al (1992) went one step further than Jay to link swearing to relative verbal aggressiveness. High verbal aggressiveness was indicated by more frequent use of attacks on others' competence, teasing, non-verbal gestures like eyerolls to attack self-concept, as well as swearing. They also found, interestingly, that high verbal aggressives reported no more aggression against them than did low-aggressives, probably indicating a threshold effect on the perception of aggression.

A great deal of recent research has been done on the sociolinguistic aspects of swearing. While a belief persists that swearing tends to be associated with males more than females, and with certain socioeconomic or age groups (as McEnery's 2006 discussion of social panics about bad language neatly demonstrate, as does Hughes 1998), the research presents a more complex picture.

McEnery and Xiao (2004) cross-tabulated frequency counts of the word *fuck* with age, socioeconomic status and sex in both spoken and written language portions of the British National Corpus (BNC). The forms *fuck*, *fucked*, *fucks*, *fucking* and *fucker(s)* were counted. Indeed, they found that unskilled manual laborers (denoted with the code DE)

used all forms of *fuck* more often than managerial/professional (AB), supervisory/clerical (C1) and skilled manual worker (C2), but AB speakers were the top or second most frequent users of some forms. And, while males were found to use *fuck* nearly three times as often as female speakers, the ratio varied greatly by class: in the lower middle class group (C2), males swore 100 times more frequently than females, while in the C1 group the ratio was about 25:1, and just slightly more than 2:1 for AB and DE speakers. Age and class also interacted in complex ways. Swearing rates were high for AB-class in the 14 and under and 15-24 age groups, but non-existent or very low in the sample for the 25-34, 35-44 and 45-59 groups. (Over 60, AB speakers evidenced the only cases of swearing.) Swearing rates uniformly low for all classes in the 35-44 age group. The authors do not venture an interpretation, but it is possible that persons in this group are more likely to be raising children at this life-stage and may be more conscientious about their use of bad language.

Stenström (1995 and 1999) found ample evidence of swearing among upper middle class youth in the Bergen Corpus of London Teenager Language (COLT). Looking specifically at the use of adverbial intensifiers by pupils at a London boarding school (1999), she found that *bloody* and *fucking* (the former still a swearword with some taboo force in UK English) used less frequently than *really*, but more frequently than *absolutely* and *completely* to intensify both negative and positive adjectives. Their use with positive adjectives seems to help make the point Jay has not made in his research, that swearing is in fact used to express positive emotion, too.

Thelwall (2008) is one of the first researchers to use corpus-based methods focus specifically on swearing in an online context. Comparing MySpace pages by nationality

(UK and US) and sex of page owner, he found that the decades old assumption (e.g., Bailey and Timm 1976 and McEnery 2004/1998) that females used strong taboo terms significantly less frequently than males held for US pages, but not for UK-owned pages. Thelwall suggests this may be related to a cultural shift in the UK he refers to as the rise of “ladette culture.”

Whether males swear more than females is a secondary focus of this paper, but the question certainly continues to come up in recent literature. Kiesling’s (2001) discourse analysis of US college fraternity speech found deliberate use of swearing ostensibly to assert authority in the speech of a fraternity officer during an official meeting of his house. In mixed-sex groups of friends, however, the same fraternity member avoided swearing and adopted a more “calm, cool, got-his-shit-together” (p. 266) tone in speaking to a female friend, who happened to be a former girlfriend. Kiesling interpreted this form of code switching as an effort to shift identities based on who the young man’s interlocutors were.

Beers Fägersten (2001), using questionnaires, interviews and direct observation in perhaps the most comprehensive study of swearing in the US, found ample evidence of shifting based on multiple social variables: familiarity of interlocutors, gender, age and even race. African Americans, especially, tended to confine their swearing behavior to friends. This pattern was particularly strong for African American males, who tended to swear only in same-sex groups. The complementary questionnaire and interview data Beers Fägersten collected revealed strong awareness about the rules governing swearing among African American men in the group studied. Indeed, there seemed to be high awareness of the stigma attached to swearing which, if combined with an awareness of

societal power relationships among races, leads to a sense that swearing amidst out-groups could be negatively received. In interviews, members of this category also expressed the strong opinions against swearing by people in positions of authority, such as their college instructors, indicating, again, an awareness of rules for when it is appropriate to swear. By contrast, white males swore among the broadest array of groups. Moreover, African Americans were found to swear, or condone swearing, predominantly in a humorous tone, rarely in a distressed or angry or other tones reflecting annoyance. White speakers also frequently swore in humorous or supportive tone, but more frequently than other groups in an angry or distressed tone. Jay (1992) did not consider race in his earlier research on swearing and offensiveness, but Beers Fägersten's finding suggests an important sociocultural difference.

Certainly any sociocultural difference could apply on a national or ethnic dimension as well. Stapleton (2003) investigated Irish student drinking culture and found a somewhat different stance on swearing in a mixed-sex group of friends in which she was a participant-observer. The women and men in her group swore frequently, but they did express different notions of the appropriateness and function of swearing. The women attested to awareness of the function of swearing in showing intimacy and trust, whereas men were more likely simply to see it as expected behavior. Members of both genders saw its importance in storytelling and humor, both important bonding functions. The primary difference was in perception of offensiveness of specific terms: women attested to avoiding terms that denoted sexism or otherwise made them feel uncomfortable, such as *cunt* or *fanny* (which are synonymous in Irish English in the sense of 'vagina'.) Notably, anger- and frustration-expression were not addressed in this study, but these

subjects' awareness of swearing's role in building friendship and group solidarity was salient.

Research from New Zealand and Australia corroborates the reality of a solidarity-building function of swearing. Bayard and Krishnayya (2001) analyzed recorded conversations that took place in student apartments in New Zealand (recorded with the students' knowledge). They found that in both unstructured and structured/purpose-oriented conversation these groups of friends and roommates used swearwords freely. (Unstructured conversation was on topics like someone's personal appearance, or gossip; a structured conversation pertained to a specific goal, such as deciding whose turn it was to feed the cat.) Like Stapleton, these researchers found little difference in the quantity of swearing by the women students, even in mixed-sex contexts. Women reduced the use of "strong" swearing (e.g. *cunt*) to a lesser extent than men in structured conversation, while men overall tended to avoid weaker swear words (e.g. *dicky* 'penis').

One of the strongest pieces of research supporting the solidarity function of swearing was produced by the Wellington (New Zealand) Language in the Workplace Project (LWP). The LWP was treated in book form in Holmes and Stubbe (2003). Indeed, the leaders of the LWP drive home the importance of the interlocutors' relationship and precise context of an interaction for interpreting language use: "While some messages can be communicated directly, the precise choice of linguistic form is always influenced by the relationship between those talking, and the context of their talk (Holmes and Stubbe, 2003, p. 17)."

The LWP as a whole studied fourteen workplaces in New Zealand, using direct recording of spontaneous speech (with recording controlled, as much as possible, by the

subjects) and extensive ethnographic interviews to provide background data to help interpret the speech data. Daly et al deal specifically with a production work group in a soap factory. The work group is of mixed ethnicity, although members are predominantly of Maori or Samoan or other Pacific Islander descent. Daly et al observe that within this group, which they cite as remarkably close-knit for this factory, swearing behavior is pervasive and occurs between speakers regardless of organizational status, age, work experience, and other factors that could conceivably influence behavior. They quote the group's supervisor as attesting that swearing, including its use in jocular insults, is "a 'we know each other well thing' ... no one really took offense. (Daly et al, 2004, p. 949)."

The LWP investigators draw heavily on aspects of Politeness Theory, particularly the notion of politeness as a strategy to accommodate other people to preserve "face". (Daly et al, 2004, p. 947). There is a distinction between positive and negative face. Positive face is defined as an individual's self-worth or self-image. Negative face is an individual's need for respect of privacy and autonomy. These concepts are crucial to the analysis of the New Zealand soap factory workers' swearing behavior, since direct complaints and refusals are both speech acts that can threaten the receiver (the "FTAs", face-threatening acts, of the article's title). The article focused on usage of *fuck* in two types of speech acts – refusals and complaints, which in turn divide into direct complaints and "whinges", indirect complaints about, for example, the actions of a third party or something none of the interlocutors are directly responsible for. Within the group, FTAs are consistently balanced with face-saving gestures, such as whinges, which tend to mitigate the threat. Both FTAs and face-saving acts feature the use of *fuck*.

Dabke (1978) also observed the relationship between solidarity (“mateship” in her terms) and swearing behavior in a sports related context at Australian Rules football games. (The sport bears a closer superficial resemblance to rugby than to soccer or American football.) The swearing at these games was largely motivated by frustration and anger, or an intent to intimidate others, but the pattern of who would swear at whom demonstrates a relationship marking function. Spectators and players would each swear among their own groups; players and umpires would swear at each other. Spectators and coaches would swear at players and umpires, but this was not reciprocated, indicating at the time that this may have been considered taboo based on the defined roles of these groups.

Kuiper (1991) describes a “dark side” of politeness phenomena in a comparison of predominantly New Zealand working class men’s language in two types of sports leagues: a non-competitive recreational volleyball league, on the one hand, and a rugby league on the other. Kuiper documents no swearing at all in the volleyball league. Even when putting down the performance of other players, the men’s comments tend to be couched in face-saving strategies intended to boost or avoid deflating the self-value of the target. An example: “He’s worth two to the opposition any day (p. 202)” in reaction to a bad play by a member of the other team indicating that (translated into other words germane to the topic of the present paper) “it’s all right to fuck up, especially when it helps our side.” The rugby team provided a stark contrast. Rugby is an extremely physical sport requiring players to submit to the probability of violence and resulting pain and injury. In this environment, team solidarity is critical to success. Enforcing solidarity entails enforcing a stance, essentially, of hegemonic masculinity. The swearing behavior

in this instance involves coercion and sexual humiliation, going as far ascribing presumed feminine or homosexual traits to players who do not perform as expected.

3.2 Research on Online Communities and Online Language

Over the past 20 years a central topic of critical and methodological debate has been whether or not online communities represent *real* community or can function like physical, face-to-face communities and thus be studied as similar phenomena. A full discussion of the debate is beyond the scope of this paper. I direct the curious reader to Jones (1998) for a summary of the early debates.

Nancy Baym (1998, 2000, 2002 and 2007), much of whose work concentrates on online fan communities in popular culture realms such as television soap operas and indie rock music, proposes an emergent model of online community. As they develop, online communities exhibit and “emergence of group-specific forms of expression, identities, relationships and normative connections” (Baym 1998, p. 38) that permit members to imagine themselves as part of a community. For Baym, it is the communicative practices of an online community that give rise to a shared feeling of community among its members. These practices entail a codification of form. For instance, the soap opera fan forum (on the early Usenet network), the fellow fans Baym participated with would come up with nicknames for various soap opera characters. To help newcomers follow the conversations, members would compile lists of these nicknames periodically. It is a common practice in online communities to build a section of the site for newcomers to learn background information or the rules of the community (to the extent that they have

codified rules), or to teach basic skills, such as how to search the forum for previous discussion of a topic.

Baym relates her views on language and other behaviors within communities (as do the LWP team and Stapleton) in the work of Etienne Wenger (1998, 2000) on Communities of Practice. With respect to communicative practices like swearing, a community of practice would at least tacitly educate its members about and reinforce rules about swearing.

4. Methodology

4.1 Data Collection and Coding

An overarching objective in data collection was to ensure that posts included in the sample reflected the social network structure of the DTS community at the time data was collected. A purely random sample of posts, or even threads, would not have achieved this. Instead, posts were sampled in a multistep procedure as follows:

1. Based on my knowledge as a participant in the community, I selected two months spaced by six months that fell the month following the major regular in-person gatherings of DTS members. Choosing these months aided in avoiding undue distortion in the normal level of ingroup solidarity that would be created by excitement over the upcoming gatherings or their immediate aftermath. Heedfest 2 took place in July 2008, and the first “midwinter” gathering took place in January 2009. Thus August 2008 and February 2009 were selected. Furthermore, selecting two months helped partially correct for any unexpected absence of community members during the sampling period, another possible source of distortion of the network structure.
2. Within each month, I used the random number function of Microsoft Excel to select a start date of a two-week period. The periods August 6-19, 2008, and February 9-22, 2009 were selected.

3. Next I selected all discussion threads in all forums and subforums visible to me that were started during each two-week period.
4. For each discussion thread in the sample, I considered all posts from the first 30 days after the beginning of the thread.

Using this procedure, a total of 141 discussion threads were included in the sample, containing, ultimately, 4,558 individual posts. The numbers of posts per thread ranged from only 1 to 506, with a mean of 32.3 and median of 18.

The data were collected in September and October 2009 using the Mozilla Firefox web browser to download the pages of each thread containing the first 30-days of discussions. To speed up this part of the process, I initially downloaded all threads that were started during the two months (a total of 258), later narrowing down the sample based on the start date of the threads. The phpBB software presents 16 individual posts per page, and many of the threads spanned over multiple pages. Each page was saved in a file named with a sequential thread number and page number, e.g., 071001.htm for thread number 71 (assigned by me), page 1. Naming the files this way made it straightforward later on to keep the files in order on computers and hence to keep track of which files had been examined.

I created a Microsoft Access database to store data extracted from the files. I chose Access primarily due to years of experience creating small relational databases to store data and output it in various formats for different purposes, including for further analysis in other programs such as Excel and SPSS. I created three core database tables to store the following data to be extracted from the threads:

- Threaddata

- Thread number – assigned by me as described above
- Post count – the number of posts in the thread at the time of download
- Thread ID – the internal ID number assigned to the thread by the phpBB software
- Thread title – the overall title of the thread, in most cases assigned by the member who started the thread (occasionally changed later by a moderator or administrator)
- First post – the internal ID number assigned by the phpBB application to the first post.
- Postdata
 - Post ID – internal ID number assigned by phpBB to the post
 - Thread number – the thread in which the post appeared, assigned by me
 - Post number – a sequential number of the post within the thread, assigned by the script used to extract the data
 - User ID – the internal ID number assigned to the post author by phpBB
 - Post time – the date and time of the post as generated by the server hosting DTS
- Userdata
 - User ID – the internal ID of the user assigned by phpBB. (Note that only DTS members who authored posts in the sample were captured.)
 - User name – the board username chosen by the board member
 - Date joined – the date the user created his or her account on the board
 - Total posts – posts made by the user at the time the data were collected

I wrote a Perl script to extract this data from the downloaded files to delimited text files, which I then imported to Access using the program's native text import function.

I added additional fields to each table to be able to record additional data as I coded posts. The most significant additions were to the Userdata table to record the user's sex (if this could be determined), whether they were a board moderator or administrator (a variable related to status), and whether or not I had met the user in person. I also added a randomly generated ID number for each user for use in anonymizing discussion board activity documented in this paper. The number of posts for each user contained in the sample was derived from a query. 175 individual user names were found in the sample.

With the basic data collected I created other database tables to store information collected from each post:

- Usernames of specific users addressed in the post (up to two addressees per post)
- Whether the post contained swearing
- Whether the post was unrelated to the original thread topic
- The use of the quoting function, used to quote all or part of a previous post
- The use of any visual features, such as emoticons or hotlink-embedded images (which can be visual instances of swearing)

Individual utterances containing swearing were coded for the following variables:

- Both the full utterance and specific expressions used
- Whether the swearing expression is a euphemistic variant
- Swearing category (derived from McEnery 2006)
- Whether the utterance was an obvious expression of hostility or annoyance (thereby calling in doubt its status as solidarity-inspired swearing)

- The syntactic category of the swearing expression

One crucial methodological issue is how the researcher determines whether an expression consists of swearing. The issue is not exactly clarified by the research on swearing, with many researchers stating their own definitions.

Almost any definition involves a degree of circularity and ambiguity. To say that swearing is language that would not be acceptable in “polite company” ignores implicit communicative practices in some ingroups, such the New Zealand factory workers studied by Daly et al, or Stapleton’s student drinking group. To define it in contrast to “formal situations” assumes the fraternity meeting documented by Keesling is somehow informal. A standard such as “language one would not use polite middle class company” does not take into account the myriad possible variations of politeness within specific groups.

In deciding whether an utterance counted as swearing, I asked three questions:

1. Have I heard or seen the expression censored in electronic media?
2. Have I witnessed a native English speaker object to the expression as offensive?
3. Would I use the expression, or consider it natural for my colleagues to use it, in a formal meeting at work?

Thus I do partially apply the “polite company” standard in deciding whether an utterance contains swearing (or an obvious euphemism for a swearing expression). One thing to make clear is that the judgment of whether an utterance fits the criteria for swearing is mine alone. I have, however, attempted to add a second, independent criterion by forcing a choice of one of McEnery’s (2006) categories for each utterance. The categories, with examples from the DTS data are:

Table 4-1: Functional Category Examples	
Category	Examples
Adverbial booster	<i>Kevin Nealon as the psychiatrist who can't stop farting during the therapy session. <u>Fuckin' funny.</u></i>
Curse	<i><u>fuck you!!!!</u></i>
	<i><u>this is my thread for getting ass.</u></i> <i><u>FUCK ALL OF YOU.</u></i>
Destinational usage	<i>I don't think he appreciated my lecture on the harsh reality of life and how it sucked and how i was in no position to help him even a little bit because i had my own shit to swim through....he told me to <u>fuck off</u>. whatever.</i>
Emphatic adverb/adjective	<i>Huge <u>fucking</u> douche.</i>
	<i>But, those first 3 albums are <u>fantastic</u>.</i>
	<i>i was so <u>fucking</u> drunk when i talked to dex at frickers on thursday. good times.</i>
Figurative extension of literal meaning	<i>I occasionally go to Dayton and get <u>fucked up</u>. Tell me about yourself.</i>
	<i>why you gotta <u>cock block</u> me!???!?</i>
General expletive	<i>corn dog pizza?????</i>
	<i>oh <u>fucks</u> yeah!</i>
	<i>Why isnt Bob doing Canadian dates <u>goddammit!</u></i>
Idiomatic/stereotyped phrase	<i>But "race walking"...<u>RACE WALKING???</u> <u>WTF</u> ['What the fuck'] x 1,000,000,000</i>
	<i>But "race walking"...<u>RACE WALKING???</u> <u>WGAF</u> ['Who gives a fuck'] x 1,000,000,000</i>
Literal usage denoting taboo referent	<i>how did <u>assfucking</u> invade this thread?</i>
	<i>yeah, that's why I don't <u>fuck</u> toddlers</i>
	<i>you?</i>
Image based on literal meaning	<i>X would have <u>shit himself</u> if you showed up at Wings dressed like this.</i>
	<i>I plan to <u>text the shit out of</u> Officer Jason come Sooner season.</i>
Predicate negative adjective	<i>Maybe it's cuz I was uploading both discs at the same time (I never do that), but mostly it's cuz my computer is <u>SHIT</u>.</i>
Premodifying intensifying negative adjective	<i>unless that's what you meant, in which case you're <u>fucking</u> gay</i>
	<i><u>Shitty</u> Mike McCready?</i>

Pronominal form with undefined referent	did you survive that <u>shit</u> last night?
Personal insult	<i>why you little <u>SHITASS!</u></i>
	<i>You humorless <u>cunt!</u></i>
Reclaimed usage	<i>the little <u>chinky</u> girl was crying just now after finishing her uneven bar routine that had her fall off the bars in a epic display of fail.</i>
Religious oath	<i><u>thank christ</u> my PC is up and running again. If I was down another week who knows what Bob releases I would have missed!</i>
Unclassifiable	None in the data.

Each swear word used was coded with one of these categories. I made these coding decisions in three three passes several months apart to attempt to compensate for any temporary personal bias or inattention on my part.

4.2 Social Network Analysis

The basis for determining the structure of the social network realized within DTS is the data collected on specific addressees. Social interaction is operationalized as an instance of directly addressing another board member, either by name or clear pronoun antecedent, or by quoting a previous post by the other member. As mentioned in the description of data collection, up to two addressees were noted per post. From this data, it was possible to produce a table of all the interactions in the sample data. There was a total of 2,930 interactions in 2,860 posts. Posts not directly addressed to another member are considered to be addressed to the entire board.

The challenge was then figuring out what to do with it. The social network analysis approach adopted in this project was originally inspired by Paolillo (1999; 2001). Paolillo had collected similar online interaction data in an Indian (Asian)

chatroom. He produced two cross-tabulations of the interactions: speaker by addressee and addressee by speaker. In each table the second dimension was considered a dependent variable such that, for instance, each speaker was a case with 144 addressee “variables” measured in terms of the number of interactions. He then ran a factor analysis on each of the two tables to group the variables into six speaker groups and five addressee groups based on interaction patterns. Each participant in his sample was thus assigned to a speaker and addressee group. The intersection of these speaker and addressee group was used to classify each participant into a participant group. Thirty groups (6x5) were theoretically possible; in reality there were sixteen.

Factor analysis proved unworkable with the DTS interaction data. Using the same type of speaker and addressee cross-tabulations as Paolillo, factor analysis produced more than 40 each of speaker and addressee groups, making for a possible 1,600 participant groups. In reality the upper limit on the number of classifications would have been the 164 board members who interacted with at least one other member in the sample. Moreover, the groups suggested by factor analysis did not strike me as realistic given my own experience on DTS. I deemed this approach unworkable.

An alternative approach was developed using the Pajek social network analysis software to determine which community members belong to a clique (De Nooy, Mrvar and Balatelj 2005). In social network analysis a clique is defined as a subset of points in a graph in which every possible pair of points is directly connected (Scott 2000). Cliques can, and do, overlap, sharing members among themselves. Because the data afforded the possibility of mapping interactions in a directed graph (i.e., identifying both the speaker

and addressee), the notion of a strong clique was adopted. A strong clique is one where every member is connected in both directions. (Scott 2000)

Pajek is somewhat limited in clique analysis, however, in that it does not directly extract cliques. It can, however, be used to search for specific structures within a larger structure. The minimal size of a clique is three members, a structure also known as a triad, in which three members are all connected to each other. In a directed triad, all members are connected directly to each other in each direction, e.g., as both speaker and addressee. A directed triad is, therefore, a minimal strong clique, and the three members can be said to belong to the same clique or cliques.

Determining who belonged to a triad was three-step process in Pajek. First, I exported from the Access database a list of all speaker-addressee pairs in the sample along with the number of interactions between each. Many of these pairs were represented twice, once for each direction of the interaction. I used a Pajek tool to convert this list into the Pajek network file format, then imported that file into Pajek to create a directed network consisting of the 164 discussion board members in the sample who were a speaker or addressee in at least one interaction. Second, I created a dummy network consisting of a single directed triad and imported it into Pajek to serve as a pattern for matching triads in the data. Finally, I used Pajek to extract directed triads contained in the full directed network. This resulted in a subnetwork consisting of the 65 members who were also members of at least one directed triad and hence at least one clique.

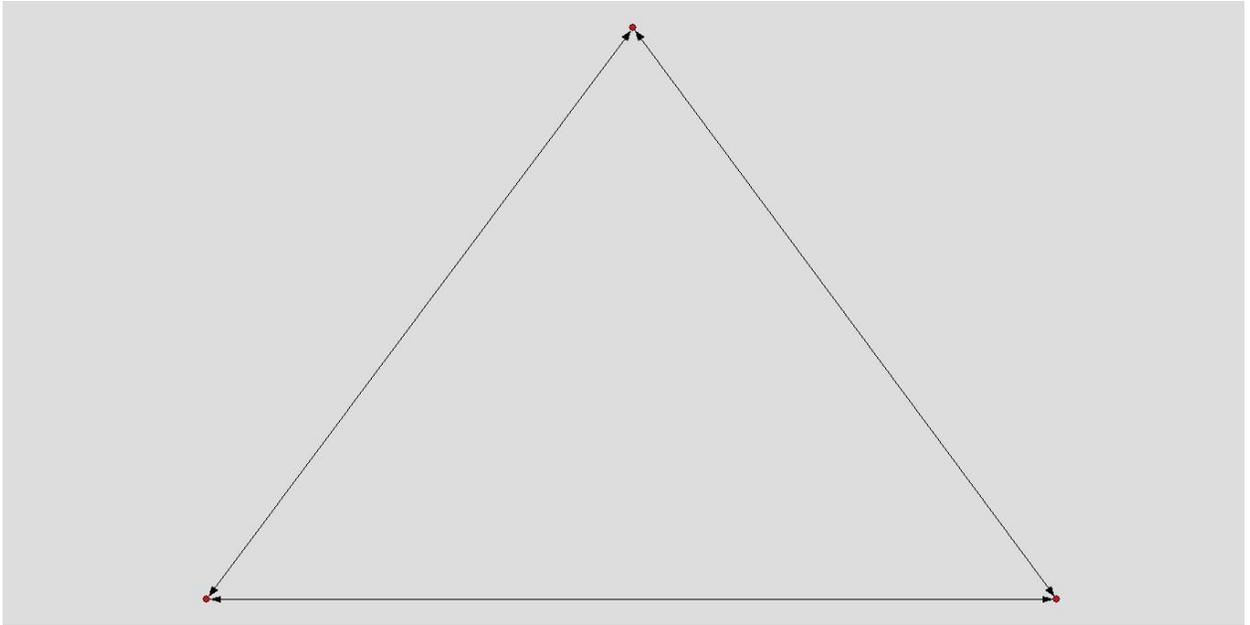


Figure 4-1: Directed Triad

Given that mutual clique membership is being used to operationalize the concept of solidarity, a final important step in the network analysis was to determine which members belonged to the same clique. Pajek does not provide a straightforward report of clique or even triad membership, so I performed this analysis outside Pajek. I first extracted the 65-member subnetwork of directed-triad members with directed pair links and analyzed them with a Perl script to determine every directed pair with at least one mutual directed link. For example, if A and B both have a 2-way relationship with C, the three form a directed triad. For my purposes it was not necessary to determine the full membership of any specific clique, just that any pair of interlocutors were members of the same clique. This process produced a list of triad/clique members, which I was able to import to the Access database for use in subsequent analysis.

Having this data in place, I could code interactive posts based on the clique status of the interlocutors:

- Speaker and addressee are in the same clique
- Speaker and addressee are in different cliques
- Speaker only (but not the addressee) is in a clique
- Addressee only (but not the speaker) is in a clique
- Neither interlocutor is in a clique

For the non-interactive posts, I could code the clique status of the speaker. This data was the basis of my analysis of “solidarity” among members of DTS.

5. Results and Analysis

5.1 General Characteristics of Swearing

The first set of data presented are meant to give an overall impression of the characteristics of swearing on DTS. The following tables show the words used, swearing expressions by functional categories, and swearing rate by discussion thread and topic. No statistically based conclusions are drawn from this data.

There were a total of 4,558 posts in the 141 discussion threads, and 794 contained at least one swearing expression. This results in an overall swearing rate of 0.174. There were a total of 1,033 individual swearing expressions. All forms of a word (aside from exceptions noted below are counted as uses of the base word.

Word	Frequency	Pct.
fuck	387	37.5%
shit	222	21.5%
Ass	68	6.6%
damn/God damn	39	3.8%
hell	38	3.7%
fag/faggot	35	3.4%
cock	20	1.9%
dick	19	1.8%
asshole	18	1.7%
cunt	14	1.4%
douche/douchebag	13	1.3%
Jesus Christ/Christ	12	1.2%
bitch	12	1.2%

crap	12	1.2%
motherfucker/-ing	11	1.1%
balls	11	1.1%
pee	6	0.6%
pussy ['coward or weakling']	6	0.6%
bastard	6	0.6%
screw	5	0.5%
homo	5	0.5%
jack ['masturbate']	4	0.4%
beat off/beat it ['masturbate']	3	0.3%
wank ['masturbate']	3	0.3%
prick	3	0.3%
all others	61	5.9%
Totals	1033	100.0%

Notably, the relatively strong swear word *fuck* is the most commonly used. The counts include several idiomatic expressions that include or imply the word, such as WTF ‘what the fuck’, WGAF ‘who gives a fuck’, and MILF ‘mother I’d like to fuck’. The standalone insult term *motherfucker* was counted separately and it independently comprised about 1% of total words used. DTS members’ use of the word exhibits its usual versatility, with it appearing in most of McEnery’s categories, including as a literal reference to copulation.

WGAF as a commonly used abbreviation for “who gives a fuck” may be one coinage original to this group. According to a story that circulated among the community and posted on DTS, it came from a conversation on a car trip to see a Robert Pollard show in Chicago. A DTS member was explaining how the “Cloud Gate” sculpture in Chicago’s Millennium Park (popularly called “The Bean”) was fabricated without any seams. The explanation was interrupted by the driver of the car exclaiming, “Who gives a fuck?” This was shortened to *WGAF* by DTS members and applied to posts deemed

pointless or uninteresting. It is even used preemptively by participants about their own posts. A photo of the sculpture itself has even been used to express the sentiment.

The word *shit* was used relatively seldom in a literal sense of ‘excrement’ (16 of 222 uses). It was used in compounds such as *bullshit*, *horseshit*, *shitass* and *shitballs*. A frequent figurative use was in the adjective *shitty* as coined by a member of the group to mean something like ‘ersatz,’ for example a person known to a board member who closely resembles a celebrity, or a band perceived by some to resemble another band. In this sense, however, *shitty* does not necessarily mean ‘inferior.’ The shitty entity could, in fact, be quite adequate. I have, for instance, been referred to by a DTS member as “Shitty Doug Gillard” due to a supposed resemblance with Gillard, who was the lead guitarist of Guided by Voices from 1997 to 2004.

A coined initialism using *shit* is *NGS* [‘no gay shit’], used frequently to comment (usually ironically) on perceived homoerotic content in a post. Homoerotic banter is common on the discussion board, although it is somewhat perilous to read too much into it. It is true, however, that *fag* or *faggot* made of 3.4% of all swearwords and other words. The word was typically used as a jocular insult, e.g. “you guys are fagging this thread up,” referring to a degree of male-to-male affection the poster may have found uncomfortable or inappropriate. 22 of the 35 instances of *fag*, however, appeared in two threads in which DTS members were forced to respond to a direct accusation of homophobia by one participant – the most hostile discussion threads in my sample. Other potential masculinity-affronting insult words with frequent use include *cunt*, *homo*, and *pussy*, although the last term was used in self-deprecating comments as well as being directed at other posters.

Incidentally, coinages on DTS have not been strictly limited to swearing and obscenity. Another example is the term “of/for”. Originally used in a put down – “I am ashamed of /for you” – it became a shorthand commentary on admissions of failure.

Applying McEnery’s categories, swearing expression counts by category appear in Table 5-2.

Table 5-2: Swear Words Used, by Functional Category		
Category	Frequency	Pct.
literal usage denoting taboo referent	154	0.149
figurative extension of literal meaning	146	0.141
personal insult	138	0.134
general expletive	122	0.118
idiomatic/stereotyped phrase	101	0.098
emphatic adverb/adjective	83	0.080
curse	65	0.063
premodifying intensifying negative adjective	61	0.059
pronominal form with undefined referent	60	0.058
adverbial booster	46	0.045
destinational usage	18	0.017
image based on literal meaning	18	0.017
predicate negative adjective	12	0.012
reclaimed usage	5	0.005
religious oath	4	0.004
unclassifiable	0	0.000
Totals	1033	1.000

Examples of each category appear in the Methodology section.

There are several observations to be made about this. First, literal usage and figurative extensions are the most common categories, indicating that the group as a whole is comfortable addressing taboo subjects.

Secondly, personal insults are very common. Importantly, however, these were predominantly used with a joking or ironic intent, for instance, settling disagreements by

calling each other *cunt* or *fag*. One term, *douche/douchebag* was, however, used almost exclusively with hostile intent, although it was usually directed at third parties rather than current DTS members.

Thirdly, both religious oaths and reclaimed usages were very rare. Old-fashioned religious oaths (e.g., “As God is my witness” or “I swear to God”) may be declining in general usage, although the names of religious figures in expletives such as “Jesus Christ!” or “Goddammit!” are common in the DTS data. Reclaimed usages are understandably rare in such an ethnically and gender homogenous group. One example I counted as a reclaimed usage is the use of the word *chinky* (in reference to Chinese Olympic gymnasts) by a board member who happens to have an Asian spouse. This category is heavily dependent on context. For instance, *faggot* would be a reclaimed usage if used by members of the gay community, but during the time period covered by my research there was not a single openly gay participant. (The participant who accused DTS participants of being homophobic claimed to be straight, too.)

We can also look at the distribution of swearing by discussion thread topic:

Thread Title	Posts	With Swearing	Rate
"I'm green. Are you green? Well, I'm green."	19	5	0.263
"You're having an affair with the Bob board!"	22	1	0.045
\$5 cd's - free shipping	12	3	0.250
50 Best Websites of '08 by TIME Magazine	13	1	0.077
62 users online at 11:14am on a a saturday	4	0	0.000
777,777	15	2	0.133
A Contest Featuring Human Beings	7	1	0.143
a place for id and boh to get to know each other better...	31	9	0.290
A place for id and dex to get to know each other better...	506	73	0.144
A place for id to have cybersex.	11	1	0.091
A real CAVE ZONE for sale!	4	1	0.250

American Idol 8	31	3	0.097
Anacrusis - 1993-06-10 dvd	5	0	0.000
Anybody remember Butterglory?	22	2	0.091
anyone going to durham for the book release par-tay?	17	2	0.118
Applehead Appreciation Thread	67	17	0.254
Ask The Flon Questions About Fashion Week	26	5	0.192
Attendee List	147	14	0.095
Aviation	15	2	0.133
Back To School (not the movie!)	8	2	0.250
Bernie Mac	15	4	0.267
best Roxy Music album?	6	1	0.167
Big Love	17	6	0.353
Blatant Doom Trip	2	0	0.000
Bob Project Wishlist	16	2	0.125
Bob Saget Roast on Comedy Central	49	12	0.245
Boombox backup	6	1	0.167
Broadfield Marchers	2	0	0.000
Brown Submarine Pre Order NOW	84	11	0.131
Buffalo '66	23	3	0.130
Buy some CDs and send me to college	21	2	0.095
can anyone post pics of the book party??	6	0	0.000
Champagne ticket problems	6	0	0.000
Clone Wars	69	8	0.116
Contribute to the World's Longest Song!	6	0	0.000
Costa Rica	12	2	0.167
Customer Service at the end	43	11	0.256
Dark Was The Night	5	0	0.000
Dean Quixote	12	1	0.083
Do you give money to homeless people?	60	10	0.167
Eastbound And Down	33	9	0.273
Every time I go to revellogic's myspace page...	3	0	0.000
Everything That Happens ...	4	0	0.000
Expecting Brainchild	1	0	0.000
Fading Captain T-Shirt?	7	0	0.000
famous last words...	32	7	0.219
Favre is a cocksucker	23	7	0.304
Found something	23	2	0.087
Frogmen	5	0	0.000

Go USA! (Beijing 2008 Olympics edition)	124	27	0.218
Greenface maybe quits smoking	46	5	0.109
greyson	162	22	0.136
Have you ever had an openly gay friend?	89	37	0.416
Heedfest Geetar (Ohio Settlers only, plz)	16	4	0.250
Hey Lawyers!	2	1	0.500
Hey yew Nork settlers, I mean New York settlers...	32	5	0.156
Hit	5	2	0.400
Hold Steady fans! Get ready!	31	5	0.161
I NEED YOUR CLICKS!	31	5	0.161
Identify this song?	3	1	0.333
if you have a goatee, post here	33	7	0.212
It's Dead Elvis Day	17	2	0.118
Jamboree tape (demo - no label)	7	1	0.143
KCRW 97 session	1	1	1.000
Keep Me Down	28	3	0.107
Kelly Grocutt R.I.P....	1	0	0.000
Late Nite With Conan O'Brien	9	2	0.222
Let's Discuss the New War	15	0	0.000
Let's Speak Candidly About the Band "Live"	22	1	0.045
Liquor Bag	5	2	0.400
Live vinyl bootlegs...anyone miss them?	12	3	0.250
Look it's . . . Cycling?	8	0	0.000
Look, its curling!	22	3	0.136
Lost Television Greats	47	4	0.085
Lucero - Attic Tapes	15	4	0.267
Merge Records - Score 20	12	2	0.167
MILF MUSIC/NOT MILF MUSIC	48	6	0.125
Most Antagonistic Poster	34	11	0.324
Mr. Ghost Town	1	0	0.000
Name That Former Member of GBV!	37	4	0.108
Planning a Trip to Wales. Suggestions?	23	2	0.087
pluck something from obscurity and post it here	79	11	0.139
Poll: Crotch v. Ass	26	10	0.385
Pollardy Googly Image Search	22	1	0.045
Post here after you certify your unemployment claim.	10	2	0.200
Post Here when you are on a conference call	22	2	0.091
Presidents' Day Poll -- Favorite Monarch	37	2	0.054

Queen of Stormy Weather	13	1	0.077
Quick A/V Cable Question	6	0	0.000
Random Funny Snippets	3	1	0.333
Rate Rock Band Content	13	4	0.308
Rated: The Thread	18	0	0.000
RIP Bernie Mac	1	0	0.000
RIP Isaac Hayes	26	8	0.308
RIP Jerry Wexler	3	1	0.333
ROBERT POLLARD FORUM NUGGETS	10	2	0.200
Sign a Settler's Yearbook	42	7	0.167
Southgate House - 9/25 - A Thursday	18	1	0.056
SPAT! Lindsay Lohan and Sam Ronson in Valentine's Fight	2	1	0.500
Strawdogs	7	3	0.429
Suicide	17	7	0.412
Sundays are the new Mondays	10	2	0.200
Terrible Hard Rock Of The 90's	185	58	0.314
The "Ask 'Russell Johnson' A Question" Thread	58	9	0.155
The Battle For ID's Heart	28	10	0.357
The Bel Air Drinking Society	28	6	0.214
The Cincinnati Bengals	11	3	0.273
The Cleveland Browns	29	6	0.207
The Erin Andrews Isn't All That Pretty Thread	15	4	0.267
The Glove Thread	79	5	0.063
the hitler game	32	2	0.063
The It's Seriously Fucking Hot In The Northwest Thread	28	7	0.250
The Jesco White, Dancing Outlaw thread	34	4	0.118
The Lonesome Crowded West	19	7	0.368
the OKC boys	4	1	0.250
the olympics are boring	50	11	0.220
the pan	7	1	0.143
The Question Girl, Aright	1	0	0.000
The Recession Strike Back	26	2	0.077
The Road	8	2	0.250
The Sleptalkers	8	1	0.125
The Teenage FBI is coming to Chicago and Atlanta! Be there!	24	3	0.125
The Town That's After Me	8	0	0.000
The TRIFFIDS thread	24	6	0.250

The Willard Scott Thread	11	1	0.091
Things you assume about the average Settler.	318	77	0.242
Things You Assume About The Average Settler's Workout Regime	57	11	0.193
This Is Why You're Fat	77	8	0.104
Tits vs Ass	73	10	0.137
Tropic Thunder	17	2	0.118
Way Down Yonder in New Orleans	31	9	0.290
What Do You Currently Smell Of?	90	4	0.044
What ever happend to dulli girl?	37	3	0.081
What's the Worst Place You've Ever Spent The Night	89	13	0.146
Where is Sopes Getting His Chicken Wrap From Today?	53	8	0.151
Which Marx Brother would you sleep with to save humanity?	14	2	0.143
Who inspires the most contempt and rage within your soul?	25	10	0.400
Winston's Atomic Bird	20	2	0.100
Wormhole	26	4	0.154
YEP ROC ECONOMIC STIMULUS \$5 SALE	14	0	0.000
You say it's your birthday...It's Yoko's day too, yeah!	4	1	0.250
Totals	4558	794	0.174

There is a wide distribution of the number of sampled posts in each thread, making it difficult to perform a valid statistical analysis or even make generalizations. 55 of the 141 threads in the sample exhibited a swearing rate (posts with at least one use of swearing / posts in the sample) greater than the overall average of 0.174. This suggests, plausibly, that certain thread topics may have elicited a higher swearing rate. The topic “Who inspires the most contempt and rage within your soul?”, which could strike participants as an invitation to swear in anger, had a 40% rate. This is equally plausible with the thread “Terrible Hard Rock of the 90’s” (31.4% rate), especially in a community made of strongly self-identified music fans. Thread titles containing swear words also tend to have an above average swearing rate: “The It’s Seriously Fucking Hot in the Northwest

Thread” (26.7%), about the weather, and “Favre is a cocksucker” (30.4%), about the former National Football League quarterback. The two threads containing a heated discussion of homophobia in the community exhibited a high swearing rate: “Things You Assume about the Average Settler”, where the homophobia discussion started (24.2%), and “Have you ever had an openly gay friend?” (41.6%), where it was continued in a new thread dedicated to the topic. Since these threads involved community self-defense against a critic, this suggests that swearing is used as a defense strategy.¹

One minor question I explored is whether the relevance of posts to the original topic affected the frequency of swearing. The question is whether the solidarity inherent in the informality of changing the subject encouraged swearing. I coded posts for this and found the following results exhibited in Table 5-4.

	Swearing	No Swearing	Total	Swearing Rate
Post On-Topic	689	3157	3846	0.179
Post Off-Topic	105	607	712	0.147
Totals	794	3764	4558	0.174

(Statistical results: $X^2 = 4.19$, $df=1$, $p=.041$ at $\alpha=.05$)

Pearson’s Chi-Square shows that swearing is significantly more common in on-topic posts, so the hypothesis that this sort of informal solidarity encourages swearing is not supported.

5.2 The Social Network Structure.

The first hypothesis is based on the structure of the social network evident in the sample of DTS postings, so it is important to know what the structure is. To reiterate,

¹ The accuser posted under the username “Zombie in Tuxedo,” a name derived from the lyrics to the song “Evil vs. Evil” by the Keene Brothers, a collaborative project between Robert Pollard and the guitarist Tommy Keene, who is openly gay.

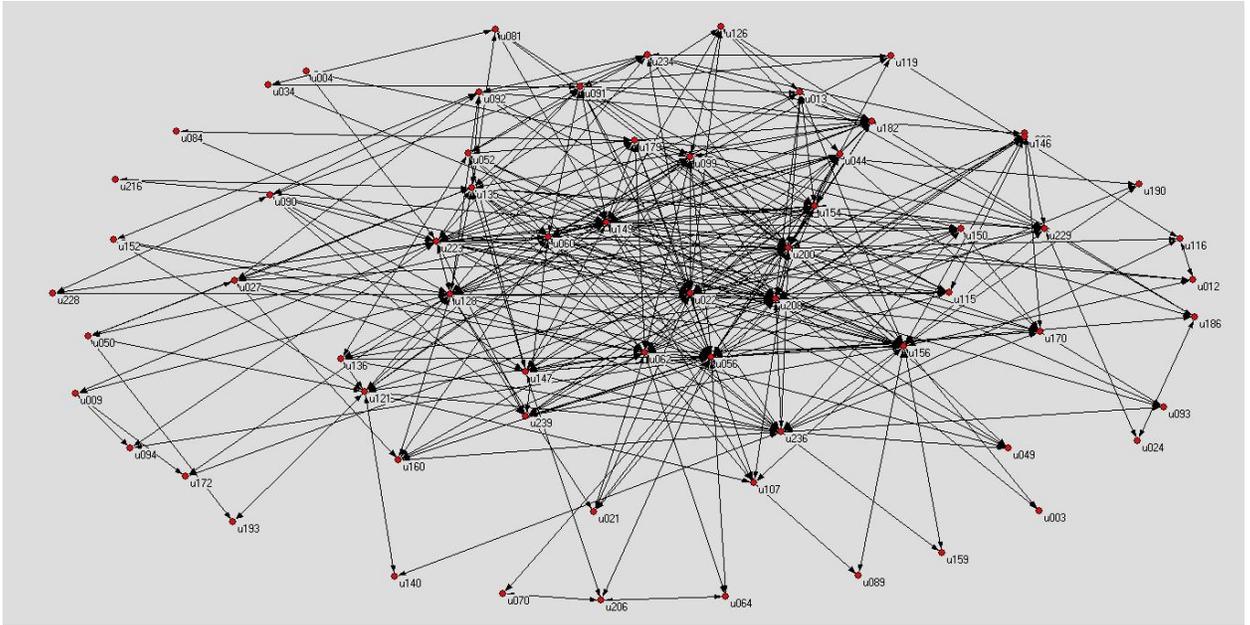


Figure 5-2: Clique Subset (i.e., members in directed triads)

A count of interactions (posts in which one participant directly addresses one or more others) reveals that a majority of interactions (68.3%) occur between members of the same clique. This membership pattern is the most frequent (45.3%) and members of the same clique interact more frequently than others, with nearly three times as many interactions per interlocutor pair as all other membership patterns. This is clear evidence that clique formation is an important feature of this online community. (Note that the count of interactions includes posts where two addressees are counted. Each addressee is counted as an interaction. There were 70 multiple-interaction posts, thus 70 posts are represented twice in the interaction counts.)

Clique Membership Pattern of Interlocutors	Interactions	Pct.	Interlocutor Pairs Fitting Pattern	Pct.	Interactions Per Pair
Interlocutors in the Same Clique	2001	0.683	650	0.453	3.08
Interlocutors in Different Cliques	502	0.171	408	0.285	1.23
Speaker Only Is in a Clique	205	0.070	180	0.126	1.14
Addressee Only Is in a Clique	163	0.056	142	0.099	1.15
Neither Interlocutor in a Clique	59	0.020	54	0.038	1.09
Total	2930	1.000	1434	1.000	2.04

In posts without a specific addressee, speakers who are in a clique are nearly six times as likely as those not in any clique to make a post: 20.8 posts per speaker in a clique, compared to 3.7 per speaker for those not in a clique. This suggests a strong relationship between clique membership and overall participation in the DTS community. Predictably, perhaps, the more frequently a participant makes posts to the board, the more likely he or she is to interact with other board members and form direct triads with others.

Speaker Clique Membership	Speakers	Pct.	Posts	Pct.	Posts per Speaker
Speaker in a Clique	64	0.388	1329	0.783	20.8
Speaker not in a Clique	101	0.612	369	0.217	3.7
Total	165	1.000	1698	1.000	10.3

Social Network Analysis recognizes several measures of social “prestige” or “popularity”. My unobtrusive data collection methodology did not permit a measurement of these concepts based on expressed subjective opinions of fellow board members (say, with questions like, “List the 10 DTS members you respect the most”), but we can look at

the objective measures of **Degree**. In SNA, the degree of a particular network member is the number of connections with other members. In my method, a single interaction with a member constitutes a connection and is counted in the Degree measure. A member's In Degree is the number of participants who directly address the member. Similarly, the member's Out Degree is the number of individual participants the member directly addresses. Additionally, I derived a measure of Triad Degree, or the number of directed triads each member belongs to. This equates to the number of cliques the member belongs to.

Tables 5-7 and 5-8 include the five-number summary and the other major measures of central tendency of the degree measures.

	Degree	In Degree	Out Degree	Triad Degree
Max	66	44	58	32
3rd Quartile	17	11.5	11	4
Median	6	4	3	0
1st Quartile	2	1	1	0
Min	0	0	0	0
Mean	12.0	8.3	8.3	3.7
Mode	1	0	1	0

	Degree	In Degree	Out Degree	Triad Degree
Max	66	44	58	32
3rd Quartile	35	25	26	14
Median	23	16	15	7
1st Quartile	14	9	9	4
Min	6	3	4	2
Mean	26.5	18.6	19.2	10.1
Mode	27	9	8	2

Notably, both tables show a right skew (suggesting that that the means are greater than the medians), but the skew is somewhat less in the subnetwork of 65 clique members. Incidentally, the maximum values for all four measures were achieved by the same DTS participants, suggesting that this social network is built around one or a relative few active and/or prestigious members. The same member was also the most frequently addressed participant but, curiously, also made the greatest numbers of posts without a specific addressee. Table 5-9 summarizes post data.

	Posts	With Addressee	Without Addressee	Posts Addressed
Max	256	201	73	226
3rd Quartile	27	13.5	11	15
Median	7	3	4	4
1st Quartile	3	1	1.5	1
Min	1	0	0	0
Mean	26.0	16.3	9.7	17.0
Mode	1	0	1	0

5.3 Statistical Analysis of Hypotheses

Hypothesis 1: Swearing occurs more frequently among members of the same clique.

Following previous research on swearing and solidarity, my first hypothesis is that clique membership should significantly influence swearing. The main test of this hypothesis involved coding the 2,930 interactions with an addressee (encompassing 2,860 posts) and whether or not they contained swearing. The results summarized in Table 5-10. (17 instances of swearing included two addressees.)

Table 5-10: Swearing by Interlocutor and Clique Membership: DTS Posts with Specific Addressee(s)				
	Swearing	No Swearing	Total	Swearing Rate
Interlocutors in the Same Clique	351	1650	2001	0.175
Interlocutors in Different Cliques	80	422	502	0.159
Speaker Only in a Clique	37	168	205	0.180
Addressee Only in a Clique	24	139	163	0.147
Neither Interlocutor in a Clique	14	45	59	0.237
Total	506	2424	2930	0.173

(Statistical results: $X^2 = 3.277$, $df=4$, $p=.513$ at $\alpha=.05$)

The Chi Square test fails to show a significant difference among the various clique membership patterns of interlocutor in these interactive posts. Mutual clique membership, in fact, results in only a slightly greater swearing rate than the overall average. This was, however, a higher swearing rate than found between members of different cliques, so among members of the clique subnetwork there may be a slight effect. When only one interlocutor is a clique member, there is an apparent difference in swearing rate depending on whether the speaker or addressee is a clique member. The relative small number of interactions in these two categories undercuts their influence on the overall result. The highest swearing rate is found between non-clique members but, again, the small number interactions does not permit us to claim a significant result. This hypothesis is rejected.

Clique membership may yet have an overall influence on swearing.

Table 5-11: Swearing and Clique Membership DTS Posts without a Specific Addressee				
	Swearing	No Swearing	Total	Swearing Rate
Speaker in a Clique	252	1077	1329	0.190
Speaker not in a Clique	53	316	369	0.144
Total	305	1393	1698	0.180

(Statistical results: $X^2 = 4.144$, $df=1$, $p=.042$ at $\alpha=.05$)

Looking at posts without an addressee, presented in Table 5-11, we do find a significant difference based on clique membership of the speaker.

Hypothesis 2: Recognized leaders of the community will swear at a significantly different rate than others.

The most straightforward indicator of formal leadership in the DTS community is status as a moderator or administrator. In theory the participants who hold these positions have certain powers other members do not have, including the ability to delete and/or edit posts, and ban other members. In practice, only administrators do this, although the moderator tag is still recognized to some extent as an emblem of importance.

The hypothesis is stated neutrally with respect to swearing rate, because it could work either way: formal leaders could serve to reinforce general swearing behavior, or they could aim to reduce it. (It should be noted that there was not one instance of disapproval of another DTS member's swearing by a moderator or administrator in the sample.)

	Swearing	No Swearing	Total	Swearing Rate
Moderator/Administrator (n=10)	154	624	778	0.198
Non-Moderator (n=165)	640	3140	3780	0.169
Totals	794	3764	4558	0.174

(Statistical results: $X^2 = 3.677$, $df=1$, $p=.055$ at $\alpha=.05$)

As seen in a Table 5-12, the ten DTS participants with moderator or administrator status during the time of the sample posts swear at a noticeably higher rate. The Chi-Square statistic is very close to the required significance level ($\alpha=.05$), but we can only tentatively accept the hypothesis if we relax the standard.

Hypothesis 3: Male participants swear at a higher rate than female participants

Previous research showed differences between sexes in swearing, in frequency, in who they swear with, and in the specific swear words used. One recent study of online swearing (Thelwall 2008) showed that the differences seemed to be less apparent in online communities in the United Kingdom, but that the difference was still evident in the United States. Since most DTS participants are based in the US, I base this hypothesis on recent findings for US users.

One caveat must be made in the analysis that follows. Without a direct questionnaire, I had to determine the sex of participants from the content of their posts and the responses and commentary of other DTS members. Since I attended several DTS-related events and was able to meet many participants in person, I am able to confirm that the data is accurate. It is not complete, however – I could not determine the sex of 45 of the 175 users from DTS post content. On the other hand, these 25.7% of participants

made fewer than 4% of all posts, so factoring out their possible influence should not harm my analysis. Table 5-13 shows the breakdown of participation by sex.

Sex of Participant	N	Pct	Posts	Per User	Addressed	Per User
Female	13	0.074	418	32.2	406	31.2
Male	117	0.669	3982	34.0	2440	20.9
Unknown	45	0.257	158	3.5	84	1.9
Totals	175	1.000	4558	26.0	2930	16.7

Interestingly, while female DTS participants made up only 7.4% of posters in the sample, they participated at roughly the same rate as males (32.2 posts per member, compared to 34.0) and were addressed at more than a 50% higher rate than males.

A key place to look for a difference in swearing is in interactive posts and the sex of speakers and addressees. Table 5-14 includes all interactive posts, including those by those whose sex is unknown.

Sex of Speaker-Addressee	Swearing	No Swearing	Total	Swearing Rate
Female-Female	1	27	28	0.036
Female-Male	33	235	268	0.123
Female-Unknown	0	4	4	0.000
Male-Female	52	321	373	0.139
Male-Male	396	1726	2122	0.187
Male-Unknown	18	55	73	0.247
Unknown-Female	0	5	5	0.000
Unknown-Male	4	46	50	0.080
Unknown-Unknown	2	5	7	0.286
Totals	506	2424	2930	0.173

No statistical tests are attempted on this table since we cannot interpret the influence of an unknown sex. Table 5-15 reduces the results to interactions where the sex of both interlocutors is known.

Sex of Speaker-Addressee	Swearing	No Swearing	Total	Swearing Rate
Female-Female	1	27	28	0.036
Female-Male	33	235	268	0.123
Male-Female	52	321	373	0.139
Male-Male	396	1726	2122	0.187
Totals	482	2309	2791	0.173

(Statistical results: $X^2 = 14.06$, $df=3$, $p=.003$ at $\alpha=.05$)

Females swear with other females at a much lower rate than would be expected in this sample, and they swear almost four times as often with males. Males, in turn swear at a higher rate with other males than with females, although they still do so more frequently than females to males. The Chi Square test shows significance, so this data supports the hypothesis.

Overall swearing rates by sex also support the hypothesis.

Speaker Sex	Swearing	No Swearing	Total	Swearing Rate
Female	53	365	418	0.127
Male	720	3262	3982	0.181
Totals	773	3627	4400	0.176

(Statistical results: $X^2 = 7.623$, $df=1$, $p=.006$ at $\alpha=.05$)

Again, the Chi Square test shows significance again. The situation appears more complex, however, when we look at posts with and without a specific addressee. When there is a specific addressee, we will see a significant difference.

Speaker Sex	Swearing	No Swearing	Total	Swearing Rate
Female	34	266	300	0.113
Male	466	2102	2568	0.181
Totals	500	2368	2868	0.174

(Statistical results: $X^2 = 7.751$, $df=1$, $p=.005$ at $\alpha=.05$)

But when there is not a specific addressee, the difference is insignificant, as females swear at a rate similar to males. Analysis if Table 5-18 shows no significant difference.

Speaker Sex	Swearing	No Swearing	Total	Swearing Rate
Female	20	105	125	0.160
Male	270	1203	1473	0.183
Totals	290	1308	1598	0.181

(Statistical results: $X^2 = 0.421$, $df=1$, $p=.516$ at $\alpha=.05$)

The difference is clear again, however, if we look at the sex of the addressee, regardless of the sex of the speaker.

Addressee Sex	Swearing	No Swearing	Total	Swearing Rate
Female	53	353	406	0.131
Male	433	2007	2440	0.177
Totals	486	2360	2846	0.171

(Statistical results: $X^2 = 5.384$, $df=1$, $p=.02$ at $\alpha=.05$)

The Chi Square test shows that male Settlers are addressed with swearing at a significantly higher rate than female Settlers.

On the whole, the analysis of swearing by sex supports the hypothesis. However, females themselves swear more frequently to male addressees than to other females, and when there is no specific addressee, there is no significant difference between the sexes in swearing rate.

6. Discussion and Conclusions

To reiterate the results for each hypothesis:

- *Hypothesis 1: Swearing occurs more frequently among members of the same clique.* This hypothesis is rejected based on the data analysis.
- *Hypothesis 2: Recognized leaders of the community will swear at a significantly different rate than others.* This hypothesis is tentatively supported when “leadership” is defined by discussion board moderator or administrator status.
- *Hypothesis 3: Male participants swear at a higher rate than female participants.* This hypothesis is supported by the data, at least for swearing in interactive posts.

With respect to Hypothesis 1, Daly, et al (2004) had observed a high frequency of swearing in a face-to-face communication within a factory work team when compared to rates between members of different work teams. Their conclusion was that solidarity within the work team encouraged swearing, or at least loosened the rules about swearing and making potentially face-threatening insults to either other.

I did not find the same strong relationship. Using the SNA concept of a clique to define solidarity, there was no significant relationship between belonging to the same clique and swearing in interactive posts. As I used a very different methodology than the

Daly team, I cannot directly challenge their findings, but my findings beg for an explanation. There could be several explanations for my different findings:

1. The Disarm the Settlers community is highly effective at incorporating new members into its practices. If swearing is indeed one of those practices, it would be difficult to detect differences based on solidarity.
2. The sense of solidarity among the DTS membership in general is so strong that it is difficult to measure a difference between subgroups of participants. In a sense, everyone who registers on the discussion board is already predisposed to solidarity with their fellow Guided By Voices fans.
3. DTS members, by the time period covered by my sample, were so accustomed to meeting in person at live shows and other gatherings that solidarity was a given when they returned to the online environment.
4. Participant swearing is based largely on factors other than group solidarity, e.g., individual preference and personality.

It is tempting to wonder if this result would have been different if I had used a stricter definition of “clique”, perhaps as directed network of at least four members. There is no theoretical requirement to do this in social network analysis, however, so this strategy would probably not be justified.

Another alternative approach would be to compare samples from two or more communities. Social network analysis could be used to measure differences between communities (e.g., degree, and other measures like network density) and their relationship to swearing rates. Clique membership apparently has some influence on

swearing behavior. I did find a significantly higher swearing rate by clique members than non-clique members when not addressing a specific participant, so there is reason to think network structure has some relationship to swearing, at least where swearing is a community practice.

Hypothesis 2 is tentatively supported, with a p-value of near .05. This finding differs from Paolillo (1999 and 2001), who found that the moderator/administrator group in his community did not swear at a significantly different rate than some other groups, which led him to raise some questions about how the natural leaders in a community influence language use. But if leaders have a conservative influence on language (Milroy and Milroy 1992) and swearing is a community practice, my findings make sense. It would be interesting to measure the difference with a different definition of leadership, for instance by replacing the group of ten moderators and administrators with the ten belonging to the greatest number of triads, which arguably are the best “connected” members of the group. (The various degree measures turned out to be useless in analyzing differences in individual swearing rates: fewer triad memberships correlates with few posts, which distorts swearing rates.)

Hypothesis 3 confirms some previous findings that swearing is dependent on sex, and the relationship is complex. In my sample, female board members swore among themselves in only one interactive post, a rate of 3.6%, yet they swore nearly as much in female-to-male interactions as males did in male-to-female interactions. This suggests that while swearing is definitely part of women speakers’ linguistic repertoire, it is perhaps less important as a mode of expression among women than it is among men.

Note however that in posts that addressed the entire community rather than any specific addressee, there was no significant difference in swearing rate between males and females. This suggests that the women of DTS in aggregate have no concern with being observed using taboo language.

Yet another line of exploration could include usage of specific words. Does clique membership, moderator status, or sex relate to usage of, say, forms of *fuck*, or use of swearing in personal insults? Data collected using my methods could address these and more questions.

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