Online Gendered Interactions:Exploring Divergent Perspectives

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Abstract-**The effects of the Internet on social life are well documented. Empirical evidence highlights fundamental changes in various aspects of social life connected to the growth of information and communication technologies. The ability to communicate with others across time and space has expanded opportunities to meet others and maintain personal relationships. Over the last twenty years, researchers have explored a variety of topics in relation to this new information and communication technology. A common question posed in the literature on the Internet relates to how social structures such as gender matter when people interact without physical presence in a technologically mediated environment. Despite the multidisciplinary, methodological, and theoretical diversity of the various studies on the topic of gender online, patterns are identified in the literature and include gender fluidity, gender reproduction, and a blending of gender fluidity and reproduction. This paper examines the significance of gender in online settings and concludes by discussing how recent developments in information and communication technologies present new arenas in which to examine the role of gender on the Internet**

Keywords-Internet, gender, pseudonyms, computer-mediated communication, online forums, chat rooms, gender swapping

I. INTRODUCTION

The effects of the Internet on social life are well documented. Empirical evidence highlights fundamental changes in various aspects of social life connected to the growth of information and communication technologies. The Internet, as a vast set of interconnections or a "network of networks," is responsible for the growth of virtual social spaces (Craven and Wellman: 1973).These social spaces serve a range of purposes and bring together groups of people around topics, interests, and curiosities. The ability to communicate with others across time and space has expanded opportunities to meet others and maintain personal relationships. Over the last twenty years, researchers have explored a variety of topics in relation to this new information and communication technology. Considering that twenty five percent of the world's population and the majority of people in North America, Europe, and Australia use the Internet, the need for further examination of online social dynamics is clear. (Miniwatts Marketing Group 2009).

Gender is a social category that significantly shapes people's identities and social interactions. A common

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question posed in the literature on the Internet relates to how social structures such as gender matter when people interact without physical presence in a technologically mediated environment. What role this social structure plays online has intrigued researchers from a variety of disciplines. Various studies have addressed a range of topics in relation to gender in online environments. While this general interest has contributed to a wide spectrum of speculative and empirical work, it has also created a body of literature that lacks a clear structure. This lack of structure presents challenges to providing an organized and coherent review of the literature on the topic.

The literature on gender in online environments has several unique characteristics. First, since the literature covers studies from a wide range of disciplines, there is no clear approach to studying gender in these settings. Because of this diversity, there is a lack of agreement on methodological approaches and theoretical frameworks when studying gender online. Researchers use a variety of methodologies including surveys, content, discourse, and textual analysis, observations and participant observations, experiments, and interviews to examine gender relations online. Since research in this area is fairly new, there are still debates regarding which methodological approaches will produce valid and reliable data. Furthermore, ethical guidelines used to conduct online research are currently under debate. This has contributed to further discussions that focus on methodological concerns with less attention given to the findings of these studies. Second, the variety of theoretical frameworks used in studies has led to conflicting interpretations of data. Theoretical frameworks are diverse and often reflect the specific perspectives offered within multiple disciplines. For example, two different studies may offer similar findings but provide different interpretations of the data. Third, studies address many different types of online environments and therefore make it difficult to categorize and summarize findings due to the varying contexts of these settings. Forth, many of the sources on this topic are not found in peer-reviewed journals, but are located in conference proceedings, obscure and outdated Internet sources, and/or published as theses and dissertations. These various locations not only make it difficult to track down sources, but it also calls into question the scientific rigor of findings. Many of the sources are speculative rather than empirical.

Despite the difficulty of reviewing the literature on this topic, there are several patterns in relation to gender online that can be identified. First, researchers have documented various ways that participants in online environments practice forms of gender fluidity. Within this category, there are several findings discussed including gender swapping,

pseudonyms, gender transgression, and gender resistance. Another pattern documented includes the ways that participants reproduce gender stereotypes. Within this category, findings include the reproduction of gendered identities and interactions, gender harassment, and gendered expression in computer-mediated communication. The third category includes studies that document evidence of both gender fluidity and gender reproduction. This work examines the significance of gender in online settings and concludes by discussing how recent developments in information and communication technologies present new arenas in which to examine the role of gender on the Internet.

II.   GENDER FLUIDITY

 The concept of gender fluidity describes the process by which online users practice gendered behaviors that challenge dominant, traditional gender roles. These mechanisms for challenging traditional gender norms are represented by gender swapping, pseudonyms, gender transgressions, and gender resistance.

A. Gender Swapping

Early writing and research on gender in online environments focused on the practice of gender swapping. Gender swapping (also known as gender-switching) is described as an instance when "one presents a gender that is different from his or her biological sex" (Roberts and Parks 1999: 522). In other words, an individual who is biologically a male may identify online as a female or as a neutral gender. However, the practice of gender swapping may or may not be representative of a person's gender identification offline. There are a range of methodological approaches used to study gender swapping. Turkle (1995, 1997) gained most of her data from interviews with participants of role-playing MUDs. A MUD or MOO is a "text-based multi-user virtual reality environment" (Bruckman 1993: 2). Communication in a MUD occurs in real time. MUDs can be role playing or social in practice. Other researchers have also studied the phenomenon of gender-swapping using techniques such as content analysis of gender choice in MUDs (Danet 1998), participant observation of MUD interactions (Bruckman 1993), online ethnography (Reid 1994), observations in MUDs (Menon 1998), and surveys on users' frequency and reasons for gender switching (Roberts and Park 1999; Samp, et al). A significant issue with many studies on gender-swapping is a lack of discussion on the methodology used to collect data. Since these studies were the first of their kind, researchers seem to provide a more exploratory approach in these early studies. For example, Danet (1998) establishes a research agenda for studies on gender switching by posing a series of research questions for further investigation. Many studies cited by these authors seem to provide more antidotal evidence rather than data from a systematic collection and analysis process. Often the works cited are from conferences and/or Internet webpages. These limited approaches and discussions of methodology make it difficult to access the validity and reliability of findings. However,

many interesting studies have been conducted that provide valuable insight into the practice of gender swapping. In a landmark study, Turkle (1995; 1997) used a theory of postmodern identity to frame her argument on gender swapping in MUDs. In role playing MUDs, players interact with each other by creating a persona that they project into virtual space (Turkle 1997).Turkle explains this creation of persona as a construction of postmodern identity where individuals create a virtual self that is multiple, fragmented, and constructed through language. As postmodern personas, individuals are provided opportunities to practice parts of their self that they may not feel comfortable expressing in the offline world (Curtis, 1992; Bruckman 1993; McRae 1996; Turkle 1997; Kelly 2006). MUDs allow participants to self select their gender. Specifically, it has been observed that individuals in MUDS often practice being seen as the opposite gender (Curtis 1992). Since at the time of these early studies most of the participants of MUDs were men, it was also assumed that male-to-female cross gendering was more common than vice versa (Reid 1994). From interviews with participants, Turkle (1995) found that some participants played multiple characters and that this practice helped them to see multiple aspects of their selves, but still feel a sense of unity.

While most studies have focused on participants who gender switch within a binary gender system, Curtis (1992) and Danet (1998) also document that players on MUDS often choose unconventional genders. These unconventional genders include choices such as "neuter," "either," and "plural." Danet also notes that players can create their own gender, but very few players do. In contrast to Danet's findings, Roberts and Parks (1999) found that of those participants who switched gender, the majority did so within a traditional binary system.

Roberts and Parks (1999) suggest that gender switching is more common in role playing MUDs than in social MUDs. From their study, it was found that approximately 56% of the sampled users from role-playing MUDs were using gender switching as part of their online practices, while approximately 60% of users from social MUDs had never engaged in gender switching. The findings from this study also indicated that heterosexuals were significantly less likely to gender switch, while respondents with disabilities were significantly more like to gender switch. Reasons cited for gender switching included role-playing, curiosities about gender, to engage in sexual talk and fantasies, or to avoid gendered responses, such as sexual harassment. Findings indicate that all participants who gender switched to avoid sexual harassment were women. These findings support previous research that found women more likely to choose a different gender to avoid sexual harassment or special treatment (Curtis 1992; Reid 1994).

 Kendall (1998b) also suggests that some women may gender switch to avoid demeaning treatment associated with gender relations in the offline world. Overall, Roberts and Park (1999) suggest that those who engaged in gender switching viewed it as an experiential behavior rather than a long term expression of their identity. Echoing previous research findings (Curtis 1992), many of the participants

from this study perceived gender switching as dishonest and deceitful.

Moreover, Samp et al (2003), using an online survey of self-selected users from a random sample of chat rooms, found that the practice of gender-swapping among respondents from their study was not pervasive with only 28% stating that they had presented themselves as a different gender. The authors also found that the majority of respondents who gender switched did so through their user name rather than by manipulating gendered language. The findings indicated that approximately half of the respondents had questioned another user about their gender primarily out of curiosity. The authors speculate that users question others because they perceive gender-swapping as a normative part of online interactions.

Obviously, the research indicates that gender swapping occurs in online environments. However, due to a lack of established methods to examine this phenomenon, the information collected from these studies does not provide clear and accurate data on the prevalence and significance of gender swapping. These methodological difficulties do not minimize the findings, but indicate the necessity for developing a more rigorous scientific method when examining cases of gender swapping.

B. Pseudonyms

The practice of using pseudonyms is another example of gender fluidity in online environments. (Reid 1991, Jaffe et al 1995, Curtis 1992, Danet 1998, Menon 1998). A pseudonym is a fictitious name used by people in online interactions. There are a variety of reasons why individuals choose to use pseudonyms including masking identities such as age, race, ethnicity, and gender. Research indicates that participants use gendered pseudonyms to either gain or minimize attention from others. For the purpose of this work, I will focus on the relationship between gender and pseudonyms.

Menon (1998) found that names were an important part of the identity process for users. As previously discussed, early studies on the Internet left researchers with little reliable and valid methodological approaches to draw upon to understand this particular phenomenon. Since research on the Internet was relatively new when he conducted his study, Menon notes that he did not have access to established methodological approaches for a study on online gender identity. His approach was to conduct preliminary observations and then progress to a participant observation in a MUD called "MW." MW is primarily devoted to women and their ability to explore sexuality in a safe environment. Menon acknowledged the ethical dilemmas presented from his study. He chose to practice deception in his research and often avoided questions about his gender status. Again, the ethical guidelines for studying behavior and interactions in online environments are still not clear and researchers from various disciplines address these settings with different methodological approaches.

In his study, Menon (1998) found that names play a significant role in identity acceptance in this online

community. When the author presented himself as a male with a masculine name, he received very little contact and attention from other users in the MUD. Once the author changed his name to a feminine name, everyone in the community acknowledged his presence. During his interactions with users, Menon was frequently asked to confirm his identity as a woman. Furthermore, those who identified as women often asked personal "womanly" questions to confirm another's gender (Menon 1998). "Womanly" questions were asked about bra size, monthly cycles, types of undergarments, and types of perfumes (Menon, 1998:64). Conversely, the men in the community were less likely to question his identity unless his communication style indicated dominance; a pattern that has also been observed in other MUDs (Curtis 1992).

Other researchers have addressed pseudonyms in their work. Reid (1991), argues that changing one's gender in online settings, specifically Internet Relay Chat (IRC), is "as simple as changing one's nickname to something that suggests the opposite of one's actual gender" (10). IRC is a form of real time Internet chat or synchronous communication. It is organized as discussion forums or channels. Danet (1998) found that participants of IRC often used a "nick" or "nickname" to hide their gender identity. From a study of a virtual party on IRC, Danet, et al (1997) found that most of the nicks were not gender identifiable. By choosing a gender neutral nick, the authors argue that these participants are playing with gender identity in a synchronous chat forum. Additionally, in a content analysis of questionnaires from students enrolled in a large upper-level lecture class at a university, Jaffe et al (1995) found that females were more likely than males to choose pseudonyms that mask their identity. The authors suggest that this pattern might reflect an effort to maintain a level of equality in online conversations occurring in mixed-gender situations. This finding may also relate to previous research (Curtis 1992; Reid 1994; Kendall 1999b; Roberts and Park 1999) that indicates women may choose to gender switch to avoid sexual harassment.

Utilizing pseudonyms in online environments contributes to a pattern of gender fluidity. Pseudonym use allows individuals to manipulate gender identity by either drawing attention to a gendered presentation or to avoid/mask a gender identity. The reasons individuals participate in this practice is unclear. Researchers have recognized this phenomenon but have not delved deeply enough to fully understand the reasons why this practice exists. To this point the, literature merely assumes causation but lacks sufficient evidence for generalizations.

C. Gender Transgression

Another factor related to gender fluidity in online environments is gender transgression. Gender transgression means to breakdown the expectations associated with being a certain gender and/or to call into question certain expectations about masculinity and femininity. An example of gender transgression would be an instance of gender parody in which an individual presents himself or herself as

a caricature such as the stereotype of a hyper-emotional woman or an over-sexualized man. The gender transgression in these types of performances stems from the repetition of acts and the extreme exaggeration of stereotypes that are 'nevertheless denaturalized and mobilized through their parodic recontextualization' (Butler 1990: 176).

Utilizing a poststructuralist theoretical framework and a discourse analysis approach to interactions in a romance web chat room, Armentor (2005) found that some women chatters in the room participated in gender parody through their satirical performances. The study highlights examples of female chatters imitating masculine discursive actions that she calls "discursive drag" (Armentor 2005: 143). Some female chatters in the room perform scripts of hegemonic masculinity, but enact these scripts with other female chatters and in effect expose and dramatize notions of gender subordination. While the author acknowledges that the chatters do no openly challenge gender ideals or practices, their performances may still be seen in multiple ways because they are set before an audience and are performed in a context that challenges the traditional signification of these practices. Armentor (2005) argues that the relationship between sex and gender may be denaturalized in the female chatters' performances of hegemonic masculinity.

Rellstab (2007) also found evidence of gender transgression in a Swiss IRC. Using an ethnomethodological approach to "doing gender," and conversation analysis as a method, Rellstab frames interactions from three chat channels as gender accomplishments through interaction. The phrase "doing gender" was coined by West and Zimmerman (1987) and is defined as upholding and maintaining gender specific behavior such as girls dressing in feminine attire or boys actively engaging in sporting activities. Due to the anonymity of IRC, Rellstab suggests that chatters feel more comfortable to explore gender limits and transgress the boundaries of gender norms. Findings demonstrate that some participants stage gender "plays" in the chat channels (Rellstab 2007: 780). While these plays often mimic the normative conceptions of masculinity and femininity, the author argues that they also disrupt these norms. In one example from the study, a female chatter performs in front of a chat audience using highly charged, stereotypical masculine discourse patterns. She is doing gender but also transgressing gender boundaries by making a room intruder believe she is a male. In this role, she is able to transcend the expectations associated with femininity and gain a powerful advantage over a chatter who crashes the room to provoke others. Overall, findings from this study suggest that there are instances when chatters temporary transgress gender boundaries by disrupting attitudes towards normative conceptions of gender through theatrical gender performances (Rellstab 2007).

Online environments offer individuals the opportunities to transgress gender boundaries through gendered performances. These performances often allow individuals to safely create alternative gendered personas and challenge gender norms. Gender transgressors are purposely disrupting the dominant ways of understanding gender by challenging the meanings associated with the traditional ways in which we do gender. Research is this area is relatively new and needs further definition and exploration.

D. Gender Resistance

Researchers have also documented a pattern of gender resistance in online forums (Herring 1995, Cook and Stambaugh 1997, Armentor 2005). Gender resistance goes beyond playing with gender to actively opposing socially accepted gendered patterns in interactions. For example, in conversations between women and men, research has found patterns of male dominance and control in which men dominate the conversation by talking over and silencing women. Cook and Stambaugh (1997) found that men performed hegemonic masculinity through flaming and demeaning jokes about women. Flaming is defined as "the expression of strong negative emotion, use of derogatory, obscene, or inappropriate language, and personal insults" (Herring 1994: 6). Women's efforts to call attention to these behaviors were met with resistance from some men on the list. Some women on the list resisted male domination in the forum by identifying inappropriate behavior. Often, the women would confront the dominators and try to negotiate a change or attempt to convince them to leave the list (Cook and Stambaugh 1997).

Similarly, Herring et al (1995) found that in a mixed sex public discussion list frequented by academics, women resisted methods of silence enacted by men on the lists. Despite being in the numerical minority, women on the list resisted by rephrasing their arguments, elaborating, keeping the discussion focused on the topic, and maintaining solidarity with other women in the room. However, the authors argue that despite the strategies for empowerment exhibited by women on the list and their ability to gain power temporarily, some men on the discussion list ultimately silenced them. At the time of this study, men dominated most online environments. However, the online population has changed over the last ten years as men and women are now equally represented as Internet users. (Pew Internet and American Life Project 2009). This population change may challenge patterns of male domination such as those found by Herring, et al.

Using critical and poststructuralist feminist perspectives to analyze qualitative interviews from sixteen girls in Vancouver, Canada, Kelly et al (2006) explored how girls learn about issues of femininity in the presence of others online. The authors found that girls in this study performed a variety of femininities in various chat forums. Some girls challenged conventional forms of femininity and performed rebellious femininity by provoking girls with hyper-feminine screen names and challenging hyper-masculine boys by questioning their heterosexuality (Kelly et al 2006). Many respondents also acknowledged that online activities allowed them to practice certain identities and behaviors such as playing the "bad girl," taking initiative in romantic relationships, and confronting boys on gender harassment. Some girls also played with gender by gender switching. Overall, the findings from this study shed light on the ways that girls engage in gender rebellion against ideologies of

gender subordination and practice alternative forms of femininity that help prepare them for engagement in offline social life.

Research in the area of gender fluidity in online environments covers a range of topics including gender swapping, pseudonyms, gender transgression and gender resistance. While this study and many others discussed in this article highlight the potential of online environments for offering users opportunities to practice and act out alternative gender behavior, researchers have also documented a consistent pattern of users reproducing traditional gender norms in these settings.

III. GENDER REPRODUCTION

Conversely, while researchers have found that patterns of gender fluidity are present in various online environments, there is strong evidence that online participants use and perpetuate traditional gender roles in their online interactions. The reproduction of gender roles and norms is not unexpected since gendered behaviors are pervasive throughout societies. Over the past 15 years, there has been a significant amount of research addressing the reproduction of gender roles and norms in online settings including MUDS, discussion lists, IRC and other chat forums.

A. Reproducing Gender Identities

Despite the potential for identity play noticed by researchers (Curtis, 1992; Bruckman 1993; Turkle 1997; McRae 1996; Kelly 2006), others have noted the practice of gender switching often reproduces patterns of traditional gender identity. Through online interviews with participants of MUDs, Kendall (1998) found those who gender switched often presented caricatured and exaggerated gender characters in these online settings. She found that these participants separated their online, caricatured images from their offline gendered identities and therefore there sense of self was not challenged or conflicted. Kendall (1998a) argues that the effect of these presentations more often reproduce existing beliefs and assumptions about gender and may actually go beyond reproduction and create more rigid beliefs about gender among MUD participants. In other words, the caricatured character may be more real in this setting than less stereotypical portrayals of gender (Kendall 1998a). In support, O'Brien (1999) suggests that online gender-crossing has the potential to reinforce conventional gender forms because participants often practice "hypergendering" by enacting caricatured gender stereotypes and reproducing gender stereotypes through their interactions. Her argument is that playful online gender performances do not necessarily translate into new and creative interactions. In fact, a study conducted by Roberts and Park (1999) found that of the respondents in their study who decided to gender switch, the majority did so within traditional binary categories of gender. In a participant observation that examined interactions and identity performances in a MUD, Kendall (2000) found participants' performances of gender both diverged and converged from ideologies of hegemonic masculinity. Participants in her

study employed a form of masculinity that centered on computer culture and a nerd identity, while distancing themselves from femininity and women in general through "formulaic joking patterns" that depict women as sexual objects (Kendall 2000: 263). However, the participants' identities as nerds also positioned them in a non-hegemonic gender status leading them to express ambivalence towards dominant standards of masculinity. Overall, the findings suggest that participants distanced themselves from both men who they perceived as enacting forms of hegemonic masculinity and women in general because of they identified as men thus isolating themselves from the larger society and creating their own nerd subculture. In a more recent study, Valkenburg et al (2005) administered surveys to adolescents from The Netherlands about their identity experiments in online settings such as chat rooms and instant messaging. The authors found that while boys and girls did not differ in how much they experimented with their identities, they did differ in their self-presentation strategies. For example, girls more frequently pretended to be beautiful and older than boys, while boys pretended to be macho more frequently than girls (Valkenburg, et al 2005). Citing past research, the authors suggest that since anonymous online settings such as chat rooms often have strong gender stereotypical norms, this may contribute to the higher incidences of gender stereotypical presentations from adolescents in these settings.

Likewise, Del-Teso-Craviotto (2008) found in her participant observation of dating chat rooms that participants were more likely to present gender identities that were rooted in traditional hegemonic ideas about gender. She found that participants authenticated gender identities through methods such as the posting of one's ASL (age, sex, and location), screen names, and gendered behavior such as the use of emoticons and other graphical symbols. Del-Teso-Craviotto (2008) suggests that the ephemeral nature of the exchanges, the scarcity of cues and rapidity of conversations limiting the presentation of a developed identity, and the likelihood that online identities reflect shared cultural values about gender all contribute to the prevalence of online stereotypical gender identities.

Research on the reproduction of gender identities in online settings has found that identities developed online do not necessarily translate to life offline. However, the online reproduction of exaggerated gendered stereotypes often promotes and perpetuates traditional gender identities among participants. Through practices of gender swapping, the development of male subcultures (nerds), self-presentation strategies, and chat behavior, dominant gender identities are often reproduced in online environments.

B. Gender Harassment

Researchers have documented incidences of gender harassment in online forums (Dibbell 1993; Herring et al 1995; Herring 1999). One of the first discussions of gender harassment in cyberspace involved the virtual rape of several female and non-specified gender characters in a popular MOO called LambdaMOO. In this incident, a user

under the name of "Mr. Bungle" used a software program called "voodoo doll" that "attributes actions to characters that their users did not actually write" (Dibbell 1993). Mr. Bungle used the program to force other players to engage in virtual sexual acts towards him and other characters in the room. The discussion of this incident led many researchers to further investigate the issue of gender harassment in online environments and to examine the effects of this type of practice.

Other studies (Herring et al 1995, Herring 1999, Armentor 2005) have also examined incidences of sexual harassment online. For example, Herring (1999) examined two episodes of gender harassment from two different online forums, one from a synchronous recreational chat channel (IRC) and the other from a semi-academic asynchronous discussion list. Herring found that while there were differences between the two forums, such as the sexualization of female participants in IRC and the silencing of women in the discussion list, there were similarities between them in terms of rhetorical gender dynamics. In both forums, the author found gender harassment occurred in a progression of stages. These stages included initiation situation, initiation of harassment, resistance to harassment, escalation of harassment, accommodation of the targeted group to harassers, and/or targeted participants falling silent (Herring 1999). In her study, Herring (1999) found that male participants used activities such as "actions" and "kicking" to harass female participants in IRC and quoting in the discussion lists and IRC. The author maintains that "actions" are a way for users to type about themselves in the third person rather than directly, "kicking" refers to kicking someone else off a chat channel, and "quoting" refers to including a portion of a previous message in one's response. The men in these forums utilize these various strategies to maintain dominance over the women in the settings. Overall, Herring (1999) found that while female participants attempted to resist male harassers in both forums, they ultimately fell silent in the light of the escalation of gender harassment.

In a study of a romance web chat room, Armentor (2005) found that while both male and female chatters participated in flaming, male chatters accounted for the majority of the harassing or flaming. In the romance chat room, Armentor found a culture of sexism existed that varied in form and range from name calling to discursive acts of sexual violence including "actions" of virtual rape perpetrated by male chatters. When conflicts arose between female and male chatters, males often resorted to sexualizing comments. However, Armentor (2005) also noticed that female chatters often resisted this culture of sexism by regularly fighting back through the use of discursive strategies such as reframing discussions and the co-optation of their harassers' words that were then used against them.

Gender harassment exists online and offline in male dominated societies. Men maintain their control over women in online environments much the same way they do in offline interactions. Research highlights that the use of silencing, flaming, sexualization, and sexual violence are used as mechanisms of dominance in online settings. How women respond to these forms of gender harassment varies in degree and type. Research comparing women's responses to gender harassment in both online and offline environments would provide insight into how information technology effects the way in which women respond to gender harassment online.

C. *Reproducing Gendered Interactions*

Stereotypical gender interactions and communication styles have been observed in a variety of online settings. In a participant observation of a male-based chat room and a female-based chat room, Soukup (1999) found that masculine-based interaction in the form of "locker room talk" and sexual humor were dominant in both rooms. In the male-based chat room, which was sport-related, a pattern of argumentative interaction occurred where "masculine participants" fought each other for attention through interruption and "holding the floor" for extended periods of time (Soukup 1999: 173). In the female-based room, the author found patterns of interaction associated with feminine styles of communication and relationship building. However, despite the fact that masculine participants were in the minority in the female-based room, Soukup observed that they often still managed to dominate the space. For example, masculine participants would often transform the space from one focused on female interactions to an arena for heterosexual romantic encounters (Soukup 1999). Similarly, Waseleski (2006) found that while most subscribers to the discussion lists in her study were female, participation came primarily from males.

Furthermore, in Soukup's study, the feminine participants often contributed to these interactions by playing traditional female roles that reproduced ideologies about masculinity and femininity. Soukup (1999) also found that masculine participants frequently interrupted females while they were having conversations. While feminine participants regularly sanctioned group members who acted inappropriately, these patterns of interaction continued to occur in the female-based room. Moreover, Armentor (2005) found patterns consistent with Soukup's findings in her study of a romance chat room, but she also found patterns of interaction that challenged these findings. For example, many female chatters in the room also participated in a style that can be defined as masculine including insults and flaming. While these studies shed light on the gender interactions in chat rooms, more studies need to be conducted to assess the extend of these patterns in other types of chat rooms and online settings.

D.   *Reproducing Gendered Communication Styles*

Beyond gendered patterns of interaction in online environments, several researchers have addressed the topic of gender and language/communication styles (Savicki et al 1996; Witmer and Katzman 1997; Herring 1993, 1994, Panyametheekul and Herring 2003; Baron 2004; Wasekeski 2006; Fox 2007). Herring has written extensively on gender communication styles in computer-mediated communication. From a participant observation and discourse analysis of two academic discussion lists, Herring

(1993) found that in mixed-sex academic lists, men were far more likely to participate, women's messages were shorter, men and women preferred different conversation topics, and men and women used different rhetorical and linguistic strategies when communicating on the lists.

Herring examined women's and men's language styles and found distinct differences in the way that men and women communicate online. The features for women's language identified by Herring (1993) included "attenuated assertions, apologies, explicit justifications, questions, personal orientation" and support for others, while the features for men's language included "strong assertions, self-promotion, presuppositions, rhetorical questions, authoritative orientation," challenging others, and humor/sarcasm (7). In her analysis, Herring (1993) found that 68% of women's messages contained one or more of the identified features for women's language, the majority of women's messages contained a mixture of both styles, and almost half of men's messages contained only features for men's language. She suggests that this finding supports a view that women must practice men's style to be taken seriously in academics, but also practice women's style to avoid being viewed as too aggressive. Herring also found evidence that suggests women were discouraged from participating on the lists since other participants, both men and other women, rarely acknowledged their comments.In contrast to mixed-gender discussion lists, Herring (1994) found that on women's lists flaming did not occur and women participated more in these settings. This finding is supported by Wasekeski's (2006) study that found little evidence of flaming in a discussion list devoted to the "feminine" profession of librarianship. Savicki et al (1996) found that in groups with higher proportions of men, language was more impersonal, fact oriented, and contained more calls for action, while groups with a higher proportion of females showed a pattern of self disclosure and tension reduction. However, the authors found little evidence of extreme flaming among the groups. Furthermore, Herring (1994) found that while both men and women disliked flaming, they held different views on politeness with women more concerned with the wants and needs of others and men placing more emphasis on freedom from censorship, open expression, an agnostic debate (Herring 1994). While the findings from these studies are important for understanding the role that language plays in online gender interactions, more research needs to explore how language shapes gender interactions in other types of online forums. Herring's work focuses on academic discussion lists, and therefore, one should use caution when generalizing to other types of discussion lists focused on different topics and to other online forums such as chat rooms. The ephemeral and playful nature of a chat room may contribute to different types of communication styles and interaction patterns among men and women. Herring (1999) and Armentor (2005) have documented patterns of gender harassment in chat, but chat rooms vary greatly in type and focus and should be examined in relation to their social and technological contexts.

For example, using conversation analysis, Panyametheekul and Herring (2003) examined a Thai chat room and found that females participated more and received more responses from men in the chat room. Patterns of communication that reflect traditional gender norms were present in the chat room and included females being more interactive and other-oriented, males speaking out in the forum regardless of responses from others, and males being more flirtatious in their communication (Panyametheekul and Herring 2003). While participants engaged in communication that reflects traditional gender norms, females in the room enjoyed greater participation and engagement with other participants than males. The authors suggest that this pattern may be the result of the fact that females make up the majority of participants and/or that the room reflects the values of politeness and civility found in the larger Thai culture (Panyametheekul and Herring 2003). These suggestions are reasonable, but it should be noted that researchers have found conflicting evidence in terms of patterns of male dominance in online forums where females are the numerical majority (Savicki et al 1996; Soukup 1999).

E.   Gendered Expression in Computer-Mediated Communication

The level of expression for women and men varies in computer-mediated communication. Studies of both asynchronous and synchronous contexts support this finding. (Herring, 2003; Wasekeski 2006; Baron 2004; Witmer & Katzman 1997) This finding is consistent with research that indicates women are more expressive in face-to-face communication (Hall, 1984). Witmer and Katzman (1997) found that in messages from newsgroups, women were more likely to use graphic accents (emoticons) than men. Contrary to what previous research suggests, the authors also found that women were more likely to flame in this sample population. This finding is interesting and contradicts claims that suggest men are more likely to challenge others in online environments.

In a study of discussion lists, Waskeski (2006) found that females used exclamations to express friendliness significantly more than males on the lists. Furthermore, recent studies of instant messaging (IM) have contributed to the literature on gender, expression, and online communication. IM is a "synchronous form of one-to-one computer mediated communication" (Baron 2004: 399). Examining gender differences in instant messaging (IM) from college students, Baron (2004) found that females were more talkative than males because they "took longer turns, had longer overall conversations, and took longer to say goodbye" (418). He also found that females were far more likely to use emoticons than males. Fox (2006) also found that women's communication was more expressive than men's communication in IM among college students. Fox (2006) describes expressiveness as including characteristics such as emphasis, laughing, emoticons, adjectives, and number of topics. Research on gender expression in computer-mediated communication documents the perpetuation of traditional gender norms.

IV. BLENDING GENDER FLUIDITY AND REPRODUCTION

While most of the literature on gender in online environments focuses on either issues related to gender fluidity or gender reproduction, there are several studies that document patterns associated with both categories of thought. In these studies, researchers acknowledge that participants reproduce traditional gender binaries through their presentations and interactions, but they also call attention to the multiple methods that participants use in these presentations and interactions and the potential for challenging notions of gender.

In an early study of IRC, Rodino (1997) textually analyzed a conversation from a chat channel. She found that some participants' performances conformed to gender stereotypes and other participants' performances broke away from these forms and expressed gender in multiple and contradictory ways. For example, one character in her study identified herself as female but did not exhibit characteristics associated with "women's language." However, the character did attempt to gain attention through sexual objectification. Another character in the room displayed a gender ambiguous name and conveyed conflictual information about their gender status. Another character created a masculine image through his gendered nickname and further attempted to maintain this image through interactions with others in the setting. These examples help to illustrate the multiplicity and performance of gender in online forums. Rodino (1997) argues that reconceptualizing gender as performatively constructed helps to deconstruct the idea that women's oppression is a result of biological differences between women and men.

Parallel to Rodino, Krolokke (2003) also conceptualizes gender as a series of performances rather than a form of identity. In her study, Krolokke (2003) found that most participants' language styles in IRC were so stereotypical that they bordered on parody. However, she acknowledges that an online environment such as IRC also provides opportunities to engage in language play as evidenced by transexual gender performances that switch from feminine to masculine. Both Rodino and Krolokke argue that IRC both contributes to gender fluidity and reproduces binary gender categories.

In a study of Danish and Flemish weblogs, Doorn et al (2007) observed that while participants presented their gender identity in relation to their offline lives and a binary gender system, they also were constantly presenting themselves as gendered in multiple ways through discursive and visual methods. Furthermore, both men and women in his study accepted the practice of diary writing, which is most often viewed as a feminine practice. Doorn et al (2007) argue that this practice could contribute to the acceptance of a type of "feminine" discourse online. Overall, while the authors did not find examples of gender fluidity directly, they did document diverse performances of gender in these weblogs.

V. CONCLUSION

The effects of the Internet are pervasive and widespread due to global accessibility of this technology. This paper specifically examined the literature on online interactions and found that regardless of the discipline gender did, in fact, matter. However, coherency and agreement in the literature on how gender actually matters is conflicting. Much of this conflict is grounded in a lack of agreement on the methodological and theoretical approaches to studying gender online. This paper addressed issues of gender fluidity, gender reproduction, and the blending of gender fluidity and gender reproduction.

The phenomenon of gender fluidity is found in the ways that online users represent themselves and interact with one another in online settings. Gender swapping, or the presentation of oneself as opposite their biological identity, is a common form of gender fluidity and varies across online forums. The reasons for gender swapping are complex and cover a range of meanings for Internet users. The use of fictitious names, or pseudonyms, in some Internet settings also contributes to patterns of gender fluidity. Evidence is unclear as to why participants use pseudonyms in their online interactions. Some research indicates that pseudonyms are used as a way to deflect attention away from oneself or to draw attention towards oneself. Gender transgressions break down the expectation of gender by questioning ideas about masculinity and femininity. Some female participants will exaggerate masculinity in the form of drag. Research indicates that gender transgressions in online interactions often expose and challenge gender stereotypes. Another example of gender fluidity is gender resistance in which patterns of male dominance and hegemonic masculinity are challenged through approaches such as identifying and confronting disruptive masculine behavior. Women often build solidarity with one another to reject male dominance and regain a gender balance in online interactions. Yet, men are often successful in maintaining dominance in online forums. However, as more women become active Internet users, this pattern of male dominance may decrease. The argument for the reproduction of traditional gender norms in online interaction rejects the concept of gender fluidity. Evidence supports the perpetuation of gender stereotypes through performances of hyper-gendering. Researchers have documented that when participants gender swap, they often do so within a traditional binary gender system and may actually create online characters that are more caricatured than their offline gender identities. Furthermore, adolescents often reproduce traditional gender identities online by representing themselves in ways that embody expectations for women and men. Another area focusing on the reproduction of gender norms in online forums is gender harassment. Gender harassment occurs in online interactions in the form of virtual rape, silencing, actions, kicking, sexualization, and flaming. Online gendered interactions also show characteristics of traditional gender norms regardless of the gender population of setting. Even on women's sites, men continued to dominate interactions and

women accepted and contributed to the dominance. In some cases, women would sanction men for negative behavior, but dominance would continue. Despite the potential for challenging traditional gender norms, both women and men users continued to perpetuate and support these norms.

In addition to the arguments based on gender fluidity and gender reproduction in online forums, there is also research that documents both patterns in participants' behavior. In other words, participants' behaviors and interactions are not always one-dimensional and can often both reproduce and challenge offline gender norms. More studies need to address the complexity of behaviors and interactions occurring in multiple online settings. With the growth of new online forums such as social networking sites, it is necessary to continue investigating the role that gender plays in online interactions. For example, in a study that examined issues of online identity and language among female and male teenagers who created and maintained weblogs, Huffaker and Calvert (2005) found that the blogs of these males and females were more alike than different. They also found a pattern of male teenagers using more emoticons than female teenagers. While the authors obse rved that males did use language that was more active, inflexible, and resolute, they did not observe females engaging in more passive, cooperative, or accommodating language (Huffaker and Calvert 2005). As new generations enter the online world and new forums are created with multi-mediated capabilities, there may be differences in the types of gendered interactions unfolding in online social life. Females and males may start to share similar language and communication styles due to the influence of different gender roles (Huffaker and Calvert 2005). Social networking sites such as Facebook offer participants more variety in terms of communication and presentation of identities. Research should examine the ways that men and women use these new forums and document any similarities and/or differences in their behaviors and interactions. Since sites such as Facebook focus on the development of networks, it will be interesting to observe participants' networks for gender related patterns. Furthermore, investigating profiles and real time news feeds would shed light on the gender identities and interactions of social networking participants. Overall, the changes in both online participants and forums warrants continued research in the area of gender and online interactions.

VI. REFERENCES

1. Armentor, J. 2005. Simulated social spaces: Exploring interactions in a web chat room. *Dissertation Abstract International*. 62(5), 1963A. (UMI No: AAT 3176981) Retrieved January 26, 2010 from Dissertations and Theses Abstracts.

2. Baron, N. 2004. See you online: Gender issues in college student use of instant messaging. *Journal of Language and Social Psychology*. 23: 4, 397-423.

3. Bruckman, A.1993. Gender swapping on the Internet. *Proceedings of INET –93*. Reston, VA: The Internet Society. Butler, J. 1990. *Gender trouble*. New York: Routledge.

4. Cook, K. and P. Stambaugh. 1997. Tuna memos and pissing contests: Doing gender and male dominance on the Internet. In C. Ronai, B. Zsembik, and, J. Feagin (Eds.), *Everyday sexism in the third millennium*. (pp. 62-83). New York, NY: Routledge.Craven, P. and B. Wellman. 1973. The Network City. *Sociological Inquiry*. 43: 1: 57-88.

5. Curtis, P. 1992. MUDding: Social phenomena in text-based virtual realities. Retrieved January 26, 2010 from http://www.aluluei.com/cult-form.htm

6. Danet, B.1998. Text as mask: Gender, play, and performance. In S.G. Jones (Ed.), *Cybersociety 2.0: Revisiting computer mediated communication revisited*. (pp.129-158). Thousand Oaks, CA: Sage.

7. Danet, B., L. Ruedenberg, and Y. Rosenbaum-Tamari. 1997. Hummm…where's that smoke coming from? Writing, play, and performance on Internet relay chat. *Journal of Computer-Mediated Communication*. 2:4, Retrieved January 26, 2010from http://jcmc.indiana.edu/vol2/issue4/index.html

8. Del-Teso-Craviotta, M. 2008. Gender and sexual identity authentication in language use: The case of chat rooms. *Discourse Studies*. 10:2, 251-270.

9. Dibbell, J. 1993. A Rape in cyberspace. *The Village Voice.*December 23.

10. Doorn, N. and L. Zoonen. 2007. Writing from experience: Presentations of gender identity on weblogs. *European Journal of Women's Studies*. 14:2, 143-159.

11. Fox, A., D. Bukatko, M. Hallahan, and M. Crawford. 2007. The medium makes a difference: Gender similarities and differences in instant messaging. *Journal of Language and Social Psychology*. 26:4, 389-397.

12. Hall, J. (1984). *Nonverbal sex differences: Communication accuracy and expressive style*. Baltimore: Johns Hopkins University Press.

13. Herring, S. 1993. Gender and democracy in computer- mediated communication. *Electronic Journal of Communication*. 3:2. Retrieved January 26, 2010 from http://ella.slis.indiana.edu/~herring/ejc.txt

14. Herring, S. 1994. Gender differences in computer-mediated communication: Bringing familiar baggage to the new frontier. Keynote talk presented at *American Library Association Annual Convention*, Miami, FL, USA. Retrieved January 26, 2010.

15. http://www.mith2.umd.edu/WomensStudies/Computing/Articles%2BResearchPapers/gender-differences-communication

16. Herring, S., D. Johnson, and T. DiBenedetto. 1995. This discussion is going too far! Male resistance to female participation on the Internet. In M. Bucholtz and K. Hall (Eds.), Gender *articulated: Language and the socially constructed self* (pp. 67-96). New York: Routledge.

17. Herring, S. 1999. The rhetorical dynamics of gender harassment on-line. *The Information Society.* 15, 151-167.

18. Huffaker, D. and S. Calvert. 2005. Gender, identity, and language use in teenage blogs. *Journal of Computer- Mediated Communication.* 10:2, Retrieved on January26ᵗʰ from http://jcmc.indiana.edu/vol10/issue2/huffaker.html

19. Jaffe, J., Y.-E. Lee, L. Huang, and H. Oshagan. 1995. Gender, pseudonyms, and CMC: Masking identities and barring souls. Paper presented at the *45ᵗʰ Annual Conference of the International Communication Association*, New Mexico, USA. Retrieved January 26, 2010 from http://research.haifa.ac.il/~jmjaffe/genderpseudocmc/

20. Kelly, D., S. Pomerantz and D. Currie. 2006. No boundaries? Girls' interactive, online learning about femininities. *Youth and Society*. 38:3, 3-27.

21. Kendall, L. 1998a. Meaning and identity in cyberspace: The performance of gender, class, and race online. *Symbolic Interaction.* 21:2, 129-153.

22. Kendall, L. 1998b. Are you male or female? Gender performances on Muds. In J. O'Brien and J. Howard (Eds.). *Everyday inequalities: Critical inquiries.* (pp.157-187). Oxford: Blackwell Publishers.

23. Kendall, L. 2000. Oh no! I'm a nerd! Hegemonic masculinity on an online forum. *Gender and Society*. 14:2, 256-274.

24. Krolokke, C. 2003. Impossible speech? Playful chat and feminist linguistic theory. *Women and Language. 26:2, 15-21.*

25. McRae, S. 1996. Coming apart at the seams: Sex, text, and the virtual body, In L. Cherny (Ed.), *Wired women:Gender and new realities in cyberspace.* Seattle, WA: Seal Press, pp. 242-262.

26. Menon, G. 1998. Gender encounters in a virtual community: Identity formation and acceptance. *Computers in Human Services.* 15:1, 55-69.

27. Miniwatts Marketing Group. 2009. Internet world statistics. URL Retrieved January 26, 2010 from http://www.internetworldstats.com/stats.htm

28. O'Brien, J. 1999. Writing in the body: Gender, (re)production in online interaction. In M. Smith and P. Kollock (Eds.), *Communities in cyberspace.* (pp. 76-104). New York: Routledge.

29. Panyametheekul, S. 2003. Gender and turn allocation in a Thai chat room. *Journal of Computer-Mediated Communication.* 9:1, Retrieved on January 26, 2010 from http://jcmc.indiana.edu/vol9/issue1/panya_herring.html

30. Pew Internet and Life Project. 2009. *Demographics of Internet users.* Retrieved January 26, 2010 from http://www.pewinternet.org/Trend-Data/Whos-Online.aspx

31. Reid, E. 1991. *Electropolis: Communication and community on Internet Relay Chat.* Honours Thesis, University of Melbourne. Retrieved January 26, 2010 from http://irchelp.org/irchelp/misc/electropolis.html

32. Reid, E. 1994. *Cultural formations in text-based virtual realities.* Master's Thesis, University of Melbourne, Australia, URL Retrieved January 26, 2010 from http://www.aluluei.com/cult-form.htm

33. Rellstab, D. 2007. Staging gender online: Gender plays in Swiss Internet Relay Chats *Discourse Society*. 18:6, 765-787.

34. Roberts, L. and M. Parks. 1999. The social geography of gender switching in virtual environments on the Internet. *Information, Communication, and Society*. 2: 4, 521-540.

35. Rodino, M. 1997. Breaking out of binaries: Reconceputalizing gender and its relationship to language in computer-mediated communication. *Journal of Computer-Mediated Communication.* Retrieved on January 26 from http://jcmc.indiana.edu/vol3/issue3/rodino.html

36. Savicki, V. 1996. Gender, language style and group composition in Internet discussion groups. *Journal of Computer-Mediated Communication*. 2:3, Retrieved on January 26 fro http://jcmc.indiana.edu/vol2/issue3/savicki.html

37. Soukup, C. 1999. The gendered interactional patterns of computer-mediated chatrooms: A critical ethnographic study. *The Information Society.* 15, 169-176.

38. Turkle, S. 1995. *Life on the screen: Identity in the age of the Internet*. New York: Simon and Schuster.

39. Turkle, S. 1997. Multiple subjectivity and virtua community at the end of the Freudian century. *Sociological Inquiry.* Vol. 67:1, 72-84.

40. Samp, J., E. Wittenburg and D.Gillett. 2003. Presenting and monitoring a gender-defined self on the Internet. *Communication Research Reports.* 20:1, 1-12.

41. Valkenburg, P., Alexander Schouten and J. Peter. 2005.Adolescents' identity experiments on the Internet. *NewMedia and Society*.7:3, 382-402.

42. Waseleski, C. 2006. Gender and the use of exclamation points in computer-mediated communication: An analysis

43. of explanations posted to two electronic discussion lists. *Journal of Computer-Mediated Communication.*11:4, article 6. Retrieved on January 26, 2010 from http://jcmc.indiana.edu/vol11/issue4/waseleski.html

44. West, C. and D. Zimmerman. 1987. Doing gender. *Gender and Society*.1:2, 125-151.
45. Witmer, D. and S. Katzman. 1997. On-line smiles: Does gender make a difference in the use of graphic accents. *Journal of Computer-Mediated Communication*. 2:4.   Retrieved on January 26 fr
46. http://jcmc.indiana.edu/vol2/issue4/witmer1.html