Examining African American and Caucasian Interaction Patterns Within Computer-Mediated Communication Environments

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Abstract

This study explored the extent to which student emotion management factors and normative orientation (belief that chat rooms have normative standards of conduct similar to face-to-face interaction) circumscribe the sending of hostile messages within electronic relay chat rooms on the Internet. A questionnaire survey collected data from 114 undergraduate and graduate students from a large university in southeastern Michigan. The results of the survey revealed statistically significant differences between African American and Caucasian chat room users in terms of how the emotion management factors of shame, guilt, and embarrassment affect communication. The normative orientation of the chat room users was shown to have an inverse relationship regarding the flaming messages between both ethnic groups. This article describes how these factors are influenced by gender and ethnicity/gender. Findings regarding the perceptions of racism within electronic chat rooms are also discussed.

Introduction

The utilization of information technology, such as the Internet and its ancillaries,- including the World Wide Web, is increasingly becoming an icon symbolizing economic and social well being, technological literacy, and employability in the information age. Its implications for social and political transformation and liberation have been clearly identified in the media and academia. Due to the cue less structure of the Internet, many have predicted that it would be a mechanism to ameliorate the social inequalities commonly associated with race, gender, physical handicaps, and social class (Connolly, Jessup, & Valacich, 1990; Sproull & Kiesler, 1986, Wasserman & Richmond-Abbott, 2005).

With the exception of studies that cite the statistical disparity between African Americans and Caucasians in Internet utilization (Nielsen Media Research, 1997; Novak, Hoffman, & Venkatesh, 1997) few researchers have systematically examined the ways in which ethnicity influences behavioral differences found in cyberspace. Given the saliency that has been recently attached to Internet accessibility among the Black population (Clinton, 1997), there

seems to be a parallel need for research that explores social psychological dynamics occurring within the inchoate and amorphous structure of computer-mediated communication environments. This type of research is expected to provide a broader perspective of Internet behavior than the previous descriptive studies of Internet utilization.

Purpose of Article

In this article, the authors discuss findings pertaining to the ways in which Blacks and Whites differ in perceptions and communication behaviors as they participate in Relay Chat Rooms (RCR). A RCR includes a group of people and mass communication technology in which users send and receive text-based messages. The time delay of these computer-mediated messages can be nearly instantaneous or a "real- time" text interchange (Walther, et al., 1994; December, 1996). In comparison to studies that merely describe Internet utilization, this study's goal is to explain the variances found among Blacks and Whites for these variables, utilizing social psychological frameworks as a conceptual guideline. The researchers will primarily examine communication differences between Blacks and Whites with focused attention given to the sending of "flaming" messages in relay chat rooms.

Flaming is a term that refers to the sending of hostile messages (Lee, 2005; Orton-Johnson, 2007). The absence of informational cues pertaining to one's identity within the chat room environment has prompted many authors to allege that the Internet fosters a social context in which conventional normative standards that typically circumscribe behavior found in face-to-face interactions has been relaxed (Kiesler, Siegel & McGuire, 1984). It has been further alleged that the suppression of normative standards of conduct will create a social condition where individuals feel free to engage in antisocial communications such as flaming, sending hostile messages, and expressing anger.

Very little research has been done on the influence that social psychological factors have on flaming behavior and the moderating

influence that ethnicity and gender may have on this relationship within the "cues-filtered-out" (Culnan & Markus, 1987) context of electronic chat rooms. More specifically, given that flaming and other hostile-type behaviors do indeed occur in computer-mediated communications (CMC), s we explore the following general research questions:

1. To what extent do differences in communication behaviors (such as sending hostile messages and expressing anger) exist between Blacks and White RCR users, and what are the differences by gender within and between each of these groups?

2. In what ways do social psychological factors (such as emotions) affect CMC communications and to what extent is this relationship moderated by ethnicity and gender?

Theoretical Framework of Paper

The principal conceptual scheme of this paper is symbolic interaction (SI). Symbolic interaction is a social psychological approach (within sociology) to studying the ways in which humans create and use symbols in formulating social organization (Blumer, 1969; Goffman, 1959; Mead, 1934). Central to this framework are the following concepts:

1. Interaction – "Symbolic interactionism concentrates on the interactive processes by which humans form social relationships" (Turner, 1998, p. 364). Most important, interaction is delineated as the focal point for analyzing the nature of social organization.

2. Taking the Role of the Other – is an interaction process by which the individual's perception of self is obtained through interpreting the expectations of others in a given social situation. The self, then, is defined as a social self, which could consist of a specific other or a *generalized other*, which consists of a broader community of attitudes such as one's culture. Successful interpretation among "actors" in a given situation is what enables communication to take place. An emergent "pattern" of such communication is what imparts a semblance of "structure" to the interaction.

Thus, the focal point of analyses here is *role* behavior (Stryker, 1987).

3. Definition of the Situation – pertains to the covert cognitive process of determining the nature of a particular social situation in terms of its role expectations and normative standards. By mentally defining the situation, the individuals are able to present themselves in "socially acceptable" ways (Goffman, 1959). The cognitive landscape of the situation is influenced by the symbols contained in both the situation itself and the culturally derived mental pictures that the person has internalized.

4. Mind – is a concept that represents the internalization of the structure and processes of the factors described previously. Within this context, mind is the epistemological expression of form and process. However, the mind as described here is not a static construct as referred to in various psychoanalytical frameworks. Rather it is an entity that is dynamically homeostatic with emergent social processes. As such, the study of individual identity takes the form of analyzing the ways in which the self simultaneously maintains and creates itself in varying situational contexts.

This conceptual framework was selected for this article because its core tenets appear to be a heuristic guideline for analyzing ethnic and gender behavioral differences on the Internet whose peculiar cultural differences are expected to reflect differences in role-taking and situation-defining processes. Frameworks similar to the interactionist approach that are used to examine behavioral processes within the CMC context consist of sociocognitive theory Walther et al., 1982; (Kern & Warschauer, 2000; LaRose, 2001) and sociocultural theory (Block, 2003; Brignall & Van Valey, 2005). Furthermore, the theory's propositions concerning the dynamic interrelation between structure and mind allude to the idea that these processes may have a different epistemology within cyberspace as compared to face-to-face communication platforms.

Relay chat rooms on the Internet represent a very distinct type of situation to analyze communications because of the absence of symbols that characterize traditional face-to-face

communication. Subsequently, some authors have predicted that communication in cyber-space would reduce differences in cultural (i.e., ethnicity and gender) communication styles (Connolly, Jessup, & Valacich, 1990). However, symbolic interaction theorists would argue that people do not leave their culture at home when faced with new situations, such as CMC. Rather, they define novel situations according to cultur-ally learned definitions of the situation (Blumer, 1969; Shott, 1979). SI proponents would pro-pose that individuals have covert conversations with "self" as they define the CMC interaction episodes. If this is the case, differences in com-munication patterns are expected both between African Americans and Caucasians and accord-ing to gender, because each group has its own unique cultural orientation that creates differ-ences in how its members define situations.

Examining whether African Americans and Caucasians differ on such things as flaming behavior will indicate whether or not CMC is reducing cultural differences in interaction behavior. Using the symbolic interaction con-ceptual framework, these researchers will seek to explore if African Americans and Caucasians define the CMC environment in different ways and to determine if any such differences lead to different tendencies in interactive behavior. It is a well-documented idea that African Americans and Caucasians differ in cultural orientations. These differences are conceptualized within this article to refer to differences in the ways each group may define the cyberspace situation.

The Sociology of Emotion

The sociology of emotion (Heise, 1977; Hochschild, 1979; Kemper, 1991; Ridgeway, 1982; Hochschild, 1992; Shott, 1979; Stryker, 1987; Turner, 1994) is a symbolic interaction approach which postulates that emotions influ-ence the interaction process. Emotions are attested to as sociologically relevant phenomena because particular types of emotions as expressed toward others are moderated by situational and normative constraints. More important, emotions are considered as factors that circumscribe various types of behaviors within the context of particular social situations. Emotions will be framed in this article as *emotion management* factors. This framework is particularly relevant to the present study given the attention to the management of emotions within the context of emotional intelligence (Salovey & Mayer, 1990).

In order to operationalize the concept of emotion management, the emotive theory of Shott (1979), which delineates specific emotion types, will be drawn upon. Taking the role of the other is the focal point in Shott's emotion man-agement schema. "Much role-taking is reflexive in that the individual has an internal conversa-tion with self as an object, seen and evaluated from the perspective of specific and generalized others. In this evaluation process, emotions are aroused and labeled; and if these emotions are negative, they mobilize the individual to adjust behavior" (Turner, 1994. p20). Shott (1979) delineates six emotion management factors: guilt, shame, embarrassment, empathy, vanity, and pride. Of these, the first three appear to be relevant to the present discussion, and brief definitions follow:

1. Guilt – Guilt is a feeling that emerges when a person acknowledges that her/his behavior is incongruent with the norma-tive and moral standards within a specif-ic social situation.

2. Shame – Relates to an individual's judg-ment of self relative to situational expec-tations (Ausubel, 1955). Shame occurs when after taking the role of the other, the person learns that the other's percep-tion of the behavior is not congruent to her/his idealized image of self.

3. Embarrassment – Is a feeling that exists "when an individual's presentation of a situational identity is seen by the person and others as inept" (Turner, 1998).

Each of these variables, which are referred to as emotion management factors, will be tested in terms of the degree to which they influence flaming behaviors among African American and Caucasian relay chat room users and among males and females. A negative correlation between these factors and the interaction vari-ables would indicate that they do indeed circum-scribe antisocial behavior within chat rooms. This is the expected relationship between these variables.

Methodology
Participants

Data for this study was collected from 114 undergraduate and graduate students in a rela-tively large university in southeast Michigan. The undergraduate students were enrolled in a

technology and society-type class, which satisfies a basic studies requirement at the university. Subsequently, the sample population represents a wide spectrum of undergraduate degree programs and career orientations within the university. This improves upon the generalizability of the sample (for the university population).

A full sample was taken among students who identified themselves as chat room users (for both undergraduate and graduate students). The graduate students were enrolled in an interdisciplinary technology program. Each student completed a 104-item questionnaire (during class time) that measured a variety of Internet and chat room utilization factors. (There were two Asian respondents and one Hispanic respondent in this survey. They are not included in the present analyses).

Shott's emotion management factors.
Guilt - "I feel guilty if I say something to offend someone in a chat room."

Shame - "I feel a sense of shame when someone in a chat room points out to me that my messages are inappropriate."

Embarrassment - "There have been times that I have felt embarrassed in a chat room because of how I presented myself."

Moderator factors.
A moderator variable is a categorical factor that is examined to determine the influence that it has on the *relationship* between the independent and criterion factors. In this article, we attempt to determine if the correlations between the emotion management factors, cybernorm, and

Chart 1. The following chart presents an overview of the demographic characteristics of the sample:

Demographic Structure of Study												
Ethnicity		Gender		Ethnicity/Gender				College Level				
B	W	M	F	BM	BF	WM	WF	F	S	J	S	Gr
36	73	64	45	18	18	46	27	37	35	20	14	3

Instruments criterion factors.
The dependent variables within this paper pertain to the sending of antisocial messages in chat rooms (interaction). Each variable and its measurement are as follows:

Flaming. "I send flaming (hostile) messages."

The tendency for sending hostile messages while in chat rooms as compared to face-to-face communications: "I am more likely to send hostile messages in chat rooms than in face-to-face communications" (This variable will be referred to as "Hostility" within the statistical analyses).

Perception of displaying anger in chat rooms. "It is more appropriate to display anger in chat rooms than in face-to-face communication" (Will be referred to as "Anger").

Independent Variables:
Cybernorm. "I believe that there is an unwritten code of conduct that people must follow in chat rooms."

the communication variables are altered within categories of user's ethnicity, gender, and ethnicity/gender.

Ethnicity – African American and Caucasian sample populations.

Gender/ethnicity – African American male, female and Caucasian male, female categories (ethnicity and gender ethnicity are also used as independent factors).

Statistical Procedures
The statistical procedures for analyzing the data are mean comparisons and Pearson correlation. The Statistical Package for the Social Sciences (SPSS) was the statistical software used for this analysis.

Results
Mean Comparisons of Interaction Variables by Ethnicity and Gender/Ethnicity
Table 1 illustrates mean differences in the communication variables found between ethnic and gender groups, and ethnicity/gender. Very little difference was revealed between African

Americans and Caucasians according to their propensity for sending hostile messages in chat rooms. The most significant differences appear among gender and ethnicity/gender categories. To begin with, males are more prone to send flaming messages than are females (p = .006). This finding holds true within each category of ethnicity for the Caucasian male/female comparison (p = .07) and the African American male/female comparison (p = .01). There is also a slightly higher difference between the African American male/female comparison (.95) than the Caucasian male/female comparison (.63). African American males show the highest mean on flaming among all of the groups.

Very little difference is shown among each of the groups for the hostility variable. However,

mean value on anger than do females. Further, the African American male/female difference is significant at the .05 level, whereas the Caucasian male/female does not reveal significance (p = .26).

Differences on whether or not RCR users believe that there are norms of conduct operative in chat rooms are shown within and between each of the groups. None of these differences, however, were found to be statistically significant.

The next tasks were to determine the extent to which the variances in chat room behavior can be explained by the social psychological factors of cybernorms and emotion management factors and then to ascertain the moderator effect of ethnicity on these relationships.

Table 1. Mean Comparisons of Interaction Variables by Ethnicity, Gender, and Ethnicity/Gender

N = 110								
	Ethnicity		*Gender*		*Ethnicity/Gender*			
	n = 73 Caucasian	n = 37 Afr.-Am.	n = 67 Males	n = 46 Females	n = 46 Caucasian Males	n = 27 Caucasian Females	n = 18 Afr.-Am. Males	n = 18 Afr.-Am. Females
Interaction Variables								
Flaming	2.21 S = 1.49	2.35 S = 1.23	2.56 S = 1.45	1.83 S = 1.27	2.44 S = 1.56	1.81 S = 1.30	2.89 S = .96	1.94 S = 1.27
Hostility	3.15 S = 1.56	3.34 S = 1.29	3.34 S = 1.44	3.27 S = 1.54	3.13 S = 1.51	3.19 S = 1.66	3.61 S = 1.14	3.19 S = 1.36
Anger	2.90 S = 1.41	2.78 S = 1.17	2.81 S = 1.31	2.83 S = 1.37	2.76 S = 1.39	3.15 S = 1.43	3.17 S = .99	2.47 S = 1.20
Cybernorm	3.00 S = 1.48	2.89 S = 1.23	3.07 S = 1.43	2.76 S = 1.51	3.07 S = 1.42	2.89 S = 1.60	3.00 S = 1.37	2.65 S = 1.42

once again, the data indicates a larger mean difference between African American males and females (.32) than between Caucasian males and females (.06), and African American males show the highest mean on this variable. Neither difference, however, revealed statistical significance (p = .88 and .46, respectively).

For the anger variable, very little difference is shown according to ethnicity or gender, but there are larger differences shown by ethnicity/gender. Also, the direction of the differences was different for each ethnicity/gender category. Among Caucasian RCR users, females have a higher mean value than do males. The opposite is true for the African American users, where males have a higher

Correlation Analyses for Cybernorms and Interaction Variables

Table 2 presents the correlations between cybernorm and the interaction variables by ethnicity and ethnicity/gender. For the entire sample, cybernorm is significantly correlated with only the flaming variable, and the negative sign indicates that it operates as a constraining factor to sending flaming messages in chat rooms.

The same finding is found within each of the ethnicity and gender categories. Cybernorm is more strongly correlated with sending flaming messages for males than females, and for Caucasian males in particular. Stronger correlations are shown for Caucasians, both male and

female, than for African Americans on the flaming variable.

Relatively weak correlations are found between cybernorm and the hostility variable among all of the categories. The only strong correlation (in the expected negative direction) between cybernorm and anger is revealed among African American females.

Based upon the moderately strong inverse relationships between cybernorm and flaming, the viewpoint that one's definition of the situation affects behavior is confirmed, and it is confirmed in the expected direction.

Analyzing the Impact of Emotion Management on RCR Behavior

factors that would circumvent the sending of antisocial behaviors, such as flaming. This has been the commonplace proposition relative to face-to-face communication situations (Goffman, 1974). Our concern here is to test whether this proposition holds true for electronic communication platforms.

The weak correlations shown in Table 3 between the emotion management factors and interaction variables for the population as a whole, does not support this proposition in relation to relay chat room environments. However, in examining the moderator influence of ethnicity upon these relationships, a different and interesting finding is revealed. As shown in Table 4, there are moderate correlations between two of the emotion management factors (guilt

Table 2. Correlations between Cybernorm and Interaction Variables for Entire Sample, and by Ethnicity, Gender, and Ethnicity/Gender

		Ethnicity		Gender		Ethnicity/Gender			
	N = 109	n = 73	n = 36	n = 67	n = 45	n = 46	n = 27	n = 18	n = 18
	Entire Sample	Caucasian	Afr.-Am.	Males	Females	Caucasian Males	Caucasian Females	Afr.-Am. Males	Afr.-Am. Females
Interaction Variables									
Flaming	-.325**	-.331	-.204	.-395**	-.301*	-.378*	-.305	-.223	-.287
Hostility	-.092	-.090	-.164	-.020	-.153	-.035	-.165	-.153	-.138
Anger	.042	.120	-.127	.170	-.085	.234	-.026	-.085	-.307

*p < .05
**p < .01

In attempting to present oneself in an appropriate manner during face-to-face encounters, a person's concern for not feeling guilty, not being ashamed, or not being embarrassed are seen as

and shame) and the flaming variable for Caucasian RCR users, and although the correlation between flaming and embarrassment is small, it is nevertheless in the anticipated

Table 3. Zero Order Correlations between The Interaction and Emotion Management Variables

N = 108			
	Interaction Variables		
	Flaming	*Hostility*	*Anger*
Emotion Management			
Guilt	-.199*	.215*	.197*
Shame	.025	.050	.201*
Embarrassment	-.002	.045	.179

*p < .05

Table 4. Zero-order Correlations between Emotion Management and Interaction Variables within Ethnicity Categories

N = 109						
	Interaction Variables					
	Flaming		*Hostility*		*Anger*	
	Gender					
	n = 36 *Afr.-Am.*	n = 73 *Caucasian*	n = 36 *Afr.-Am.*	n=73 *Caucasian*	n = 36 *Afr.-Am.*	n =7 3 *Caucasian*
Emotion Management						
Guilt	.319	-.363**	.409*	-.081	.066	.232*
Shame	.455**	-.166	.226	.062	-.085	.262*
Embar.	.373*	-.098	-.198	.154	-.069	.268*

*p < .05
**p < .01

Table 5. Correlations between Interaction and Emotion Management Variables by Caucasian Male and Female Categories

N = 73						
	Interaction Variables					
	Flaming		Hostility		Anger	
	Ethnicity/Gender (Caucasian)					
	N = 46 *Male*	n = 27 *Female*	n = 46 *Male*	n = 27 *Female*	n = 46 *Male*	n = 27 *Female*
Emotion Management						
Guilt	-.267	-.464*	-.039	-.153	.173	. 269
Shame	-.115	-.228	.148	-.075	.323*	.136
Embar.	-.071	-.134	.221	.073	.264	.271

*p < .05
**p < .01

inverse direction. This indicates that these factors do indeed operate as emotion management factors within computer-mediated communication environments, but only among the Caucasian users for this sample. Table 5 shows that this pattern is maintained among both Caucasian males and females, although stronger correlations are revealed among Caucasian females.

Comparatively, each of the correlations for the same variables among African American (Table 6) users is positive, indicating that the emotion factors operate as interactive, rather than as suppressive factors. Furthermore, these are moderately strong correlations when compared to those found within the Caucasian population sample.

Table 6. Correlations between Interaction and Emotion Management Variables by African American Male and Female Categories

N = 36						
	Interaction Variables					
	Flaming		Hostility		Anger	
			Ethnicity/Gender (African American)			
	N = 18 *Male*	n = 18 *Female*	n = 18 *Male*	n = 18 *Female*	n = 18 *Male*	n = 1 8 *Female*
Emotion Management						
Guilt	.180	.472	-.255	.723**	.021	-.043
Shame	-.027	.700	.023	.379	-079	-.166
Embar.	.189	.510	-.482*	.092	-.143	-.183

*p < .05
**p < .01

This is a very surprising, yet interesting finding. These extreme statistical differences implicate that African Americans and Caucasians are defining the CMC situation in different ways. A possible explanation of this finding as it relates to symbolic interaction theory is that each group engages in different role taking and cognitive rehearsal processes, which are affected by the unique cultural experiences of the two groups.

More specifically, African Americans, who have historically experienced more prejudice in social encounters than Caucasians, (with other Caucasians) may be putting more emphasis on chat rooms as a "liberator" of traditional social inequities Kiecolt, 1997). Electronic communications suppress identity traits, such as race, enabling a person to fully participate in the communication act, not as an African American person per se, but as the individual or role that the user *perceives* is the represented group. Subsequently, when African American users are taking the role of the other within this electronic context, they may be taking the role of the Caucasian participants from an *assumed* Caucasian role, as compared to an African American role as would be more likely the case in an face-to-face (FTF) situation. The question to be raised in this instance would be the following: How does an African American person performing a Caucasian role define both the chat room situation and the expectations of the assumed Caucasian role from the perspective of other Caucasian roles?

Given that the acting out of this assumed role does not contain the complete genome of the Caucasian culture, there is a real likelihood that some perceptions would be erroneous, thereby causing behavior that is not isomorphic to that group's actual chat room expectations. In short, African American users, in comparison to Caucasian participants, may be defining the chat room situation as an appropriate place for expressing hostile feelings, such as flaming. For example, "it is something that Caucasian people do, I am in a Caucasian environment, and therefore, I should behave (role acting) accordingly." Furthermore, they also may conceptualize the Caucasian role as one that has this expectation, where in essence this may not be the case. This idea appears to be supported by the higher mean scores on the cybernorm variable among Caucasians in comparison to that of African Americans, which was reported previously in this article. The lower correlations between cybernorm and the interaction variables among African Americans in comparison to Caucasians described previously also give support to this proposition. The positive direction of the correlations is maintained for both African American males and females. However, these positive correlations are much stronger for African

American females than for African American males. This finding indicates that cultural dynamics are occurring that are peculiar to the African American female culture.

Our attempt to explain this dubious finding from a symbolic interactionist perspective is merely theoretical conjecture. We intend to conduct further research on this particular CMC phenomenon.

Discussion

Several important social psychological conclusions can be drawn from this study. The first is that the extent to which hostile type communications is displayed in a virtual communication environment is affected by the user's normative orientation. The perception that norms exist in relay chat rooms was shown to be a constraining factor for sending hostile-type communications in RCR among each of the categories of ethnicity and gender. This finding negates recent claims that characterize electronic communications as relatively normless. The results of this investigation suggest that individuals take with them culturally learned symbols of conduct to situations, including emerging social systems, such as those found on the Internet that have not yet reached organizational homeostasis. From a historical perspective, electronic communications such as relay chat rooms, because of their faceless architecture, are expected to make revolutionary changes in social organization at the societal level. Although this may indeed be true, this study clearly indicates that such changes will not be completely divorced of traditional mental categories of social order. These conventional categories of images and thought will serve as a mental map for traversing the landscape of the new cyberculture. This means that symbolic categories of conventional racism and sexism will also be copied and pasted within the so-called new social structure along with normative standards of conduct.

Second, although cybernorms were shown to influence CMC behavior, the degree of its affect varies according to ethnic and gender groupings, which reflect differences in cultural orientation within these groups. Such variance supports the notion that the relatively one-dimensional analyses of CMC dynamics that is currently commonplace should be replaced by more systematic research strategies that attempt to explore how a larger number of factors covaries in relation to explaining CMC

behavioral dynamics. Moreover, in the future researchers should continue to examine the within-group variance among African Americans, according to gender and other factors (Schuman et al., 1997; Carter, DeSole, Sicalides, Glass, & Tyler, 1997).

Along the same lines, the interesting finding that emotion management factors circumscribe the sending of hostile RCR messages among Caucasian users and not those of African Americans raises some intriguing issues about identity formulation (or reformulation) and computer-mediated communications. It is important to consider the epistemological implications of CMC interaction processes. The mind, as conceptualized within the symbolic interaction framework, is the energic outcome of the recursive interfacing of form and process (social structure). That is to say, a person becomes what he/she does (interactions). These interactions, when developed as a pattern, become the structure or condition that gives direction to the individual. Most important, from the perspective of identity development, the person internalizes this structure, and this internalized perception of social reality becomes the basis of that person's mind or consciousness. The format of virtual communication enables users to more freely define their symbolic context, and this will subsequently allow people to present themselves in various ways (; Tanis & Postmes, 2007; Tynes, 2007).

We believe that the drastic differences between African Americans and Caucasians on the emotion management factors allude to the idea that chat rooms are serving different epistemological purposes for the two groups. This idea is supported by a study by Weiser (2001) that revealed that processes such as flaming are driven by social psychological factors pertaining to the needs that the Internet serves for the users.

From a practical standpoint, it may mean that such recent psychological phenomena, such as Internet addiction should be approached by psychological practitioners with the" personal epistemology" of the client in mind. Although the design of this research project does not delineate the particular aspects of such an epistemological model, the profound differences that African Americans and Caucasians revealed for the emotion management factors in this study suggest that ethnicity would be a valuable

starting point or a component for its development. As the diversity within the data among ethnic and gender categories points out, authors must be careful not to reify CMC technology with deterministic powers as espoused in the constructivist perspective inherent within previous studies and theoretical postulations. Rather, the mind is a very dynamic construct, wherein there is the potential for a lexicon of variants in consciousness within the boundaries of culturally derived symbols that can be created by the individual. The individual here is not seen as a receptacle of social and cultural ideas, however, her or she is understood as an entity who has the ability to define and redefine her/his situational context (Savicki et al., 1998). CMC, particularly as it pertains to African Americans, makes this process a more viable possibility.

Finally, the results of this study should be considered a preliminary investigation into the differences between African American and Caucasian CMC utilization. Future studies along these lines should be conducted with a different and wider sampling population (i.e., non-collegiate population) to determine the generalizability of the patterns shown among college students in this present study. Studies that strategically address the findings that relate to identity development among African American users should be conducted to create a more comprehensive understanding of this dynamic as it occurs within the context of electronic communication.

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