

Gender Schematicity, Gender Identity Salience, and Gender-Linked Language Use

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Using self-categorization theory, the effects of sex, chronic gender accessibility (i.e., gender schematicity), and gender identity salience on gender-linked language use in e-mail are examined. Results confirmed interactive effects only. Gender schematic men and women whose gender was salient used typical gender-linked language (e.g., men used male language). With low gender salience, schematic men and women used countertypical gender-linked language (e.g., men used female language). The language of nonschematics varied minimally. Results are discussed regarding previous research on gendered language, the nature of gender identity salience, and examining gendered language in computer-mediated communication.

Much theoretical and empirical debate surrounds the idea that the communicative behaviors of men and women exhibit both similarities and differences (Canary & Hause, 1993; Canary & Dindia, 1998). Certain situations reveal gender-based communicative differences, whereas others reveal similarities (Carli, 1990; McLachlan, 1991). In fact, a large scale review suggested that the similarities are far more prevalent than the differences and “that knowledge of a person’s gender will give us little ability to accurately predict how a person will behave in many situations” (Aries, 1996, p. 189). Theory, therefore, must be able to explain and predict how situational dynamics impact gender-based communicative differences and similarities. The two major explanations proposed to account for gender-based communication, however, fall short in their explanatory capabilities. Some theorists claim that differences result from culturally learned behaviors (the gender-as-culture explanation;

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Maltz & Borker, 1982), while others assert that they result from power differentials favoring men (the dominance explanation; Henley & Kramarae, 1991; Thorne & Henley, 1975). These approaches offer some general explanations; however, they generate minimal utility to account for gender-based communication, as they do not specify the antecedent conditions and cognitive mechanisms needed for such communicative disparities. These two approaches predict that men and women will communicate differently most, if not all, of the time and across contexts (as a main effect), when, in fact, much research demonstrates that this is very unlikely (see Aries, 1996). What is needed, then, is an explanatory mechanism capable of predicting and accounting for when, how, and why gender-based communicative differences and similarities will emerge.

Applying self-categorization theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) to gender and communication research can resolve the current lack of theory in the area by explaining and predicting what difference (if any) will emerge, when, and why. The current study offers an initial step toward an explanatory mechanism for gendered language use differences and similarities by outlining (a) self-categorization theory, (b) the integral role of gender-linked language use in relation to gender identity salience, and (c) the theoretical rationale for the hypotheses.

Self-Categorization Theory

Self-categorization theory (Turner et al., 1987) expands upon social identity theory (Tajfel, 1970) by elaborating the sociocognitive basis of collective self-definition. Behavior and self-definition are conceived as a continuum ranging from interindividual to intergroup. When an individual interacts with another in terms of various social groups, the person is near the intergroup side of the continuum. Self-categorization theory claims that individuals categorize themselves relative to the situational context to make sense of the world. The cognitively represented self changes depending on the social environment and which identity is activated situationally. Identities are based on the categories used to organize the self and are hierarchically situated. People use social similarities and differences between individuals to define the self and others as a member of a certain social group and not another. Depending on the social context, a specific self-categorization (e.g., female or male) can be more salient at a certain time relative to another identity (e.g., student).

According to self-categorization theory, accessibility and fit determine what social identity is likely to be salient (that is, operating cognitively) in any given context (Oakes, 1987). *Accessibility* is perceiver readiness to identify the self in terms of a category. The more accessible a category is, the more likely one will classify the self in terms of that category. *Fit* is the extent to which reality corresponds with the criteria that define the

category. Fit is composed of two forms. *Comparative fit* is the extent to which intragroup differences are perceptually minimized and intergroup differences are perceptually maximized. *Normative fit* is the extent to which perceived intragroup similarities and intergroup differences are socially meaningful and correspond to group norms. When a social category is accessible and fits the current context, the social category and identity become salient.

Research suggests that accessibility might be more complex than originally proposed (Blanz, 1999). Situational accessibility—the temporary cognitive accessibility of a social identity—is a direct causal factor for identity salience along with fit. Alternatively, chronic accessibility—the predispositional cognitive accessibility of a social identity—may interact with the salience of a social identity to influence the consequences of an activated group identity (Blanz, 1999). Such chronic accessibility factors include schemata, group identification, or personality variables. Situational accessibility and fit lead to social identity salience; on the other hand, the chronic accessibility of a social identity can interact with identity salience such that the effects of a salient identity are maximized when the social category is also chronically accessible for an individual.

When a particular social category is salient, the self is viewed as a prototypical group member—a process termed *depersonalization* (Turner et al., 1987). When depersonalized, individuals cognitively, perceptually, affectively, and behaviorally assimilate to the ingroup norms and prototype. In other words, when a particular identity is salient, individuals prescribe to that which is most exemplary of the group, including communicative behaviors.

The Significance of Gender-Linked Language Use

Men and women linguistically behave in different ways (Mulac, 1998). Men use certain male-linked language features, such as *directives* (e.g., “Read this book”), more frequently than women, who use female-linked language features, such as *references to emotion* (e.g., “I am happy”), more frequently than men. Table 1 lists the gender-linked language variables. This differential language use has been demonstrated in oral language, such as public speeches (Mulac & Lundell, 1982) and same-sex dyads (Mulac, Wiemann, Widenmann, & Gibson, 1988), as well as in written language, such as impromptu essays (Mulac, Studley, & Blau, 1990). The majority of studies have examined university students’ language; many, however, have examined the language of other age groups, such as fourth- and fifth-grade students (Mulac et al., 1990), and individuals in their 50s and 60s (Mulac & Lundell, 1994). In fact, knowing one’s language use alone allows for highly accurate statistical classification of the communicator’s sex (Mulac, 1998).

TABLE 1
Gender-Linked Language Variables with Means, Standard Deviations, and Reliabilities

Language variable ^a	Definition	Examples ^b	M ^c	SD ^d	Reliability ^e
"I" references ^f	First-person singular pronouns in the subjective case.	"I think society will have..."; "I believe that..."	2.02	1.39	100%
Dependent clauses ^f	A clause that serves to specify or qualify the words that convey primary meaning.	"...those that control the system of society..."; "...those who do not will be..."	.78	.76	88%
Directives ^f	Apparently telling others what to do.	"Society needs to..."; "Think about it for a minute."	.06	.26	100%
Elliptical sentences ^f	A sentence in which the subject or predicate is understood.	"Perhaps."; "Yikes."; "Not only technological but also political, social, and religious."	.06	.23	100%
Intensive sdvverbs ^f	An adverb that apparently increases strength or intensity of what it modifies.	"...a very changed place..."; "...strongly pushed for..."; "really"	.89	.91	91%
Judgmental adjectives ^f	An adjective that indicates personal evaluation or opinion rather than mere description.	"...make the world seem bad."; "...much lazier."; "so-called..."	1.76	1.35	84%
Locatives ^f	A word that indicates the position or location of objects.	"...in the United States..."; "...in a world..."	.41	.55	100%
Negations ^f	A statement about what something is not.	"I don't think that..."; "It doesn't come up to par..."; "...there won't be as many women..."	1.15	.93	83%
Oppositions ^f	Retracting a statement and then posing another statement with an opposite meaning.	"More people will be poorer, but more will be rich also."; "...countries around the world will experience and economic rise. Then again, the opposite can occur..."	.03	.12	100%
Questions ^f	A sentence asking a question.	"Why?"; "What will happen to these people?"	.05	.27	100%
References to emotion ^f	Any mention of an emotion of feeling.	"...in a time of fear..."; "hatred"; "quite amazing"	.83	.89	88%

TABLE 1 (continued)
Gender-Linked Language Variables with Means, Standard Deviations, and Reliabilities

Language variable ^a	Definition	Examples ^b	M ^c	SD ^d	Reliability ^e
References to quantity ^f	Any mention of an amount or quantity.	"...many important advances..."; "in 10 years..."; "...no more collectivism."	3.79	1.68	78%
Sentence initial adverbials ^f	An adverbial phrase at the beginning of a sentence, that answers how, when, or where regarding the main clause.	"Starting in 1992,..."; "In the year 2012,..."; "With increasing technology..."; "However,..."; "Hopefully,..."	1.59	.94	88%
Uncertainty verbs ^f	A verb phrase indicating a lack of certainty or assuredness.	"...they will probably do..."; "...maybe we will have..."; "...women seem to be having..."; "I highly doubt..."	.58	.73	82%
Mean length of sentences ^f	Number of words divided by the number of sentences.	—	20.22	4.66	—
Words	The total number of words for a transcript.	—	181.73	59.49	100%
Sentences	A word or string of words, clauses or phrases that form a syntactic unit, usually ending with a period.	—	9.33	3.54	100%

NOTE: ^a All language features were coded with the exception of mean length of sentences. ^b Examples were taken from actual transcripts used in the current study. ^c Means were standardized for the occurrence of the variable per 100 words, with the exception of words, sentences, and mean length of sentences. ^d Standard deviations were also standardized per 100 words, with the exception of the same language variables. ^e Reliabilities were computed, as the percentage of agreement, for only those language features coded. ^f These fifteen language variables were examined in the main analyses.

Even though these male and female language differences (i.e., gender-linked language use) are independently notable, investigating them is supplemented by examining the evaluative effects of this linguistic variation (i.e., gender-linked language effect). The gender-linked language effect is the consistent finding that naive raters judge communicators who use language empirically found to be typical of women high on aesthetic quality and sociointellectual status, whereas raters judge communicators who use language typical of men high on dynamism (Mulac, 1998). The specific language features, which are used differently by men and women, determine the extent to which a communicator is judged dynamic, aesthetically pleasing, and sociointellectual (Mulac & Bradac, 1995). The language, which is typically used by one gender more than the other, leads to judgments consistent with gender stereotypes, even when the accuracy of individuals determining communicator sex is no better than chance (Mulac, Incantro, & James, 1985). The gender-linked language effect, then, is not an artifact of perceived speaker sex, but rather determined in large part by the specific language features, which are used differentially by men and women. Using typical male-linked language leads an individual to be perceived as more dynamic than using typical female-linked language, whereas using typical female-linked language leads an individual to be perceived as more aesthetically pleasing and sociointellectual than using typical male-linked language.

The gender-linked language effect is consequential for communicators. A message recipient infers different beliefs and evaluations when forming impressions about communicators due to the linguistic features that communicators use (Bradac, 1990). A message sender's language also impacts the responses (e.g., behaviors and communicative strategies) that a message recipient has toward the sender during interaction (Cargile & Bradac, 2001). For these reasons, investigating factors that affect the extent to which men and women use gender-linked language is important.

Examining gender-linked language is more imperative in a computer-mediated context, such as e-mail. In computer-mediated communication (CMC) language use is paramount, as it is at times the primary method by which communicators pass judgment on and form impression of others due to the reduced cues available (Daft & Lengel, 1984; Dubrovsky, Kiesler, & Sethna, 1991). When interacting anonymously via CMC, language use is fundamental to the formation of relationships (Walther, 1996). With recreational CMC rapidly increasing (Flanagin & Metzger, 2001; Morgan Stanley, 1996), organizations using CMC more and more (Fulk & Collins-Jarvis, 2001; Scott, 1999), and current organizational forms evolving in ways that make the employment of CMC favorable (DeSanctis, & Poole, 1997; Monge & Fulk, 1999; Nohria, & Berkley, 1994), the differential use of language by men and women and the subsequently associated impressions are likely to play a major role in computer-mediated contexts.

Much can be gained from a theoretical account of consequential male-female language use, as current explanations are partial and ostensibly conflictual.

Language use among different groups, including gender groups, is one way in which a salient social identity can affect individuals. Individuals use language differently depending on their ethnic identity (Giles, 1977; Giles, Mulac, Bradac, & Johnson, 1987; Hogg & Rigoli, 1996). Communication and language are central ways in which individuals enact gender identity (Bergvall, 1996; Cameron, 1998; Eckert & McConnell-Ginet, 1992; Meyerhoff, 1996). Gendered behavior and communication vary based on the standpoint (e.g., identity) one takes (Collins, 2003; Harstock, 1998). Accordingly, much support, but no direct tests, exist for the claim that men's and women's gender identity affects their gender-linked language use.

Theoretical Rationale

Gender-Linked Language Use

Despite the research supporting differential language use of men and women in a variety of oral and written contexts (Mulac, 1998), little empirical evidence demonstrates that men and women use language differently in computer-mediated contexts. Mulac, Flanagin, Tiyaamornwong, Palomares, and Hallett (2001) examined group CMC discussions and found gender-linked language differences similar to those found in nonmediated contexts (see also Thomson & Murachver, 2001). Savicki, Kelley, and Lingenfelter (1996a, 1996b) and Herring (2000) found linguistic differences between men and women in CMC contexts. These studies, however, focused on subsets of the gender-linked language variables in Table 1. Nevertheless, drawing on the consistent support that men and women use different language in a variety of contexts, including mediated contexts, the following hypothesis, predicting a sex¹ main effect, is proposed:

H1: In a computer-mediated context of e-mail, men use more typical male-linked language than women, whereas women use more typical female-linked language than men.

Chronic Accessibility of Gender Schemata

As previously stated, the chronic accessibility of a social category affects individuals' adherence to group norms (Blanz, 1999). One understanding of chronic gender identity accessibility is available in gender schema theory (Bem, 1981b, 1985). Gender schemata are cognitive structures

that predispose individuals to process information in terms of the cultural definitions of gender. Gender schematic (sex-typed) individuals view themselves as prototypically gendered, prefer using gender-appropriate behaviors, and actively avoid gender-inappropriate behaviors more than nongender schematics (Bem & Lenney, 1976). Gender schematic individuals, compared to nongender schematics, use more gender-typical nonverbal (LaFrance, 1981) and verbal communicative behaviors (Diliberto, 1992; Kim & Aune, 1997; Shaffer, Pegalis, & Cornell, 1991; Stephen & Harrison, 1985). A few studies (Drass, 1986; Richmond & Gorham, 1988; Rubin & Greene, 1991) have shown effects in line with gender schema theory and language use but were not direct assessments of the theory regarding actual language use, leaving a gap.

Self-categorization theory predicts that individuals with high chronic accessibility of their group identity behave in ways consistent with the group prototype. Gender schema theory similarly predicts that gender-schematic individuals have a proclivity to process information and behave in ways consistent with the cultural definition of gender. Coupled, these theories result in the following sex by gender schematicity interaction:

H2: Gender schematic men use more typical male-linked and less female-linked language than nongender schematic men, whereas gender schematic women use more typical female-linked and less male-linked language than nongender schematic women.

The Salience of Gender Identity

When group identity is salient, people likely behave in group prototypical ways. Women used more tentative language than men when gender identity was salient; men and women, on the other hand, used tentative language equally when gender was not salient (Reid, Keerie, & Palomares, 2003). Other research investigated naive individuals' perceptions of the language used by men and women who had either a high gender salience (i.e., mixed-sex groups) or a low salience (i.e., same-sex dyads; Hogg, 1985).² Men's language and women's language were perceived as masculine under conditions of high gender salience—suggesting that when gender was salient, both men and women used more male language and less female language than when gender was not salient. That is, women converged to the male linguistic standards when salience was high. Seemingly contrary to the current argument, female convergence to male language norms was likely due to the specific nature of gender salience, as certain intergroup differences normatively fit depending on the context. Status differentials in favor of men normatively fit in mixed-sex, compared to same-sex, interactions (Ridgeway & Walker,

2000). Perhaps women adopted typical male language, because men and women experienced different types of high gender salience. Men likely had a relatively high status gender salience compared to women, who likely had a relatively low status gender salience, which resulted in female convergence. Having a salient gender, without reference to status differentials, will be conducive for men to use male language and women to use female language, as the salience of admiring one's social identity and enjoying being a member of that group enhances the adherence to group norms (Hogg, 1985; Reid et al., 2003).

The current research extends previous research on the effects of gender identity salience on language use (Hogg, 1985; Reid et al., 2003) by employing a positive gender salience manipulation that is similar for both men and women and by analyzing gender-linked language. Based on self-categorization theory, the following hypothesis is proposed:

H3: Men with high gender salience use more typical male-linked and less female-linked language than men with low salience, whereas women with high gender salience use more typical female-linked and less male-linked language than women with low salience.

The Interaction of Sex, Gender Schematicity, and Gender Identity Salience

In addition to predicting the simple effects of chronic accessibility and salience for men's and women's language use, self-categorization theory yields the proposition that the maximal adherence to group norms occurs for those who are high in chronic accessibility and for whom group identity is highly salient (Blanz, 1999). Theoretically, then, the most exaggerated expression of typical gender-linked language should occur when chronic gender identity accessibility and gender identity salience are both high, resulting in the following hypothesis, predicting a three-way interaction:

H4: (a) Gender schematic women with high gender salience use more typical female-linked and less male-linked language than schematic men with high salience; (b) gender schematic women with low gender salience use more female and less male language than schematic men with low salience (although to a lesser extent than when salience is high); (c) gender schematic women with high gender salience use more female and less male language than schematic women with low salience; (d) gender schematic men with high gender salience use less female and more male language than schematic men with low salience; and (e) nongender schematic individuals vary minimally, if at all, in gender-linked language.

METHOD

I employed a 2 (sex: men versus women) by 2 (gender schematicity: schematic versus nonschematic) by 2 (gender identity salience: high versus low) experimental design to examine 15 language variables that compose gender-linked language (Mulac, 1998; Mulac, Bradac, Gibbons, 2001).

Participants

Participants were 210 (54.3% women; mean age = 19.51 years; $SD = 1.52$ years) predominately White American undergraduate precommunication majors at the University of California, Santa Barbara (UCSB). All received course credit for their participation.

Gender Schematicity

The Bem Sex-Role Inventory (BSRI; Bem, 1981a) measures gender schematicity.³ The scale is composed of 60 randomly ordered items on seven-point scales (1 = *almost never true*; 7 = *almost always true*), each asking the extent to which certain characteristics or adjectives are self-descriptive. Twenty of the items measure femininity; 20 measure masculinity; and the remaining items measure socially desirable characteristics, unassociated with masculinity or femininity. A median split categorized participants as either gender schematic, androgynous, undifferentiated, or cross sex-typed (cf., Bem, 1981a). The medians for the masculinity and femininity scales were 5.05 (similar to other research; e.g., Bem, 1981a; Hoffman & Borders, 2001). As in other studies (e.g., Diliberto, 1992; LaFrance, 1981), men and women who were categorized as cross sex-typed were dropped from further analyses (7 men and 17 women), because "no clear prediction can be made about the gender schematicity of this group" (Bem, 1985, p. 195). The remaining individuals who were not categorized as sex-typed (i.e., androgynous and undifferentiated) were classified as nongender schematic (cf., Mulac Jansma, & Linz, 2002). This system yielded 46 gender schematic women, 40 gender schematic men, 51 nongender schematic women, and 49 nongender schematic men.

Gender Identity Salience Manipulation

An effective method for manipulating gender salience was sought, as previous methods confounded gender with status (Hogg, 1985) or were unsuccessful (Hallett, 2002). Realistically, individuals cannot be told not to think of themselves in terms of gender. As such, the high gender salience condition was created by having individuals positively identify

with and think about themselves in terms of their gender group, whereas the low gender salience condition had participants positively identify with and think about themselves in terms of being a UCSB student.

Paragraphs deliberately manipulated gender identity salience using a factual, personally relevant, and praising approach.⁴ First, so that the paragraphs would realistically apply to most members of each group, generalized descriptions using factual and ostensibly factual information were employed rather than judgmental characteristics. Next, each paragraph repeatedly stressed that "you" are a member of this group to increase participants' personal involvement and subsequent belief that the statements in the paragraphs were self-reflective (Thomsen, Borgida, & Lavine, 1995). Further, a positive and praising strategy was used, as individuals prefer to be associated with positive rather than negative things (Cialdini & Richardson, 1980). As part of the current strategy, each paragraph ended by directing participants to "Be proud and pleased you are a male/female/UCSB student and let it define who you are." Gender identity salience was manipulated to make individuals believe the information, find it self-applicable, and enjoy identifying with the group.

Two parallel paragraphs were constructed for the high gender identity salience condition, one tailored for men and another for women. A third paragraph was constructed to enhance student identity salience, which was the same for both sexes and followed the same strategy as the high gender identity salience paragraphs avoiding gender related issues. Table 2 contains the three paragraphs varying in gender identity salience. Clearly, gender identity salience and student identity salience were activated in a parallel manner using a factual, personally relevant, and praising strategy. To augment and further instantiate the desired salient identity, after reading the salience manipulation paragraph (i.e., passage) participants also read and completed the following: "After reading the above passage, please write (in one or two sentences) how you feel about yourself."

Manipulation Check Measures

Two questions tapped gender salience on seven-point scales (1 = *not at all*; 7 = *very*): "After reading the passage, how much are you *thinking about* being a male or a female?" and "After reading the passage, to what extent are you *evaluating yourself*, positively or negatively, in terms of your gender?" Two questions measured student salience on similar scales: "After reading the passage, to what extent are you *assessing* (i.e., evaluating, appreciating) yourself as a UCSB student?" and "After reading the passage, how much is being a UCSB student *foremost in your thoughts*?" Five filler questions were used to draw participants' attention away from the gender and student focus of the investigation (and not used in the analyses). A principle component analysis of the four, gender and student, salience

TABLE 2
Gender Identity and Student Identity Salience Manipulation Paragraphs

High male gender identity salience

Think about being a male. As a male, you can be proud of who you are and what you do. Already, because you're a man, you've extensively helped others by doing everything from lifting heavy objects, carrying big boxes, getting hard-to-reach items, disposing of unwanted pests and rodents, fixing and repairing stuff, and climbing into obscure locations to do difficult tasks, giving advice, taking charge of situations, protecting family members, and standing up for yourself and others. Studies show that young adult males such as yourself score in the top 90% on tests of industriousness and dependability. American males, yourself included, are routinely looked up to as the most capable, and judged as the most independent. Sociologists find that the experiences you have as a man cause you to develop strong character and good judgment skills (in the upper 90th percentile). Adult males like yourself are the reason for 93% of all innovative technologies and are responsible for some of our greatest moments as a country. For example, Charles Lindbergh set standards for all pilots for years to come by completing the first solo flight across the Atlantic Ocean. Paul Revere, risking his own life, alerted the country to an attack, stopping at each house to warn those inside. Rudy Giuliani led the city of New York during difficult times, giving individuals hope and courage to move forward. You are already carrying this great tradition of men into the future and setting an example that today's young boys, one day, will follow. Enjoy the fact you have been, are, and will continue to be a credit to your gender. Be proud and pleased you are a male and let it define who you are.

High female gender identity salience

Think about being a female. As a female, you can be proud of who you are and what you do. Already, because you're a woman, you've extensively helped others by doing everything from reading young children stories, getting things from the store, organizing social events, watching after siblings, mending and repairing stuff, and offering friends emotional support to helping those in need, giving advice, comforting family members, handling touchy situations, and standing up for yourself and others. Studies show that young adult females such as yourself score in the top 90% on tests of generosity and dependability. American females, yourself included, are routinely looked up to as the most empathic, and judged as the most independent. Sociologists find that the experiences you have as a woman cause you to develop strong character and good judgment skills (in the upper 90th percentile). Adult females like yourself are the reason for 93% of all creative ideas and are responsible for some of our greatest moments as a country. For example, Amelia Earhart set standards for all pilots for years to come by being the first female to fly solo across the Atlantic Ocean and the first person to fly solo across the Pacific Ocean. Eleanor Roosevelt virtually led the country during World War II when her husband, the President, was incapacitated, giving individuals hope and courage to move forward. Susan B. Anthony, one of the key figures of the women's movement, paved the way for women's right to vote. You are already carrying this great tradition of women into the future and setting an example that today's young girls, one day, will follow. Enjoy the fact you have been, are, and will continue to be a credit to your gender. Be proud and pleased you are a female and let it define who you are.

TABLE 2 (continued)
Gender Identity and Student Identity Salience Manipulation Paragraphs

Low gender identity salience (high student identity salience)

Think about being a UCSB student. As a UCSB student, you are what makes UCSB one of the premier universities in the country. UCSB is the 13th best public university in the nation where 95% of students are in the top 10% of their high school graduating classes. UCSB students have an average high school GPA of 3.75, 3 to 5 extracurricular activities per year, and routinely receive public recognition. You and other UCSB students have outstanding SAT scores – averaging 1200 (up 92 points in just the last 6 years!). You are the reason UCSB was elected a member of the Association of American Universities which comprises the top 2% of all the universities and colleges in the U.S. and Canada. UCSB students, yourself included, pursue more than 90 different majors, the most popular and challenging of which are engineering, communication, biological sciences, business economics, political science, and computer science. As a student at UCSB, you have access to 998 faculty, 2.6 million books in the library, 3 Nobel Laureates in the last 3 years, distinguished members of the National Endowment for the Humanities, 8 national research centers and institutes, and an Art Museum with a permanent collection of over 7,000 art objects. You and other UCSB undergraduates add to the larger Santa Barbara community, serving as student interns at hundreds of public and nonprofit agencies. As a UCSB student, you are what makes this University great. Be proud and pleased you are a UCSB student and let it define who you are.

items revealed two components (i.e., measured gender salience and measured student salience), as anticipated. The two gender salience items, when combined and placed on a seven-point scale, formed a very reliable measure of gender salience, $M = 3.87$, $SD = 2.13$, $\alpha = .90$, as did the two student salience items, $M = 4.32$, $SD = 1.71$, $\alpha = .84$.

Procedure

The experiment used e-mail as the means by which language samples were acquired.⁵ Participants learned, via verbal instructions, that they would fill out a paper handout and respond to an e-mail message. In a quick, thorough tutorial of the web-based e-mail program (W:Mail 3.0), the layout of the program—along with the steps needed to open and read and then type and send their reply—were conveyed verbally and visually using a projector. Participants' questions, if any, were answered. Then, the experimenter told participants to follow the step-by-step instructions on the paper handout.

The paper handout instructed participants to "read the following *passage* and then answer the question that follows." The passage was one of the three manipulation paragraphs discussed previously and randomly assigned. The handout then instructed participants: "After reading the above passage, please write (in one or two sentences) how you feel about yourself." Next, the handout instructed participants step by step to open, read, and reply to the e-mail. The e-mail message for all participants, regardless of condition, was similar to previous gender-linked language research (e.g., Mulac & Bradac, 1995) and read: "After reading the passage, please write (in two or three paragraphs, which is one full message text box) what you think society will be like in the year 2012." After sending their reply, the handout told participants to write down the e-mail address used to send their message, which was unique for, and randomly assigned to, each participant, ensuring that participants' e-mail responses could be associated with their handout responses. Participants then answered the manipulation check measures. The experiment lasted approximately 25 minutes.

Participants completed the BSRI separately from their involvement in the experiment in an unrelated research opportunity, taking about 15 minutes and receiving separate course credit. Participants completed the BSRI a few weeks before the main experiment.

Dependent Measures

Language Transcripts

Each participant's sent e-mail message was reproduced as a printed transcript, with all headers removed. Each transcript—identified only by

a number—occupied a separate page of a booklet, in which each page containing a different transcript was randomly ordered. Every coder had an identical transcript booklet.

Language Feature Coding

Sixteen research assistants analyzed the transcripts for 16 language features typically used in gender-linked language investigations (Mulac, 1998; Mulac et al., 2001; Table 1 lists each language feature coded with definitions and examples). Four coding teams working independently, each with four coders, analyzed a different set of language features across all transcripts. Coding teams were trained one language feature at a time. A definition of each language feature, exemplars of the feature, and examples of instances (that might be confused with but were not the feature) were given to each team member. Once each team member felt comfortable with their understanding of the language feature, usually after some questions and dialogue, coding teams analyzed a set of training transcripts (not used in the current analyses). After the training transcripts were independently coded by each team member, the four team members and the coding trainer talked about any possible instances of the language feature, one transcript at a time. Once trained, all four members, within each coding team, individually coded all transcripts one language feature at a time. Next, during a transcript discussion, all four team members met and conferred about all transcripts one at a time bringing discrepancies and questionable instances of the language feature to each other's attention. This discussion allowed all four team members to consider overlooked and problematic instances. After the discussion of each transcript, each coder made a final decision regarding the total number of language feature occurrences in each transcript.

Reliability was assessed prior to transcript discussion using the percentage of agreement for a particular language feature across the first ten transcripts. I defined agreement for a particular language feature as when at least three of the four team members indicated that the language feature occurred in a specific location in a transcript. Reliabilities ranged from 78% to 100% (see Table 1). Team members resolved coding discrepancies during the transcript discussion.

Language Variables

Transformations of the language features into language variables were conducted. First, I computed the average number of occurrences indicated by each coder (postdiscussion) per transcript within each team as the language feature score. Second, for standardization reasons, the number of occurrences per 100 words for each language feature score

(except words and sentences) for each transcript was calculated, resulting in language variables that controlled for wordiness. Last, as words and sentences were not used in the following analyses, I created a new variable—*mean length of sentences (MLS)*—by dividing sentences by words. Therefore, while 16 language features were coded, only 15 language variables were included in the analyses. The means and standard deviations of each language variable are reported in Table 1.

RESULTS

Manipulation Check

Only individuals who adhered to the salience manipulation remained for further analyses, assuring that participants had the intended identity salient and the other identity (relatively) not salient. Thirteen women and 19 men were eliminated from further analyses, resulting in 84 women and 70 men (154 total) who passed the manipulation check.⁶ Two separate sex by gender salience between-subjects analyses of variance (ANOVAs) tested the effects of the salience manipulation on measured gender salience and measured student salience, respectively. The first ANOVA only revealed the intended main effect for gender salience on measured gender salience, $F(1, 150) = 416.78, p < .001$, (high gender salience: $M = 5.79, SD = 1.06$; low gender salience: $M = 2.15, SD = 1.13; \eta^2 = .74$). The second ANOVA only confirmed a main effect for gender salience on measured student salience, $F(1, 150) = 246.02, p < .001$, (high gender salience: $M = 3.19, SD = 1.10$; low gender salience: $M = 5.75, SD = .90; \eta^2 = .62$). Last, examining participants' handwritten statements to the question on the handout that immediately followed the manipulation paragraph revealed that nearly all indicated feeling proud and/or happy to be a member of the particular group made salient.

Hypotheses Tests

I conducted a multivariate analysis of variance (MANOVA) using sex, gender schematicity, and gender identity salience as between-subjects factors and language use as a within-subjects factor having 15 levels (one for each of the 15 dependent variables). This analysis allowed for the simultaneous examination of the language use for each participant across each of the conditions. H1 predicted a sex main effect, H2 predicted a sex by schematicity interaction, H3 predicted a sex by gender salience interaction, and H4 predicted a sex by schematicity by gender salience interaction. No support was found for H1, $F(14, 133) = 1.28$, or for H2, $F(14, 133) = 1.00$. Power analyses, using a two-tailed α of .05 and Cohen's (1988)

suggestion for a medium effect size, indicated that the tests of H1 (power = .86) and H2 (power = .90) had sufficient power. H3 received support, as indicated by the sex by gender identity salience interaction on language use, $F(14, 133) = 2.15, p < .05, \eta^2 = .18$. The significant three-way interaction of sex by gender schematicity by gender identity salience on language use (H4), $F(14, 133) = 2.09, p < .05, \eta^2 = .18$, however, subsumes this two-way interaction. As H4 incorporates H3, the following analyses focus on H4 only.

H4

To examine more closely the three-way interaction and determine if the effects were in the hypothesized direction, I conducted a stepwise discriminant function analysis. The 15 language variables were predictor variables and the eight groups (as determined by the eight cells resulting from the 2 by 2 by 2 between-subjects design) were the grouping variable. Prior to the removal of the first discriminant function, significant predictable variation existed between the groups to justify extraction of the function (canonical correlation = .55, Wilks' $\lambda = .60, \chi^2(28) = 75.30, p < .001$), which accounted for 73.5% of the variation in membership of the eight groups. No significant predictable variation in group membership remained after removal of the first function (canonical correlation = .33, Wilks' $\lambda = .86, \chi^2(18) = 22.10, n.s.$).

The discriminant analysis revealed that the combination of four language variables added significant (at $p < .05$) predictive ability and, therefore, only four variables defined the discriminant function. The discriminant function is strongly defined by references to emotion (canonical coefficient = .91), such that as the function increases, references to emotion increase. The function is also moderately defined by *judgmental adjectives* (canonical coefficient = -.50), *MLS* (canonical coefficient = -.48), and references to quantity (canonical coefficient = .49). Previous research indicates that *references to emotion* and long *MLS* are typical female-linked language variables and references to quantity and judgmental adjectives are typical male-linked language variables (Mulac et al, 2001); as a result, high scores on the discriminant function represent typical female-linked language, while low scores on the discriminant function represent typical male-linked language. As the function increases, typical female-linked language increases and typical male-linked language decreases.

Examination of the discriminant function score centroids for each of the eight groups helps to determine the relative extent to which each group used gender-linked language. Figure 1 plots the discriminant function score centroids for each of the eight groups. Table 3 provides the F tests

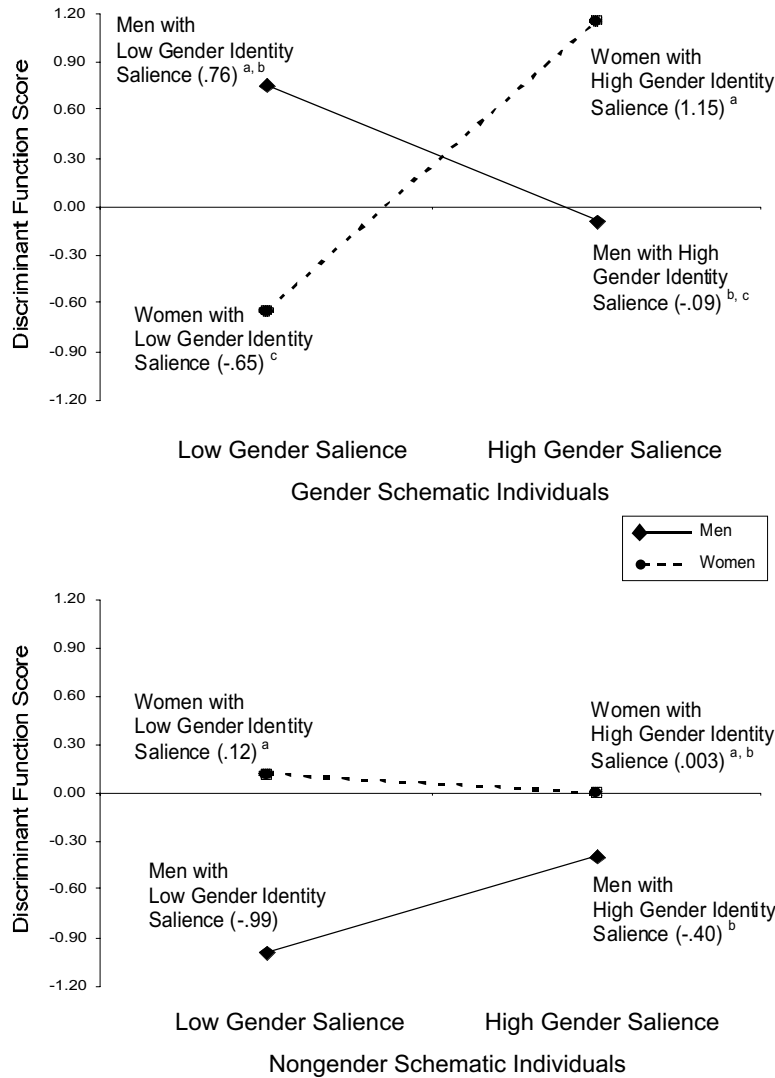


Figure 1. Gender-Linked Language Use as a Function of Sex, Gender Schematicity, and Gender Identity Saliency

NOTE: As the discriminant function score increases, typical female-linked language increases and typical male-linked language decreases. Within each of the graphs, groups that do *not* share a similar superscripted letter have statistically significantly different discriminant function score centroids. *F* test for pairwise group comparisons are reported in Table 3.

TABLE 3
F Tests for Pairwise Group Comparisons of Discriminant Function Group Centroids

	Men		Men		Men		Women		Women	
	GS HGIS	GS LGIS	NGS HGIS	NGS LGIS	GS HGIS	GS LGIS	NGS HGIS	NGS LGIS	GS HGIS	GS LGIS
Men GS HGIS	—	—	—	—	—	—	—	—	—	—
Men GS LGIS	1.58	—	—	—	—	—	—	—	—	—
Men NGS HGIS	.99	4.13** ($\eta^2 = .10$)	—	—	—	—	—	—	—	—
Men NGS LGIS	3.00* ($\eta^2 = .08$)	7.43*** ($\eta^2 = .17$)	3.93** ($\eta^2 = .10$)	—	—	—	—	—	—	—
Women GS HGIS	3.91** ($\eta^2 = .10$)	.91	7.80*** ($\eta^2 = .18$)*	9.81** ($\eta^2 = .22$)	—	—	—	—	—	—
Women GS LGIS	1.02	4.95*** ($\eta^2 = .12$)	1.24	1.03	8.07*** ($\eta^2 = .18$)	—	—	—	—	—
Women NGS HGIS	1.42	2.20	2.23	2.72* ($\eta^2 = .07$)	3.47** ($\eta^2 = .09$)	1.52	—	—	—	—
Women NGS LGIS	.81	1.34	2.56* ($\eta^2 = .07$)	2.95* ($\eta^2 = .08$)	2.74* ($\eta^2 = .07$)	1.63	.35	—	—	—

NOTE: Partial *F* (4, 143) tests are reported for group comparisons of the discriminant function group centroids of the eight groups resulting from the sex by gender schematicity by gender identity salience factorial design. Effect size estimates are in parentheses. GS refers to gender schematic, whereas NGS refers to non-gender schematic. HGIS refers to high gender identity salience, whereas LGIS refers to low gender identity salience.

* $p < .05$; ** $p < .01$; *** $p < .001$.

for the pairwise group comparisons for the relative distance of the eight groups' discriminant function score centroids. Gender schematic women with high gender salience used significantly more female language and less male language (group centroid = 1.15) than gender schematic men with high gender salience (group centroid = -.09), as predicted (H4a). Contrary to H4b, gender schematic women with low gender salience used significantly less female language and more male language (group centroid = -.65) compared to gender schematic men with low gender salience (group centroid = .76). Also, gender schematic women with high gender salience used significantly more female language and less male language (group centroid = 1.15) than gender schematic women with low gender salience (group centroid = -.65), as predicted (H4c). On the other hand, gender schematic men with high gender salience did not use significantly less female language and more male language (group centroid = -.09) than gender schematic men with low gender salience (group centroid = .76), but the results were in the predicted direction (H4d). Finally, the language use of nongender schematic men and nongender schematic women with high and low gender salience differed minimally, as predicted (H4e), with the biggest difference occurring in nongender schematic men with low gender salience who use the least female language and the most male language relative to the other three groups of nonschematic individuals. Overall, support emerged for H4. Gender-linked language use depended on an individual's sex, gender schematicity, and gender identity salience; language use was typically gendered when individuals were gender schematic and had a high gender identity salience.

Classification Analysis of Discriminant Function Analysis

The ability of the eight group discriminant function to classify participants into the eight groups is limited, as detailed in Table 4. The discriminant function correctly classified 18.2% of the participants. By chance alone, one can expect to predict accurately group membership 12.5% (proportional chance criterion) to 15% (maximum chance criterion) of the time. Discriminant functions typically must improve accuracy at least 25% above chance levels to be considered useful (Hair, Anderson, & Tatham, 1987), which in this case is 15.6% to 18.8%, levels barely reached and not exceeded. Nongender schematic men and nongender schematic women are commonly misclassified as a member of the opposite sex. For example, nonschematic women with a high gender salience are (mis)classified 39.1% of the time as nonschematic men with a high gender salience. Problems in the current classification analysis most likely are due to nongender schematic individuals who seem to be unaffected by the gender salience manipulation.

TABLE 4
Classification Results for Eight Group Discriminant Analysis

	Predicted Group Membership							
	Men				Women			
	GS HGIS	GS LGIS	NGS HGIS	NGS LGIS	GS HGIS	GS LGIS	NGS HGIS	NGS LGIS
Men GS HGIS	0%	7.7%	46.2%	0%	7.7%	7.7%	30.8%	0%
Men GS LGIS	0%	<u>10.5%</u>	10.5%	0%	47.4%	10.5%	21.1%	0%
Men NGS HGIS	0%	4.3%	<u>17.4%</u>	8.7%	13%	30.4%	26.1%	0%
Men NGS LGIS	0%	0%	20%	<u>20%</u>	6.7%	40%	13.3%	0%
Women GS HGIS	0%	5.3%	10.5%	0%	<u>52.6%</u>	0%	31.6%	0%
Women GS LGIS	0%	4.8%	28.6%	9.5%	0%	<u>28.6%</u>	28.6%	0%
Women NGS HGIS	0%	17.4%	39.1%	4.3%	17.4%	8.7%	<u>13%</u>	0%
Women NGS LGIS	0%	28.6%	19%	0%	14.3%	19%	19%	<u>0%</u>

Actual Group Membership

NOTE: GS refers to gender schematic, whereas NGS refers to nongender schematic. HGIS refers to high gender identity salience, whereas LGIS refers to low gender identity salience. Underlined numbers refer to the percent correctly classified for each group.

Summary of Results

Men and women did not differ in their language use overall (H1) or in relation to their gender schematicity (H2); however, interaction effects emerged when considering gender identity salience (H3 and H4). Specifically, gender schematics whose gender was salient used typical gender-linked language. That is, schematic men used male language, and schematic women used female language when their gender was salient. When gender salience was low and student salience was high, however, gender schematics used countertypical gender-linked language (i.e., men used female language and women used male language). The language of nongender schematic individuals minimally varied. Overall, language use differences between men and women were at their greatest when they were gender schematic and shared a similar level of gender identity salience. Language use was similar, however, when individuals were not gender schematic or when men and women were gender schematic and had a different level of gender salience.

DISCUSSION

This experiment adds to the vast literature demonstrating gender-based communication differences and similarities. Gender-linked language differences emerged primarily for gender-schematic individuals depending on their gender salience. Similarities, on the other hand, were primarily found for nongender schematic individuals. Having a schema regarding individuals' gendered self-representation seems to be key for the production of gender-linked language differences. More important, however, is individuals' gender salience (of which gender schematicity is a part via accessibility). By accounting for the effects of gender salience (and gender schematicity), one can explain and predict what language differences (if any) will emerge, when, and why. The following discusses theoretical and empirical issues in light of the present findings.

Gender-Linked Language Differences and Similarities

The current research did not support the notion that over a variety of contexts men and women differ in their language use in consistent ways. Rather, the results supported the joint prediction of self-categorization and gender schema theories that individuals use typical gender-linked language (e.g., women use female language) only when they are gender schematic and have a salient gender. Language differences were detected currently, but these differences did not surface as a sex main effect across men and women, as common in previous research (Mulac, 1998). Men and women used gender-linked language depending on how they

cognitively represented the self situationally and predispositionally. These findings lead one to ponder the role that gender identity salience may have played inadvertently in previous research. Perhaps gender identity was not salient for most participants when communication similarities were detected in past research, but it was unknowingly made salient when gender-based communicative differences were demonstrated. Communication reflects the contextual dynamics most relevant to the current context. Typical gender-based communicative differences therefore may occur when gender is a factor in individuals' cognitions, whereas similarities (or counter-typical differences) emerge when gender does not matter. Conceivably, as Mulac, Bradac, and Palomares (2003) theorize, gender identity may be salient for most individuals by default. In other words, individuals mostly have a highly salient gender identity and other identities (e.g., student, employee) interfere with or become more salient than their gender, resulting in communication similarities among men and women.

Alluding to these ideas is a study that examined the language of men and women who role played criticism giving in a professional work environment (Mulac, Seibold, & Farris, 2000). Results contrary to previous gender-linked language research surfaced in this study. Certain language features typically associated with one gender group were used more by the other gender group. For example, references to emotion, a typical female language variable, were used more by men than women. Gender probably was not salient in this study, but rather an employee identity was likely more salient for participants. In the Mulac et al. study, in other words, gender may not have been situationally accessible nor fit the professional work context, therefore resulting in counter-typical gender-linked language (similar to the current low gender salience condition). Perhaps gender-linked language differences in previous research were actually the result of a salient gender. The current data are only able to reach high levels of accurate classification comparable to previous findings when gender is mutually high for gender schematic men and gender schematic women. Theoretically, then, gender-based communicative differences will only emerge when gender is salient.

More broadly, this rationale implies that communicative similarities are likely to occur in explainable and predictable ways when considering gender schematicity and gender identity salience. Similarities will occur when gender is not a factor in one's cognitions either situationally via salience or permanently via schemata. Previous research that found gender similarities in behaviors might be (re)considered examining such behaviors as a consequence of gender salience, as gender differences may result only when gender is salient. As a caveat, gender differences will only be found for prototypical behaviors associated with one gender group and not the other (i.e., those behavioral differences that normatively fit the current

context). Future gender research could control for or examine the effects of different salient identities in order to predict and explain gender-based communication similarities and differences in light of contextual variation.

Countertypical Gender-Linked Language

Both self-categorization and gender schema theories have difficulty accounting for the finding that gender schematic individuals used countertypical gender-linked language (i.e., men used female language and women used male language) when gender salience was low and student salience was high. Perhaps gender schematics did not feel the need to conform to gender norms in the low gender salience condition. They, therefore, felt liberated from gender constraints, opting to use language countertypical to gender norms. Gender schematic individuals, in other words, seized an opportunity to use gender-inconsistent behavior when their chronic sense of gender was lowered.

Another plausible explanation was offered by Palomares, Reid, and Bradac (2004). They suggested that countertypical gendered language may occur because men and women can adopt language that is prototypical of different social categories. For example, female physicians may use relatively direct male language, but these direct forms also likely are prototypical of physicians in general. This direct language may be categorized objectively by researchers as male-typical, but cognitively it is physician-typical for participants. If direct language is the relevant prototype for physicians, then a physician identity would be salient for participants, and gender would not, even though researchers might recognize the language as objectively male. There is potentially considerable overlap between the kinds of language that can be prototypical for gender and prototypical for other social groups. Regarding the current research, perhaps low gender salience actually being high student salience accounts for the countertypical gender-linked language. The high student salience, in other words, might have influenced participants' language, resulting in objectively countertypical gender-linked language, but cognitively it was student-typical language.

Whatever the reason, examining countertypical gender-linked language is informative, especially considering the research on tentative language (Reid et al., 2003) that found no male–female language differences in the low gender salience condition, as predicted by self-categorization theory. That is, while Reid et al. did not find countertypical tentative language in the low gender salience condition, the current study demonstrated countertypical gender-linked language in the low gender salience condition. Determining why these two studies revealed discrepant findings for two different forms of gendered language is important; perhaps

differences in tentative language versus gender-linked language account for this disparity.

The Nature of Gender Identity Salience

Gender identity salience is clearly more complex than the dichotomous nature with which it is currently treated. Some may consider that a bifurcated gender salience manipulation limits the theoretical understanding of the concept; others can view it more optimistically as a springboard from which future theory and research can advance. Gender salience depends on individuals' perceptions of the differences between men and women (i.e., comparative fit) and the socially meaningful group differences (i.e., normative fit). Dissimilar gender differences can fit at different times, with the precise features that fit the current context altering the nature of gender salience. When gender is positively salient, as in the current study, men and women use typical gendered language. On the other hand, if gender is negatively salient, such that power differentials for one group over another normatively fit the context, then typical patterns for gendered language may not be exaggerated by men and women equally. Rather, the gender group with a salient gender including reference to the outgroup's situational dominance may converge their language to the outgroup's norm as a form of assimilation to the situationally powerful outgroup (see, Hogg, 1985). Differences in gendered language emerge depending on the nature of gender identity salience.

Variations in the nature of gender salience have theoretical implications for the gender-as-culture explanation, which claims that male-female language differences are the result of different culturally learned behaviors (Maltz & Borker, 1982), and the dominance explanation, which states that language differences are a reflection of power or status differentials in favor of men (Henley & Kramarae, 1991). These two hypotheses are important; however, they offer little utility in a more comprehensive explanation of gendered language and are usually unnecessarily treated as oppositional explanations. In recent theoretical work, Palomares et al. (2004) suggested that using the concept of gender identity salience fills the explanatory gap in the gendered language literature as well as offers a theoretical unification of the two ostensibly conflicting hypotheses.

Under the conceptual umbrella of gender identity salience, the gender-as-culture and the dominance hypotheses can mutually coexist without presenting divergent explanations (Palomares et al., 2004). Different cultures are not always equal in terms of status. Men and women belong to two subcultures, each of which has a different status in general. The current research demonstrates that under conditions of high gender salience (in a positive light, without reference to status differentials) language use is in line with gender norms when an individual is gender

schematic based on the culture's views of gender. Other research suggests that when gender is salient and includes status differentials in favor of men, men use normative gendered language, whereas women use more typical male language as a way to assimilate to the male higher status norm (Hogg, 1985). When female dominance normatively fits the situation, on the other hand, women show dominance over men in their communication (Dovidio, Brown, Heltman, Ellyson, & Keating, 1988; Postmes & Spears, 2002). Therefore, most of the research in support of the dominance hypothesis could be explained when considering the fact that men, for the most part, have a higher status than women and, when interacting with women, gender including these status differences likely is salient by default (Ridgeway & Walker, 2000; Hogg & Turner, 1987). When competitive status differences are a part of gender salience, communication between men and women will reflect this identity, whereas when cooperative intergroup relations between men and women are part of gender salience communication will reflect this identity (Palomares et al., 2004). To offer empirical support for this reasoning, gender salience can be examined without confounds, by manipulating gender salience independently from status differentials. Examining the influence of different types of gender salience on gendered language could prove fruitful.

Gendered Language in CMC

Men and women did not differ overall (as a main effect) in their language use in the current computer-mediated context of e-mail. Interactive effects emerged in light of sex, schematicity, and salience; however, only four language variables defined current gender-linked language. Other research, however, has detected differences in many more language variables (see Mulac, 1998). One reason for this inconsistency could be due to a decrease in gender-linked language differences. As recent research has found gender-linked language differences (e.g., Mulac et al., 2001; Thomson & Murachver, 2001), this reason is unlikely. Further, the communicative task (i.e., speculating about society in 10 years), the written (as opposed to oral) language, and the monologue nature of participants' discourse are not expected causes; all are reminiscent of previous research showing extensive gender-linked language differences. A more probable explanation might be the character of the computer-mediated context used—e-mail. Admittedly, there are problems with equating the current use of e-mail as CMC. The limitations of the experiment required a very scripted, unidimensional e-mail task with an unspecified response partner. Perhaps the current use of e-mail influenced the extensiveness of gender-linked language differences. If contextual features associated with e-mail had been varied, perhaps additional language differences would have resulted.

Future research could build upon the current experiment and examine gendered language in additional CMC contexts (e.g., chats, e-mail exchanges) with variations in contextual features (e.g., anonymity, identifiability). Language use plays a pragmatic role for men and women in CMC—an environment where social interpersonal cues are often reduced, making language a primary means for gaining information about others (Postmes, Spears, Lea, 1998; Walther, 1996). Given the gender-linked language effect, contextual features of CMC affecting one's gender identity salience are critical to explaining what types of gender-linked language use will emerge, when, and why.

Expanding on the basic premises of self-categorization theory, the Social Identity Model of Depersonalization Effects (the SIDE model) claims that anonymity in CMC can lead either to an enhanced or a diminished depersonalized self (Postmes, Spears, Lea, & Reicher, 2000). Alterations in anonymity affect gender salience by either increasing or decreasing the tendency for an individual to categorize him- or herself as male or female, respectively (Spears, Lea, & Postmes, 2000). For example, knowing the sex of one's e-mail partner can increase gender salience, resulting in increased use of gender-linked language. Increases in gender salience with reference to status inequities can have adverse outcomes for one gender group compared to another in CMC. Theory and research can grow by examining how anonymity (and other features of CMC) impact gender identity salience and subsequently gender-linked language use and effects from a self-categorization perspective.

CONCLUSION

The language use of men and women is not as straightforward as men having the crosscontextual tendency to use some language features and women having the crosscontextual tendency to use others. The current research revealed a more complex picture of consequential male–female language differences rooted in the theoretical underpinnings of gender identity salience. Chronic gender identity accessibility (i.e., schematicity) and gender identity salience are essential factors in determining gender-linked language use. Gendered language transpires only when gender is salient. This research takes an initial step toward a theoretical account of gender-linked language use. Based on current theoretical arguments and empirical findings, future research will provide a more inclusive understanding of what gendered communicative differences (if any) will emerge, when, and why.

NOTES

1. Participants' gender was operationalized as their biological sex. Gender was not directly measured; therefore, sex is used hereafter to refer to the variable of gender. Gender identity salience was manipulated, just as gender schematicity was measured, regarding the social manifestation of what it means to be male and female (i.e., gender). The term gender, therefore, refers to these two variables. Finally, I used the term gender-linked language as opposed to sex-linked language, as theoretically the linguistic features composing gender-linked language are associated with participants' sense of being male or female as opposed to their biological sex.

2. Hogg and Turner (1987) used the same interacting same-sex dyads and mixed-sex groups as Hogg (1985) used to determine the extent to which individuals' gender was salient, finding that those in the mixed-sex condition had their gender more salient than those in the same-sex condition. Empirical support thus demonstrates that men and women in mixed-sex groups, compared to same-sex dyads, have a greater gender salience. In the Hogg and Turner study, however, the exact nature of the gender salience for men and women is unknown.

3. Some researchers question the validity of the scale (e.g., Auster & Ohm, 2000); nonetheless, psychometric examinations find the BSRI to be a valid measure of gender schematicity even in recent years (Bem, 1981a; Cramer & Westergren, 1999; Holt & Ellis, 1998; Larsen & Seidman, 1986). Further, recent research has demonstrated its usefulness, finding results consistent with gender schema theory (Lombardo, Cretser, & Roesch, 2001; Mulac, Jansma, & Linz, 2002). The current research also found the BSRI to be useful, such that the measure of gender schematicity was related (interactively) to language use. The current use of the scale, therefore, was warranted.

4. Various pilot experiments were conducted to ensure the manipulation of gender salience was achieved in a positive manner similar for both men and women. Information on these tests is available from the author.

5. As information about participants' response partners was not given (i.e., participants did not know to whom they were sending an e-mail or if anyone would respond), the current research should be considered an investigation of language use in a computer-mediated context, not in true CMC.

6. The following procedure (based on the two identity salience measures) was used to drop those participants who did not adhere to the manipulation. For individuals in the high gender salience condition, each participant who simultaneously reported a gender salience of 2.80 (i.e., mean minus half the standard deviation) or lower and a student salience of 5.18 (i.e., mean plus half the standard deviation) or higher was dropped. In other words, if a participant in the high gender salience condition did not have a gender salient, but rather had a student identity salient, then that participant was dropped. For individuals in the low gender salience condition, each participant who simultaneously reported a gender salience of 4.94 (i.e., mean plus half the standard deviation) or higher and a student salience of 3.46 (i.e., mean minus half the standard deviation) or lower was dropped. Thus, if a participant in the low gender salience condition did not have a student identity salient, but rather had a gender salient, then that participant was dropped.

Dropping participants who do not conform to an experimental manipulation can potentially create a threat to validity, because regression to the mean affects extreme scores at the high and low ends of a measure. For the current research, however, regression to the mean is likely not a serious problem for two reasons. First, only those participants scoring at one end of a particular identity salience measure relative to the other identity salience measure were dropped, whereas those scoring at the middle and the other end of the particular measure were retained. Regression to the mean unlikely posed a serious threat in the current experiment, because regression "does not affect obtained change scores among scorers

at the center of the pretest distribution since the group is likely to contain as many units whose pretest scores are inflated by error as units whose pretest scores are deflated by it" (Cook & Campbell, 1979, p. 52–53). Regression to the mean likely would have been a serious problem, for example, if those who scored at the high and low ends of the gender identity salience measure (irrespective of the student identity salience measure) were retained and those falling at the middle range of the scale were dropped. Second, regression to the mean is determined in part by the reliability of a measure: "The higher the reliability...the less will be the regression" (p. 53). The reliabilities of the gender identity salience measure (i.e., $\alpha = .90$) and student identity salience measure (i.e., $\alpha = .84$) were particularly high. For these reasons, the majority of those participants who were retained were not likely seriously affected by regression to the mean.

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