“DOING GENDER” IN DOCTOR-PATIENT INTERACTIONS:
GENDER COMPOSITION OF DOCTOR-PATIENT DYADS
AND COMMUNICATION PATTERNS

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by

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CHAPTER I

INTRODUCTION

Societal gender inequality is not just a social fact, but also something that is realized, reinforced, and perpetuated through interaction. Systems of inequality, as with gender inequality, are built from the interactional level. This makes interaction a good unit of analysis to analyze how stereotypes of women and men are reinforced and are mirrored in the social structure. There are many widely held beliefs about gender and language—women are expressive, responsive, supportive, and concerned with intimacy. Men, on the other hand, are thought to be task oriented, dominant, and concerned with status and independence. If these stereotypes are consistently reinforced in interaction, then the social structure will reflect these differences as well. However, there is a more complex story than just stereotypical gender differences in interaction.

Aries (1996) proposes five questions to consider in order to understand gender differences in conversational interaction. First, how different are the interaction styles of women and men? What is the magnitude of the differences? Second, can other variables that co-vary with gender, such as social roles or status, account for the differences perceived between women and men? Third, to what extent do gender differences depend on the situational context of the interaction? Fourth, to what extent do stereotypes shape the perceptions and evaluations of the speakers? Finally, are the correct meanings assigned to the behaviors being studied (Aries 1996: vii-ix)? Research on gender and
interaction shows that there is individual and situational variability in gender differences in language. Women and men are capable of displaying both masculine and feminine styles of communication in interaction and those styles are dependent on their status, role, gender identity, and interaction goals (Aries 1996). Stereotyped beliefs and the expectations they form have the power to become a sort of self-fulfilling prophecy in which women and men will end up behaving according to the expected stereotypes. Consequently, those stereotypes are reinforced and are then seen as essential differences in women and men. Furthermore, those differences are a tacit justification for the existing social order and the structural arrangements of a society presumed to be responsive to those differences, with “the social order being merely an accommodation to the natural order” (West and Zimmerman 1987:146).

The current study is informed by Aries’ five questions in considering a broad framework to organize this research on gender and communication in doctor-patient interactions. I will first discuss the magnitude of communication differences between women and men found in the literature, as Aries suggests. I will then discuss these differences in the context of doctor-patient interactions and attempt to distinguish the differences due to gender as a status and those due to the status of physician, as Aries cautions to consider the role of status and roles in gender differences. Drawing from the literature, I develop six hypotheses, being careful to assign the correct meaning to the communication behaviors at hand, another one of Aries’ considerations. Aries also recommends considering how much the situational context of the interaction accounts for gender differences. I discuss whether it is gender differences broadly or the specific
context of doctor-patient interactions with fourth year medical students and standardized patients (SPs) that can account for the differences found. Finally, I analyze whether it is the actual style or nature of women and men physicians\(^1\) in this study that account for the differences or if it is the gendered expectations, or stereotypes, of physicians and patients that drive the communication patterns within these encounters. This discussion addresses Aries’ question to what extent do stereotypes shape the perceptions and evaluations of the speakers.

This study will provide an important micro-macro link to gender and language and gender inequality in the social structure, specifically within the context of doctor-patient interactions. The institutional forces that maintain gender inequality are validated in interaction. However, this study will show that gender differences in language are not stagnant features of women and men’s communication styles and that gender differences in communication are highly situational. In the context of doctor-patient interactions, this study suggests an increasing equal social order within medicine because women and men are not communicating as stereotypes would predict. Without the consistent reinforcement of inequality in interaction, institutional arrangements are also likely to move closer to gender equality.

\(^1\) Although the phrase “men physicians” seems unconventional as opposed to “male physicians,” I use it throughout this document because its awkwardness, although grammatically correct, highlights that physicians rarely need the qualifier “men.” The term “women physicians,” on the other hand, while in the same grammatical form as “men physicians”, does not sound awkward. Using “men physicians” instead of “male physicians” emphasizes the point that there is a distinction between sex category and gender.
CHAPTER II

LITERATURE REVIEW

LANGUAGE AND GENDER

There has been a great deal of research indicating that language reflects gender role differences (Henley and Thorne 1975; Kramarae, Thorne, and Henley 1983). It is evident in these studies that various features of language and speech, both verbal and nonverbal, reflect the dominant position of males in society, often in diffuse and subtle ways. These studies are open to criticism concerning the definition of certain speech forms. Across different contexts, a given speech form may vary in whether it really reflects dominance or deference (Tannen 1994). Regardless of the interpretations, women and men consistently engage in different language patterns, with distinct differences in many speech forms. Although women and men use the same qualitative forms of talk, there are gender differences in the relative frequency of many speech forms: Men speak and interrupt more and women ask more questions, especially tag questions, use more qualifiers and disclaimers, use more minimal responses, and they smile and laugh more (Johnson 1994). Despite these well-documented gender differences, explanations for why these observations exist vary.
Since gender is associated with power and status, with males holding higher positions in this society, some argue that differences in power and status can account for gender differences in language (Aries 1996; Johnson 1994; Sagrestano 1992; Woods 1988). When women do obtain positions of high power and status, they have violated traditional gender role norms (Aries 1996). Even when in positions of high power and prestige, women continue to use language consistent with their gender role rather than the language of prestige associated with that other role. This may be because women are better received by others when they adhere to traditional gender role norms, which include language that displays support, responsiveness, and friendliness. When gender is salient in conversation, women are more likely to use language consistent with gender role norms rather than the language associated with other roles they may hold (Aries 1996).

Because explanations of gendered language based on roles tend to reduce gender to a static role and cannot account for variations in language across contexts, West and Zimmerman (1987) argue that gender is an accomplishment that emerges in social interaction. Recognizing the complexity of gender, West and Zimmerman (1987) contend that differences in language are not due to essentialist features of sex, but rather something accomplished through interaction. Thus, interaction reinforces the asymmetry between women and men. When gender is seen as an accomplishment, “an achieved property of situated conduct, our attention shifts from matters internal to the individual and focuses on interactional, and ultimately, institutional arenas” (West and Zimmerman 1987:126). Gender emerges as a feature of social arrangements and as a means of
legitimating “one of the most fundamental divisions in society” (West and Zimmerman 1987:126).

Role theory is inadequate when applied to gender in interactions because roles are situated identities that are realized and discontinued with the particulars of situations, such as the role of ‘doctor,’ ‘nurse,’ ‘patient,’ or ‘professor.’ Unlike most roles that are situation dependent, “gender has no specific site or organizational context,” which renders gender a master status (West and Zimmerman 1987:128). Furthermore, many roles are confounded with gender, or “gender marked,” such as “male nurse” or “female doctor.” Because gender is enmeshed in other contexts and organizational structures, it is difficult to distinguish the separate effects of gender on other roles. People have many different identities and roles that are more or less salient as different times, but people are always women or men, and thus there are the resources to “do gender” in any situation even where there is role conflict.

To “do gender” does not mean that women and men always adhere to normative expectations of their sex category, i.e. femininity or masculinity, but rather that their behavior is always subject to gender assessment, which West and Zimmerman (1987) term accountability. To do gender is to engage in behavior “at the risk of gender assessment” and it is unavoidable insomuch as society divides itself according to “essential” differences between women and men (West and Zimmerman 1987:136). If both genders “do gender” appropriately, “we simultaneously sustain, reproduce, and render legitimate the institutional arrangements that are based on sex category” (West and Zimmerman 1987:146). If people violate gender expectations in interactions, not doing
gender appropriately, the individual’s character, motives, etc. is called into question. Women and men must manage each circumstance so that the outcome is seen by other social actors as gender appropriate.

Furthermore, once “doing gender” creates differences between women and men, these differences reinforce the “essentialness” of gender (West and Zimmerman 1987). At the level of interaction, if in “doing gender,” men are also doing dominance and women are doing deference, the social order will reflect these power differentials. One way in which to analyze whether women and men are “doing gender” appropriately is in the micro aspects of linguistics.

THE TURN-TAKING MODEL

Women and men “do gender” that manifests in subtle ways through conversation. Sacks, Schegolff, and Jefferson (1974) provide a model for analyzing the micro aspects of language that has guided much research on linguistics, especially research on interruptions (Aries 1996). They were the first to propose that speaker transition follows an ordered set of rules to produce a normatively constrained order of conversational interaction. Their model of the techniques used to allocate turn-taking in conversations can be universally applied because it is evident in conversation regardless of the topic, the setting, the number of speakers, or the identity of the speakers (Aries 1996).

According to Sacks and his associates (1974), interaction is organized so that one party speaks at a time, speaker change recurs, occurrences of more than one speaker at a time are common but brief, and transitions with no gap and no overlap are common.
A turn is not just a speaking of an utterance, but the right and obligation to do so that is designated to a speaker. Since much of the time there is little or no gap between the changes of speakers, the next speaker is ready to take a turn upon a possible transition point of the current speaker. Active speakership and listenership, with each alternating between participants, presuppose this readiness. Active listening is required for a speaker to be ready to take a turn without a gap in transition.

Sacks’ (1974) model of turn-taking was the first to identify interruptions as violations of the turn-taking rules for conversation. Studies following from Sacks consistently show that men interrupt more than women do. A large literature developed based on the assumption that interruptions are indicators of power and dominance. While the current study does not measure interruptions, it is based on Sacks’ model that conversation is remarkably orderly and there are general rules of turn-taking. Without this model, turn-taking and other speech forms would be random and not subject to meaning imputation. As the following review of studies show, many specific linguistic forms have meanings and implications for gender differences in language.

**Minimal Responses**

Minimal responses, or backchannels are a class of utterances such as “um hmm,” “uh huh,” “OK,” and “yeah” that occur during a speaker’s ongoing utterance and are not interruptions or an actual speaker turn. Minimal responses serve to signal listening, interest, and partnership building (Zimmerman and West 1975). Typically, the current speaker will continue the turn after a minimal response without any pause, therefore
indicating that the function of minimal responses is to do “support work,” in that the
listener is carefully attending to the speaker’s utterance (Zimmerman and West 1975).
Minimal responses also often occur simultaneously with nonverbal cues of active
listening such as head nodding and facial gestures, which are sorts of positive
reinforcement for continued talk. The literature shows women consistently use more
minimal responses than men do, possibly because for women to do gender appropriately
includes expressiveness and agreeability. Minimal responses serve these functions (Carli
1990).

Fishman (1978) builds on Sacks and others by noting that interaction is work,
with every remark or speaker turn being an attempt to interact and “for an attempt to
succeed, the other party must be willing to do further interactional work. That other
person has the power to turn an attempt into a conversation or to stop it dead” (Fishman
1978:91). Fishman says that interactional work is more problematic for women who tend
to work harder in interaction. Men, on the other hand, exert control over when and how
interaction will occur. Minimal responses are one way to show how this inequality
occurs. Both women and men use minimal responses. However, they tend to use them in
different ways. Fishman (1978) finds that while women insert minimal responses
throughout streams of talk, therefore indicating their participation, interest in the
interaction and speaker, and active listening, men use minimal responses at the end of a
speaker’s utterance merely to fill a turn at a point that needs filling. Men’s one-word
responses do not encourage the speaker to elaborate or continue speaking. Men’s uses of
delayed minimal responses in Fishman’s study (1978) discourage interaction.
Similarly, Zimmerman and West (1975) find that significant silences often follow delayed minimal responses. While one may be inclined to interpret all minimal responses as displays of active listening, these delayed minimal responses, as indicated by their power to ensue silence, are a standardized response that follows a sort of minimal listening (Zimmerman and West 1978:122). If active attention and encouragement for the current speaker to continue supports the speaker’s continuation of the utterance, then delaying the response may signal a lack of understanding or interest. Since delayed minimal responses serve to bring a topic to a close in the same manner as an interruption, both minimal responses and interruptions are a violation of the current speaker’s right to speak. As Zimmerman and West (1978) explain, “both retarded minimal responses and interruptions by male speakers interacting with females as an assertion of the right to control the topic of conversation reminiscent of adult-child conversations where in most instances the child has restricted rights to speak and be listened to” (p.124). The different uses of minimal responses, therefore, are not an indication of a natural quality that men and women possess, but rather one way in which women and men do gender in interaction.

In addition to the findings of many studies that women use more minimal responses than men (as opposed to delayed minimal responses), Coates (1989) adds that women’s use of minimal responses further demonstrates that women do more of the “interactional work” than men, as Fishman first noted. In her study of same-sex conversations with women, Coates (1989) finds that while it is true that minimal responses do characterize women’s speech, women do not always say “um hmm” or
“yeah” frequently, but rather refrain from using such utterances during an anecdote or summary, thus using minimal responses when they are appropriate. She concludes that women’s use of minimal responses show their sensitivity to interactional processes.

Several studies of minimal responses indicate that they have no consistent relationship to the power and dominance of the speakers, but rather that gender interacts with the power of the speaker. In a study of heterosexual couples, the level of asymmetry is measured by who has more decision making power within the relationship. Kollock, Blumstein, and Schwartz (1985) find that there is no significant relationship in the rate of minimal responses used by the less powerful and the more powerful person. Woods (1989), in a study of triads of colleagues of different occupational status, finds that women do not use more minimal responses when they are in the role of subordinate than when those same women are placed in a high status position. However, subordinate men use minimal responses more frequently than high-status position men do. In another study, one partner has more expertise at a task than the other has. Nonexperts use more minimal responses than experts do in single-sex dyads when a male expert is with a female non-expert. However, female experts use more minimal responses than their male, non-expert partners do (Aries 1996). Two other studies that examine dominance and the use of minimal responses find that women use more minimal responses than men do, but there is no difference in the use of minimal responses according to assessments of high and low dominance individuals (Aries 1996).

It is clear from these studies on minimal responses that any one linguistic form does not have a single function independent of contextual factors and gender interacts
with other variables. There is a certain ambiguity of linguistic strategies that can result in
the same linguistic form being an attempt to dominate a conversation while its use in
another context serves to establish rapport (Tannen 1994). This does not mean that the
function of minimal responses cannot be determined, but rather that the ways in which
women and men do gender within a certain context need to be examined more closely
and findings can likely not be generalized to other contexts. As these studies show,
minimal responses are more frequent in cooperative rather than competitive
conversations; they occur more in interaction-oriented conversations rather than narrative
portions of personal conversations; they carry different meanings based on their timing
and placement in conversations; and minimal responses do not seem to be consistently
associated with power or dominance (Aries 1996). Rather than minimal responses
always characterizing women’s speech and being a natural sex difference, both women
and men do gender in the context of different situations, accounting for the different
results of studies on minimal responses.

**Women and Men Speaking Time**

Similar to findings regarding minimal responses and the complex ways in which
gender interacts with other variables, the stereotype of women being over-talkative does
not hold in empirical studies and, in fact, men seem to dominate a disproportionate
amount of floor space, or speaking time (Swann 1989). For example, a study that
examines the separate effects of occupational status and gender on the organization of
conversations finds that men hold the floor longer than their subordinates do and women
hold the floor longer in high rather than low occupational positions compared to other women. However, male subordinates hold the floor for almost half of the total conversation time, speaking significantly longer than their female ‘bosses.’ Therefore, results show that while occupational status does affect floor holding, gender exerts a far stronger influence (Swann 1989). In another study of boys and girls in the classroom, results show that boys tend to dominate the classroom talk, but that “everyone is an accomplice in the tendency by boys to contribute more to classroom talk—girls too by, arguably, using the resources available in the interaction to contribute less” (Woods 1989:139). Although results show that males dominate speaking time, it is not because of a feature or style of male speech or a simple display of dominance. Rather, the boys, girls, and teachers are all doing gender appropriately and thus the likely patterns emerge within this context.

Like studies on minimal responses, whether or not men dominate conversations in speaking time varies across different contexts. In one study of university housing, women talk more than men do in groups from coed housing, but not in groups of single-sex housing (Askinas 1971). In another study on conversations between leaders and subordinates, neither the sex composition of the group nor gender has an effect on the amount that the participants talk, while the position of the speaker (leader or subordinate) has a highly significant effect on speaking time, with leaders talking more (Johnson 1994). No main gender differences in average number of words per remark are found in children when they are shown pictures and asked to talk about them (Cowan et al. 1967). Male college students talk longer than women in discussing personal problems and both
genders speak more with female than with male interviewers (Marlatt 1970). A study of married couples shows that in deciding how to spend a sum of money, fifty-two percent of the husbands talk most or more of the time, with the remaining forty-eight percent divided between equal amounts of talk and the wife talking more (Kenkel 1953). These studies serve to illustrate not that men simply exert their dominance on women through speaking more but that context is clearly important and it accounts for many of the gender differences found.

Minimal responses and speaking time are just two examples of speech forms that, on the one hand, show how interaction reproduces and reinforces gender inequality, and on the other hand, illustrate the complexity of gender as it interacts with other variables such as power. To conclude that men’s style of speech is an assertion of their dominance on women is premature. As Aries (1996) suggests, to fully understand gender differences in language, one must clearly analyze the magnitude of the differences, the meaning of the differences, the role of power and status in explaining those differences, how stereotypes shape the perceptions and evaluations of the speakers, and the differences within a specific context, such as within doctor-patient interactions.

“DOING GENDER” IN DOCTOR-PATIENT INTERACTIONS

Structured around one of the most basic values in any society, that of health and illness, i.e. life and death, doctor-patient communication is a fundamental feature of medical care. While expert, scientific knowledge held by the doctor is a crucial ingredient, “talk is certainly the fundamental instrument by which the doctor-patient
relationship is crafted and by which therapeutic goals are achieved” (Roter and Hall 2006:4). Therefore, to examine the micro aspects of doctor-patient communication is extremely important in assessing outcomes of doctor-patient interactions. The quality of doctor-patient communication can have profound effects on health outcomes. For example, different aspects of doctor-patient communication have an influence on patients’ behavior and health, such as patient satisfaction, adherence to treatment regimens, coping with diseases, quality of life, and state of health (Buller and Buller 1985; Molleman, Krabendam and Annyas 1984; Roter and Hall 2006; Smith, Polis and Hadac 1981; Squier 1990). Since the outcomes of doctor-patient communication are critical to health and illness, it is important to determine what aspects of interaction are producing quality communication. Furthermore, as with outcomes of healthcare:

whenever people face issues of allocation - who is to do what, get what, plan or execute action, direct or be directed, incumbency in significant categories such as “female” and “male” seems to become pointedly relevant (West and Zimmerman 1987:143).

Gender becomes especially salient in doctor-patient relationships when the physician is a woman. As previously discussed, women and men have different communication patterns and communication within the doctor-patient relationship has profound outcomes. It is therefore of interest to examine how gender affects doctor-patient interaction, especially when a woman is in a position traditionally reserved for men within the division of labor in society. The mere need for the qualifier “woman” doctor indicates that gender is very salient when the doctor is a woman. In one ethnographic study of women surgeons, the researcher never once witnessed a male
surgeon being referred to as a “male surgeon” (Cassell 1998). This is for an obvious reason: It is men who dominate medicine (especially surgery) and therefore do not require a qualifying description of their gender.

THE ENVIRONMENT IN WHICH WOMEN PHYSICIANS WORK

Before I turn to how women and men do gender in doctor-patient interactions, it is important to first discuss the environment in which women physicians work because it is directly related to how they communicate with and are perceived by patients. Once a profession dominated by men, women are increasingly entering medicine. Most notably, female applicants to medical school outnumbered males for the first time in the 2003-2004 academic year and almost half of the entering class in 2004 was female (Roter and Hall 2006). By 2020, estimates claim that women will comprise fifty-seven percent of medical school applicants. The increasing number of women entering medicine is a trend not only in the United States, but also in the Netherlands, the U.K, Australia, and Israel, among other countries (Roter and Hall 2006). Women will account for the entire growth in medical school applicants in the United States over the next two decades, likely replacing both white male medical students and medical students of color (Roter and Hall 2006). Clearly these are different patterns than in the past when males completely dominated the profession of medicine.

While these trends seem promising, they really only indicate equality in the sex composition of medical school, not gender equality. Women physicians continue to constitute an inferior position in the division of labor within medicine. Women
physicians have lower salaries and are less likely to be self-employed; women are underrepresented in positions of authority in medical organizations and academia; and they are more likely to work in health maintenance organizations (Boulis and Jacobs 2003). Both men physicians’ incomes per hour and per visit are significantly higher than women physicians’ for all stages of their career, with men physicians having an average net yearly income of $118,000 and women physicians earning an average of $73,000 (Martin, Arnold, and Parker 1988). One analysis shows that between twelve and twenty-four percent of the income difference remains after controlling for practice characteristics (Keher 1976).

Women physicians traditionally have, and continue to, enter into the lowest paying medical specialties, as they are disproportionately represented in pediatrics, internal medicine, family practice, and obstetrics-gynecology (Baker 1996; Collins, Schoen and Khoransanizadeh 1997; Roter and Hall 2006). While research links many personality traits to selection into a given specialty, it is certainly no coincidence that women consistently choose specialties that are most conducive to doing gender appropriately. Thus, women physicians are more likely to choose specialties that lack prestige, as they are described as “the housewives of the profession, that is, those who take the responsibility for the profession’s grunt work in their careers as general internists” (Levinson and Lurie 2004, as quoted in Roter and Hall 2006:97).

There are several explanations as to why women choose lower paying and less prestigious specialties. One explanation is the gender discrimination and sexual harassment in medical school. In one study, ten percent of men and twenty-percent of
women report experiencing gender discrimination and harassment during their selection of a residency program. Additionally, forty-five percent of women and sixteen percent of men indicate that this influenced their choice of a specialty (Roter and Hall 2006).

Women experience higher levels of sexual discrimination and harassment than men in every specialty except for obstetrics-gynecology, possibly accounting for the dramatic decline in men entering the specialty, with only two percent of male medical students choosing obstetrics-gynecology in 1990 (Roter and Hall 2006).

Another indication that the increasingly equal sex composition of the medical profession has not led to gender equality is that women physicians tend to work part-time or have reduced schedules (Roter and Hall 2006). The average number of weekly office visits is thirty-five percent times greater for men physicians than for women physicians, in part due to the greater likelihood that women physicians will work part-time (Mechanic, McAlpine and Rosenthal 2001). Another example shows female pediatrics residents are about five times more likely than male physicians to accept part-time positions (Roter and Hall 2006). Part-time physicians work an estimated thirty-two hours a week compared to the average sixty hours a week that full-time physicians work. The career paths of women physicians are in part due to the excessive demands of family life. The gendered division of labor in medicine, such as specializations and part-time work, reflects the gendered division of labor in the institution of family. Women physicians face difficult decisions in balancing the constraints of both gendered divisions of labor.

The environment in which physicians work as described above directly relates to how women and men communicate in doctor-patient interactions, linking institutional
arrangements of the division of labor in medicine to the production of gender at the level of interaction. For example, how many patients physicians see and the resulting time pressure they do or do not feel, may affect whether they are able to listen to the patient or have time to involve the patient in decision making. Because women physicians work part time and see fewer patients per day than men physicians, they may have more time to engage in more effective communication behaviors, such as encouraging patients to talk through minimal responses or open-ended questions. Another example is older patients who may have never had a woman physician before. Several studies show that older patients prefer physicians to have a more authoritative style, as opposed to a patient-centered orientation (Krupat et al. 2001; Swenson et al. 2004). Since a patient-centered approach is associated with women physicians (Krupat et al. 2001; Swenson et al. 2004), older patients may have different expectations of or react to women physicians differently than to the male physicians older patients dealt with for years before.

Selection into part-time work because of the gendered division of labor of family and older patients’ dis-preference for communication behaviors associated with women physicians because of the traditionally paternalistic and male dominated profession of medicine are just two examples of how structural conditions might affect communication behaviors.

Structural gender inequality must be continuously reinforced in interaction in order to sustain itself, which is why communication matters in sustaining the unequal

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2 Older patients’ preferences for an authoritative style being due to the profession being traditionally paternalistic and dominated by men is speculative. While the literature consistently shows that older patients are more likely to prefer an authoritative communication style as opposed to a patient-centered approach, these studies do not measure the reason for their attitudes.
circumstances women physicians work in. These conditions provide the resources for women and men to be accountable to do gender. Women physicians in particular need to continually accomplish gender in doctor-patient interactions and manage the “essential” nature of their sex category, female. Despite the well-known findings of Kanter (1977a; 1977b) claiming that work situation has greater salience than gender and that as the number of women and men becomes more balanced gender differences are minimized, it is clear that when women become physicians they do not automatically enjoy the same economic benefits that men do.

DO WOMEN AND MEN PHYSICIANS COMMUNICATE DIFFERENTLY?

Many studies generated a large body of literature on how women physicians communicate with patients and whether it is different from the way in which men physicians communicate with their patients. Although results are mixed, several studies indicate that women physicians are more humanistic and have better communication skills than men (Weisman and Teitelbaum 1985; West 1993). According to these studies, women physicians hold more egalitarian attitudes, show more interest in interpersonal features of patient care, produce more patient satisfaction, are more empathetic, and patients of women physicians are less likely to pursue malpractice claims (Roter and Hall 2006; Weisman and Teitelbaum; West 1993). This compilation of studies suggests that women physicians are more warm, responsive, and empathetic than men physicians in doctor-patient interactions.
On the other hand, some studies show that women physicians are no more empathetic or caring than men physicians. Studies that report women physicians are more empathetic could be due more to patients’ expectations of and attitudes toward women physicians. This is opposed to women physicians actually exhibiting more nurturing, empathetic care than men physicians exhibit. If patients seek out women physicians because of expectations of a nurturing and empathetic nature, women physicians are likely to respond in ways that will please those patients and encourage them to return for future medical needs (Lorber 1985). If patients expect greater empathy and affect in women physicians, patients may respond with greater self-expression and symptom disclosure regardless of women’s actual behaviors or orientations. Doctor-patient interactions, in general and in regards to gender, are likely mutually reinforcing in that patients’ expectations and corresponding behaviors then results in physicians adapting their communication to that of the patient’s. Nonetheless, as with women and men in general, distinct communication differences exist between women and men physicians. Gender differences emerging in doctor-patient interactions can be expected if one assumes that medical socialization does not totally obliterate gender differences (Weisman and Teitelbaum 1989).

**Questions, Information Giving, Minimal Responses, and Non-Verbal Communication**

Several studies indicate that women physicians ask more questions than men physicians do. Additionally, the type of questions asked seems to differ for women and men physicians. Women physicians ask more psychosocial questions, more biomedical
questions, more closed-ended questions, and more open-ended questions than men physicians ask (Hall et al. 1994; Roter, Lipkin and Korsgaard 1991; Shapiro 1990; Suanders and Kindy 1993). At least one study shows that patients ask more questions of women physicians than they do of men physicians (Roter et al. 1991).

Many studies indicate that men physicians provide more biomedical information/discussion with their patients (Van den Brink-Muinen 1996; Van den Brink-Muinen, Bensing and Kerssens 1998) and women physicians provide more psychosocial information/discussion with their patients (Bertakis et al. 1995; Charon, Greene and Adelman 1994; Saunders and Kindey 1993; Shapiro 1990). Similarly, patients of women physicians provide both more biomedical and psychosocial information than patients of men physicians provide (Charon et al. 1994; Roter et al. 1991; Van den Brink-Muinen 1996).

Women physicians use more minimal responses such as “hmm-mm,” “yeah,” and “OK” than men physicians use. Women physicians are more likely to use minimal responses with women patients than with men patients (Hall et al. 1994). This is important given the finding that minimal responses in medical encounters serve to produce open-ended patient questions that include new topics and concerns (Beckman and Frankel 1984). While patients are easily diverted from their thoughts and are generally deferent to physicians, physicians’ minimal responses provide an opportunity for patients to express their reason for the visit and their full agenda. Since women physicians use more minimal responses, minimal responses are likely to be associated with greater patient questions and information giving with women physicians. Women
physicians also demonstrate higher levels of nonverbal communication, considered to be positive behaviors, such as smiling, head nods, friendly voice tone, and relaxed hands (Hall et al. 1994; Shapiro 1990). Additionally, patients of women physicians exhibit more positive nonverbal communication than patients of men physicians exhibit (Van den Brink Muinen et al. 1998). These studies on questions, information giving, and nonverbal communication together suggest that women physicians are living up to their sex role expectations in that they appear to follow the same patterns of the non-medical communication literature. The above studies provide evidence that women physicians are more nurturing, empathetic, and have better communication skills than their male counterparts. When taken together, the evidence suggests that women physicians create a more patient-centered, partnership building, and more symmetrical relationship. It is likely that patients bring expectations to the doctor-patient encounter of women physicians fulfilling these roles. Moreover, women physicians and their patients are likely to mutually reinforce these behaviors.

*Interruptions*

An inferred lack of authority or expertise by patients may offset whatever advantage the woman physician gains in her ‘better’ communication skills (Roter and Hall 2006). One way this is empirically measured is through the use of interruptions, interpreted to be a form of dominance in the literature. In an influential study by West (1984), physicians interrupt patients more frequently than the reverse, except when the

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3 ‘Better’ is in quotes here because I want to emphasize that I do not claim that women physicians have better communication skills than men physicians, but that the literature consistently concludes that they do.
physician is a woman, in which patients interrupt as much or more. West’s (1984a; 1984b) findings based on this contradiction have spurred a great amount of debate concerning whether physicians do indeed interrupt patients more and if the pattern holds when the physician is a woman. Researchers also challenge whether interruptions are in fact a form of dominance.

The form of the interruption affects whether it is a display of dominance. Since West’s provocative finding about interruptions when the doctor is a “lady,” researchers refined the definition of interruptions into “successful interruptions,” which occur when the other speaker does not finish the utterance and the interrupter is able to finish the utterance. “Partially successful” interruptions occur when the interrupter allows the other speaker to finish the utterance but still manages to complete the utterance as well. Another category is “unsuccessful interruptions” in which the interrupter does not cause the current speaker to finish the utterance nor does the interrupter complete the utterance. A transition error in timing is not an interruption but rather defines another category of "overlaps" (Irish and Hall 1995). Contrary to West’s findings, when the coding of interruptions includes more specific functions and their consequences in speech, patients tend to interrupt physicians more than the reverse and there are no significant gender patterns. Furthermore, physicians interrupt more with questions than with statements and, arguably, questions are less reflective of dominance than statements (Irish and Hall 1995). Other researchers similarly developed more complex coding systems of interruptions and challenged West’s notion that interruptions are always a form of dominance despite the form, content, and context in which they occur (Dindia 1987;
Tannen 1994). Whether or not gender or the status of physician is more salient in doctor-patient interactions as measured by interruptions remains inconclusive.

**Length of Visit**

Research consistently shows that women physicians conduct longer visits than men physicians do (Charon et al. 1994; Roter et al. 1991; Roter and Hall 2006). Data from the National Ambulatory Medical Care Survey indicate that visits to women physicians are 1.2 minutes longer on average than men physicians’ visits (Mechanic et al. 2001). While one or two minutes may not seem like a lot, in a medical encounter that is approximately seventeen minutes long, it can be of great importance for medical outcomes (Mechanic et al. 2001). Good communication is fundamental to the effective doctor-patient interaction and rushed visits can reduce physicians’ ability to provide quality care. This is especially true if they result in missed diagnoses or other medical mistakes. Additionally, increased time spent with patients is associated with increased patient satisfaction and a decreased likelihood of being sued (Boulis and Jacobs 2003). More time spent with patients is not empirically linked to better quality care per se, but it is associated with greater satisfaction, which, in turn, is associated with greater patient adherence to medical regimens (Weisman and Teitelbaum 1995). Other outcomes associated with shorter medical visits include less problem identification, fewer preventative services, and less discussion of psychosocial issues (Robinson and Roter 1999; Roter and Hall 2006). Most patients are satisfied with the time they receive for
medical visits, but patients of longer encounters report *more* satisfaction (Roter and Hall 2006).

It is also interesting to note the finding that despite the relatively new pressures of working within a managed care system, the average length of the physician office visit has actually increased between 1989 and 1998. Mechanic (2001) explains this counterintuitive finding of increased length of visit by noting that there are greater pressures on physicians to provide a larger array of services to patients, such as preventative services. Mechanic (2001) claims this makes physicians *feel* as if they are more time pressured. Nonetheless, the significance of a few minutes in an otherwise rushed medical encounter should not be underestimated. Since women physicians spend more time with their patients than do men physicians, the question then becomes specifically what elements of the medical encounter can account for the longer overall length. It is equally important to consider what elements of the encounter are left out when the encounter is rushed or limited.

This pattern of women physicians conducting longer office visits than men physicians conduct may relate to the conditions in which women physicians work. Women physicians see fewer patients per unit of time in average and are more likely to work part-time, perhaps allowing for more time with their patients. That minute longer that woman physicians spend with their patients may be when psychosocial issues are discussed and patients’ perceptions of the physician as empathetic and caring is formed. A one or two minute increase per visit is also significant because it places a burden on the woman physician as it can put her an hour behind her male counterpart at the end of a day
(Roter and Hall 2006). The duration of a medical visit varies depending on a whole range of factors other than physician or patient gender. However, the consistent finding that women physicians spend more time with patients, even if only by a few minutes, is noteworthy and deserving of more empirical attention. Exactly what is making their encounters longer and if they are factors that could have significant effects on medical outcomes needs to be identified.

**Doctor and Patient Talk Time**

One way to determine what specifically is happening during the medical encounter that has an effect on the overall length of the visit is to examine the amount that each participant speaks in the encounter. This analysis can also help assess whether women or men physicians are more dominant in doctor-patient interactions. Physicians talk more than patients do, averaging around sixty percent of the talk. This is for obvious reasons and is not within itself a form of dominance (Roter and Hall 2006). The disproportionate amount of time that physicians talk is a reflection of the inherent asymmetry in doctor-patient interactions, as Parsons (1951) was one of the first to note. With the physician having expert knowledge and the patient being situationally dependent on the physician, the physician will expectedly talk more than the patient will. Obviously, the patient needs to speak enough to provide an adequate amount of information about the symptoms so that the physician can make an accurate diagnosis and present a management plan. However, generally speaking, the physician is in control of the interaction. Traditionally, the medical encounter follows the format of chief
complaint, present illness, past history, family history, social history, systems review, physical examination, other investigations, diagnosis, and plan (Waitzkin 1989). Medical students are taught to cover each of these phases and they are readily found in any textbook on medical interviewing (Roter and Hall 2006). Within each of these phases, the physician gathers information and, “once hypothesis testing has begun, it is difficult for a patient to get a word in edgewise” (Beckman and Frankel 1984:695).

With that said, of interest here is not whether physicians talk more than patients, but whether women physicians talk a greater or less proportion of the encounter than men physicians talk. Also, whether patients talk more of a proportion of the encounter to women physicians than to men physicians sheds light on the level of symmetry in the encounter. If men physicians speak more than women physicians, as with interruptions, it is not necessarily a form of dominance. However, differences between the genders in talk time can indicate if women physicians are engaging in more patient-centered health care, as the proportion of physician to patient talk moves closer to symmetry. In one study, women physicians make statistically significant more utterances than men physicians do and women patients speak more utterances to women physicians than they do to men physicians (Hall et al. 1994). A symmetrical proportion of speech occurs with women physicians with women patients. Men physicians with men patients, on the other hand, show a larger proportion of physician talk. The woman-man and man-woman dyads show no physician gender effect on proportion of talk. This indicates that it depends on the gender composition of the dyad and not just physician gender (Hall et al. 1994). Another study shows that, during the history phase of the encounter, women
physicians speak forty percent more than men physicians and patients of women physicians talk fifty-eight percent more than to men physicians (Roter et al. 1991). Three other studies confirm these findings that patients talk more to women physicians than they do to men physicians (Irish and Hall 1995; Roter et al. 1999; Van den Brink-Muinen 1998).

**Gender Concordance**

Evidence suggests that same-gender dyads, rather than physician or patient gender alone, strengthens the effects on communication such as the speech forms and behaviors described above. Medical encounters that are gender concordant tend to be longer and contain more positive nonverbal behaviors such as head nods, eye contact, and smiling. They also have higher levels of psychosocial discussion and emotional exchange than non-gender concordant encounters (Franks and Bertakis 2003; Roter and Hall 2004). In another study, of the four possible gender dyad compositions, women physicians with men patients use the least amount of technical language, smile the most, and are most anxious throughout the encounter (Hall et al. 1994). Men and women disclose more symptoms to a physician of the same gender (Young 1979). Women physicians may be “doing gender” in a way that purposely downplays their status as a physician in order to be more accepted as a female because they know they will not be well received by their patients if they do not. While gender concordance was not of most importance in the study just described, the results still highlight the importance of considering the gender composition of the dyad in doctor-patient interactions.
Despite the possible communication benefits of gender concordance between physician and patient, it is interesting that both women and men prefer men physicians (when the presenting problem is not gender-specific) although women patients are more likely to choose women physicians than men patients are (Schmittidiel et al. 2000). One study reports that eighty-four percent of men and seventy-five percent of women state a preference for a male doctor as their regular physician (Weisman and Teitelbaum 1985). With all the ‘better’ communication skills of women physicians and no gender difference in physicians’ scientific or technical knowledge (Arnold and Martin 1988), it is perplexing why patients, especially women, prefer men physicians. This suggests that no matter how much women physicians do gender appropriately and even if the result is better communication and positive medical outcomes, it may not be enough to please patients. Female physicians will still be evaluated based on their sex category that holds less prestige, power, and authority than males.

Patient Satisfaction and High Expectation.

The literature on patient satisfaction is complex and it is difficult to separate the effects of any given factor such as gender. In the past, patients’ perspectives were not highly regarded by physicians or researchers (Roter and Hall 2006). However, recent studies suggest that patients are well equipped to evaluate both physicians’ technical skills and their interpersonal skills (Roter and Hall 2006). Moreover, despite the criteria that patients use to evaluate physicians, higher satisfaction is positively associated with greater interview length. It is also associated with greater adherence to prescribed
medical regimens and less likelihood of malpractice claims being pursued (Beckman et al. 1994; Ditto and Hilton 1990; Ong et al. 1995). Patients are generally satisfied with their own physicians, although they express low satisfaction with the field of medicine as a system (Roter and Hall 2006). Since most patients are generally satisfied with their physician, researchers have tried to determine the specific factors that influence patient satisfaction, rather than simply assessing global satisfaction. In regards to specific communication behaviors, satisfaction increases when:

- physicians spend more time with their patients, show more nonverbal interest, lean forward more, engage in more nods and gestures, use more eye contact, establish a closer interpersonal distance, read the medical chart less, treat patients in a more partner-like manner, use more positively toned words (such as statements of agreement), use fewer negative words (such as criticisms), and engage in more social conversation (such as greetings and nonmedical chitchat (Roter and Hall 2006:149).

Increased satisfaction also relates to less physician dominance, whether measured through the ratio of physician to patient talk or in patients’ ratings of physician dominance (Bertakis, Roter and Putman 1991; Buller and Buller 1985). The communication behaviors that are associated with increased satisfaction are those that are also associated with women physicians. However, studies directly relating physician gender to satisfaction are mixed, with some studies showing increased satisfaction (Bertakis, Franks and Azari 2003; Roter et al. 1999), others showing the opposite (Hall et al. 1994; Ross, Mirowsky and Duff 1982), and then others showing increased satisfaction with women physicians when there is gender concordance between physician and patient (Comstock et al. 1982).
These mixed findings suggest that there are raised expectations for women physicians according to their sex category of female and patients’ satisfaction may not be a reflection of women physicians’ actual communication behaviors. Several studies support this theory. One study shows that patients have less satisfaction when they choose a woman physician because she is a woman, as opposed to an HMO who assigned patients to a physician or those who did not choose their physician based on gender (Schmittdiel et al. 2000). There may be different expectations for women and men physicians. When patients choose their physicians based on these expectations, it may be difficult for women physicians to completely fulfill them, resulting in less satisfaction. Another study shows similar results that women physicians may have a narrower bandwidth of acceptable communication behavior before patients become less satisfied. Patients permit men physicians to be either aggressive or affiliative in their communication, while women physicians may only be affiliative (Burgoon, Birk and Hall 1991). Even though women physicians use the communication behaviors that patients value and that increase their satisfaction generally, good performance by women physicians may not be enough to satisfy patients’ high expectations of females.

_Power, Status, and Gender in Doctor-Patient Interactions_

As women and men struggle to do gender in doctor-patient interactions, they are accountable for their sex category of female or male. The patterns of communication by gender in the lay world do not necessarily hold for doctor-patient interactions, as evidenced by the above literature review of communication behaviors. When a woman is
in the position of physician, she is in a unique circumstance of facing evaluation in terms of normative conceptions of female and of physician. These involve conflicting expectations in terms of status and power. While is clear that gender is especially salient in doctor-patient interactions when the physician is a woman, it is not clear whether that salience takes precedence over the salience of the status of physician. This is not an easy question to address, especially given it is not only physicians who do gender, but also patients. The woman physician cannot simply choose to act as a woman and not as a female without facing accountability by her patients who will be quick to steer the woman physician back to normative conceptions of gender if she diverges.

The current study will examine how women and men do gender in doctor-patient interactions and if women and men are doing gender appropriately, as stereotypes would predict. As shown in the above literature review, gender differences manifest in communication patterns that do not always reflect a simple display of dominance or deference. Because gender is a complex phenomenon that explanations such as role theory cannot adequately address, “doing gender” is the best framework in which to interpret varying communication behaviors across contexts because differences in communication between women and men are not due to essentialist natures of the two sexes. Rather, gender, or gender differences, is continuously created in interaction, while at the same gender structures interaction. One way to analyze how women and men do gender is through the micro aspects of linguistics. Minimal responses, the amount women and men speak within an interaction, and question asking provide empirical indicators that, although not exhaustive, provide a set of communication behaviors that
taken together can show how women and men do gender. It is especially important to examine how women and men are doing gender in the specific context of doctor-patient interactions because of the overall importance of doctor-patients interactions in society. Doctor-patient interactions are also of special interest here because of the unique salience of gender when the physician is a woman. The woman physician holds one position that has a relatively low status, that of female, and another one that holds a high status, that of physician. The limitations of West’s (1984) study, including a small sample size of twenty-one dyads and a limited operationalization of interruptions criticized for not indicating dominance, calls for further analysis on how the status of physician and the status of woman manifest in doctor-patient interactions. It is unknown whether women physicians display communication behaviors that are consistent with their low or high status. Especially given the relatively recent influx of women into medicine, the effect of gender on specific communication behaviors is inconclusive. More research, such as the current study, will help to address the broad research question of how does gender affect doctor-patient communication? I will now turn to specific hypotheses derived from the literature review above on both women and men generally and within doctor-patient interactions.
CHAPTER III

HYPOTHESES

Six hypotheses will be tested to assess how women and men do gender in doctor-patient interactions. The length of the encounter, the amount that the physician and patient speak during the encounter, the amount of physician minimal responses, and the amount of physician questions are all indications of whether women and men are doing gender appropriately as would be predicted by the literature on communication. I will measure these variables and test the hypotheses to examine how they vary by gender.

\( H_1: \) The length of the medical encounter will vary with the gender composition of the physician-patient dyad, with the length of the encounter being longest when there is gender concordance with women.

Hypothesis 1 supports the literature that consistently shows that women physicians conduct longer office visits, especially with women patients. According to the literature, length of visit can have a significant impact on patient satisfaction and adherence to medical regimens. A test of this hypothesis will shed light on whether physician gender or physician-patient gender concordance is a better predictor of length of visit.

\( H_2: \) The ratio of physician talk to patient talk will vary with the gender composition of the physician-patient dyad, with the most symmetrical ratio occurring when there is gender concordance with women.
Hypothesis 2 will examine whether the level of symmetry in the encounter, as measured by the ratio of physician to patient talk, varies by the gender composition of the dyad, as the literature suggests it does. Additionally, it will show whether it is physician gender or the mutually reinforcing behaviors of gender concordant pairs that is a better predictor of the ratio of physician to patient talk time.

\( H_3: \) The frequency of minimal responses during patient talk will vary with the gender composition of the physician-patient dyad, with the greatest amount occurring when there is gender concordance with women.

Hypothesis 3 will indicate whether women physicians exhibit more partnership building communication behaviors than men physicians do, as measured through physicians’ minimal responses during patient talk. According to the literature, these minimal responses encourage elaboration of patient talk and signal listening and interest, characteristics associated with women’s communication. This hypothesis will also test if more collaborative, symmetrical communication behaviors are more frequent with gender concordant physician-patient dyads.

\( H_4: \) The frequency of delayed minimal responses will vary with physician gender, with the most amount occurring by men physicians.

\( H_{4b}: \) The amount of minimal responses during patient talk will be correlated with longer overall length of the encounter and the amount of delayed minimal responses will be correlated with shorter overall length of the encounter.
Hypothesis 4a will test whether male physicians use more delayed minimal responses, as the literature says they indicate a sort of minimal listening with a standardized response that does not encourage continued patient talk. Furthermore, hypothesis 4b will test if delayed minimal responses do indeed discourage talk, as studies suggest. If minimal responses during patient talk actually encourage elaboration, it should result in a longer encounter.

_H5: The total amount of open-ended questions will correlate with physicians’ minimal responses during patient talk and the amount of closed-ended questions will correlate with delayed minimal responses._

Since it is difficult to determine the intent or motivation of physicians’ minimal responses, testing whether minimal responses occur simultaneously with another linguistic form that supposedly facilitates patient talk is useful. This hypothesis supports the literature that says the function of minimal responses is to encourage elaboration of patient talk. This is because the function of open-ended questions also serves this function, yet the literature on open-ended questions does not contest their function as it does with minimal responses. Hypothesis 5 will add support to the claim that minimal responses during patient talk encourage further talk and delayed minimal responses discourage further patient talk. If these two linguistic forms, minimal responses during patient talk and open-ended questions, occur simultaneously, it is further evidence that the physician is using partnership building communication.
Hypothesis 6 is based on findings that patients do the majority of their talking during the history phase and that this is the portion of the medical encounter that most determines whether an accurate diagnosis and management plan will be identified by the physician (Roter and Hall 2006). Physicians gather data about the physician mostly during this phase and it consists primarily of closed-ended questions for all gender-dyad compositions. For this reason, a value judgment (dominance, discouraging patient talk, etc.) cannot be placed on closed-ended questions during the history phase because they are expected, viewed by physicians as the best way to gather relevant information on the patient, and the practice is reinforced in medical school. While the use of open-ended questions is far rarer, they provoke substantially more medically relevant disclosure by the patient (Roter and Hall 1987). This is especially interesting for studies using standardized patients where the researcher is aware of the information patients are or are not revealing and how it relates to physicians’ questions. For example, I viewed several interactions with standardized patients where I knew the patient had taken a long driving trip, which is a major risk factor for pulmonary embolisms (in addition to smoking cigarettes and taking oral contraceptives, both of which applied to this SP). However, there were several encounters where the physician did not ask a question that would prompt the patient to disclose this information. Thus, the physician ordered several unnecessary tests to determine why the patient had chest pain (this does not deny that
close-ended questions could elicit this information as well). Given the significance of asking open-ended questions, hypothesis 6 tests the association of their frequency and how they vary by gender. I perform another analysis for all phases of the interview to add support to the findings concerning questions during the history phase. I divide the frequency of open-ended questions separately for the history, physical exam, and management phases of the encounter. I analyze open-ended questions for the history phase alone because this is the phase of the interview in which the physician is most attempting to elicit information from the patient in the form of questions.

Taken together, testing these hypotheses will indicate whether women physicians do gender appropriately and exhibit more partnership building communication behaviors in the context of doctor-patient interactions. Measuring how these variables vary by gender: the length of the encounter, how much the physician and patient speak during the encounter, how much facilitating and non-facilitating minimal responses physicians use, and how many open and closed ended questions physicians use will show how women and men do gender in doctor-patient interactions. Furthermore, these analyses will show whether it is physician gender alone, patient gender, or gender concordance that is the best predictor of communication behaviors. If women and men physicians are doing gender appropriately, they will be living up to the normative expectations of their sex category for which they are held accountable by their patients.
CHAPTER IV

DATA AND METHODS

SAMPLE

The sample of 102 medical student-standardized patient (SP) interactions observed for this study are from the videotape archives of a medical school in the Midwestern United States, Northeastern Ohio Universities Colleges of Medicine and Pharmacy (NEOUCOM). I solicited consent from 100 fourth year medical students to view their tapes made the previous academic year. I received consent from 32 medical students and used five of their eight interactions. The three interactions not used are not valid for this analysis because they are triads instead of dyads, consisting of an older couple and a parent and child; and the third is not of use because the time limit is different from the other interactions (15 minutes rather than 18 minutes). These three interactions are therefore not useful for the conversational analysis techniques used in this study. This produces a total sample of 102 interactions for this analysis. As seen in Table 1, the sample of 102 interactions, including repeated medical student and SP observations, consists of 55.9% female medical students and 44.1% male medical students; 66.7% female patients and 33.3% male patients. Eighty percent of the medical students are white and 94% of the patients are white.
The tapes are from the students’ third year clinical skills assessment at the Wasson Center for Clinical Skills at NEOUCOM. In their third year of medical school, each student participates in the videotaping of eight interactions with SPs for the purposes of education and evaluation of the students. Both the medical students and the SPs sign an agreement consenting to the videotapes being used for educational purposes at the Wasson Center. [See Appendix 1]. Because the consent forms did not cover using the tapes for research purposes, I had to obtain additional consent from the medical students to use their recordings for the purposes of my study. [See Appendix 2]

The Wasson Center includes teaching and testing skills of interviewing, performing physical exams, disease diagnosis and management, and communication skills. Students interview SPs in a technologically advanced clinical performance site. The Wasson Center consists of sixteen fully equipped exam rooms, a simulation lab, digital video recording and secure web-stream video capabilities. The students and SPs are videotaped in exam rooms that include the standard equipment of actual medical offices. Faculty and students are able to view and access student performance in real time via one-way observation windows.

The Wasson Center recruits SPs from the general public and the center trains the SPs to portray a person with an illness or medical condition. SP training includes case review, role-playing, and question and answer sessions. Each medical student participates in interviewing eight SPs, with different conditions, some of which require a physical exam. There are several SPs that represent each condition, all representing first visits to this particular medical student’s office. Five of the eight conditions were viewed
for this study, including ‘chest pain,’ ‘panic attacks,’ ‘asthma,’ ‘gallstones,’ and ‘routine physical of a woman approaching menopause.’ The SPs are presented with extensive vignettes to study that include current symptoms, medical history, family medical history, occupation, lifestyle behaviors such as smoking, and other miscellaneous factors such as needing to get back to work or being hesitant to take medication.

The structure of the medical student-SP interview is as follows: all the interviews are twenty-five minutes long. There is a verbal announcement telling the medical student to enter the exam room. There is then a verbal announcement telling the medical student there is five minutes remaining. The interview is cut-off after this 18 minute period regardless of whether the medical student is finished, but the 102 interactions viewed for this study all finished before the eighteen minute time limit, as it creates an artificial time that cannot be included with measures that are said to affect or be affected by time. After the medical student-SP interview, there is then a three minute question and answer period in which an observing physician evaluates the student on medical interviewing, physical exam, disease diagnosis and management, and communication skills. There is an additional four minutes for the SP and the physician to give feedback to the medical student (for which the SPs received training to do so objectively).
Table 1: Descriptive Statistics of Analytic Sample

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<tbody>
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<td>SD</td>
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<tr>
<td>Physician</td>
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<tr>
<td>Physician talk time (minutes)</td>
<td>7.51</td>
<td>1.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician talk time as proportion of total</td>
<td>.49</td>
<td>.10</td>
<td></td>
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<tr>
<td>Patient talk time (minutes)</td>
<td>2.58</td>
<td>1.12</td>
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<tr>
<td>Patient talk time as proportion of total</td>
<td>.19</td>
<td>.08</td>
<td></td>
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<tr>
<td>Ratio of physician to patient talk</td>
<td>3.15</td>
<td>1.53</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Ratio of silence to total time</td>
<td>.32</td>
<td>.09</td>
<td></td>
<td></td>
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<tr>
<td>Minimal Responses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal responses during patient talk</td>
<td>12.58</td>
<td>9.74</td>
<td>11.41</td>
<td>8.59</td>
<td>12.58</td>
<td>9.74</td>
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<tr>
<td>History phase</td>
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<td>7.52</td>
<td></td>
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<td>7.52</td>
</tr>
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<td>.70</td>
<td></td>
<td></td>
<td>.44</td>
<td>.70</td>
</tr>
<tr>
<td>Management Phase</td>
<td>1.19</td>
<td>2.06</td>
<td></td>
<td></td>
<td>1.19</td>
<td>2.06</td>
</tr>
<tr>
<td>Delayed minimal responses</td>
<td>46.37</td>
<td>17.40</td>
<td>46.22</td>
<td>15.28</td>
<td>46.37</td>
<td>17.40</td>
</tr>
<tr>
<td>History phase</td>
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<td>14.33</td>
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<td>14.33</td>
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<td></td>
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<td>4.30</td>
<td>3.17</td>
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<tr>
<td>Management Phase</td>
<td>3.81</td>
<td>3.95</td>
<td></td>
<td></td>
<td>3.81</td>
<td>3.95</td>
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<td></td>
<td></td>
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<td></td>
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<tr>
<td>History phase</td>
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<td>16.86</td>
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<td>49.81</td>
<td>16.86</td>
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<td>5.34</td>
<td></td>
<td></td>
<td>7.93</td>
<td>5.34</td>
</tr>
<tr>
<td>Management Phase</td>
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<td>5.22</td>
<td></td>
<td></td>
<td>6.13</td>
<td>5.22</td>
</tr>
<tr>
<td>Open-Ended Questions</td>
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<td>3.33</td>
<td></td>
<td></td>
<td>6.78</td>
<td>3.33</td>
</tr>
<tr>
<td>History Phase</td>
<td>5.19</td>
<td>3.17</td>
<td></td>
<td></td>
<td>5.19</td>
<td>3.17</td>
</tr>
<tr>
<td>Physical Exam (n=27)</td>
<td>.15</td>
<td>.46</td>
<td></td>
<td></td>
<td>.15</td>
<td>.46</td>
</tr>
<tr>
<td>Management Phase</td>
<td>1.47</td>
<td>.95</td>
<td></td>
<td></td>
<td>1.47</td>
<td>.95</td>
</tr>
<tr>
<td>Total Questions</td>
<td>69.41</td>
<td>18.09</td>
<td></td>
<td></td>
<td>69.41</td>
<td>18.09</td>
</tr>
</tbody>
</table>

*The descriptives in this table for the samples of 102 and 59 contain repeated observations.*
MEASUREMENT

Sociodemographic Characteristics and Other Measures

Table 1 reports descriptive statistics. Physician and patient sex, gender concordance between physician and patient, and physician and patient race (white or nonwhite) is measured. I do not measure Age because all the medical students are relatively the same age in their third year of medical school. The age of the patient is captured through the vignettes that the SPs portray and not the person’s actual age (for example, the SPs who play ‘gallstones’ are always fifty-two years old). The nature of the condition that the SP presents is very apparent through viewing the interaction and is coded for chest pain, panic attacks, asthma, gallstones, and routine physical with a woman approaching menopause (the only condition that does not include a physical exam). There are eighteen SPs identified by their physical attributes [from here throughout, I will refer to the medical student-SP interactions as doctor-patient interactions].

Time Measures

The timing of the interaction begins with the verbal announcement indicating that the physician may enter the room. The interaction ends either when the verbal announcement indicates that it is over or when the physician and patient exchange
greetings, such as “nice to meet you.” Some interactions end with phrases such as “OK, that’s it” or “I guess we’re done” and the patient leaves the room.

I obtain the amount of time that the physician and patient talk by simultaneously using two stopwatches, starting and stopping when each participant spoke. I record all utterances by both doctor and patient except for one-word answers such as “no.” I obtain the amount of silence in the interaction by adding the two totals of physician and patient amount of talk and subtracting from the total time of the encounter. The proportion of silence to the total time of the encounter is also calculated. I calculate the ratio of physician speech, as well as the proportion of both physician and patient speech to the total amount of time of the encounter. The amount of doctor and patient talk time is recorded for 59 of the 102 interactions because of time constraints that prohibited coding all 102 interactions. I determined that two interactions for each physician creates a large enough sample size to analyze talk-time patterns, as it is over fifty percent of my population and large enough to make reliable mean estimates. I use the first two valid tapes in my data set for each physician to create this sub-sample of 59 interactions. This is with the exception of five physicians who do not have two interactions available because the eighteen-minute time limit cut off more than three of their interactions. Thus, this sub-sample consists of 59 cases rather than 64 cases. Most physicians are observed twice, (some only once) in this sub-sample and there are 18 different patients observed, all with varying amounts of repeated observations.
**Minimal Responses**

I began this research with the intention of analyzing patterns of interruptions as a form of dominance in doctor-patient interactions. The limitations of West’s (1984) study on interruptions is in need of further analysis on how the status of physician and the status of woman manifest in doctor-patient interactions. However, probably an artifact of the medical students being evaluated and the patients being actors and perhaps not feeling a genuine sense of urgency concerning their medical condition, interruptions were very rare in these videotaped interactions. Therefore, I think it is more useful to measure minimal responses, as they might be more likely to manifest during interactions despite the contrived nature of the evaluation of the medical student and using standardized patients. Interruptions and minimal responses generally serve opposing functions, the former being a form of dominance and the latter a reflection of partnership building and a symmetrical relationship.

Minimal responses such as *m-hm, yeah, right, and yes* signal interest and encourage elaboration of the other speaker (Aries 1996). As women and men use minimal responses differently in their timing and function (Aries 1996), I code two types of minimal responses, adapted from Zimmerman and West’s (1975) distinction between minimal responses that occur during speaker talk and delayed minimal responses, occurring after the speaker has finished the utterance. I code and count minimal responses directly from viewing the tapes. Most minimal responses in these interactions are in the form of “OK,” often followed by a next question by the physician. “OK?” in the form of a question or “OK” said to one’s self, usually while conducting the physical
exam, are not minimal responses because they are not in response to the patient’s speech and therefore are not coded as such. In order to be a *minimal response during patient talk*, the physician’s utterance has to occur while the patient is talking and the patient has to continue talking after the minimal response. Accordingly, to be considered a *delayed minimal response*, it has to occur after the patient is finished speaking, usually occurring without any pause in-between, and the physician has to be the next speaker after the delayed minimal response. Whether or not the physician’s minimal response is intended to stop the patient from talking but was not successful cannot be fully captured here.

Inter-rater reliability tests of five videotapes with different physicians and patients indicate a Cronbach’s alpha of .97 and .98 reliability for minimal responses during patient talk and delayed minimal responses, respectively. I obtain this sub-sample of 59 in the same manner used to measure talk time and it contains the same interactions.

To analyze further the function of minimal responses in doctor-patient interactions, I code minimal responses for each phase of the interview, history-taking, physical exam, and management, for one interaction per physician, a sub-sample consisting of 32 interactions. One interaction for each physician, 32 interactions, is a sufficient number of cases for a preliminary analysis and to add support to the results of minimal responses for all phases of the interview. Using the first valid videotape for each physician, I code minimal responses during patient talk and delayed minimal responses in the same manner as above but separated for each phase. Thirty-two physicians (no repeated observations) and 16 different patients with varying amounts of repeated observations were observed for this sub-sample. For the one condition in which there is
no physical exam, I divide the history-taking phase from the management phase when the physician looked at the chart and then indicated that the interview was now going to turn to what they can do to maintain the patient’s health. This was usually by suggesting tests such as a colonoscopy and a plan to quit smoking cigarettes. There are only six interactions that I code minimal responses per phase that do not include a physical exam. For each of these six interactions, it is clear where the interview turns to management.

Questions

Since the function of minimal responses during speaker talk encourages elaboration of the current speaker’s (the patient’s) talk and delayed minimal responses discourage talk, open-ended questions by the physician, also supporting elaboration of patient talk, should positively correlate with minimal responses during speaker talk and negatively correlate with delayed minimal responses. Especially of interest are minimal responses and questions asked during the history phase because this is where the physician is attempting to elicit information from the patient. The information that physicians do or do not elicit from the patient determines whether there will be an accurate diagnosis and clear management plan. There is a certain degree of closed-ended questions expected in both the history phase and throughout the entire encounter, especially given that medical education teaches students to follow the format of hypothesis testing (Beckman and Frankel 1984). A higher degree of closed-ended questions cannot be interpreted as a form of dominance, but a higher degree of open-
ended questions (or minimal responses) by either gender can indicate greater partnership building communication.

Borrowing from Drass’ (1988) conceptualizations and coding procedures, I code open-ended and closed-ended physician questions for 32 interactions, the same sub-sample used to measure minimal responses by phase of the interview. As with minimal responses during each phase, I cannot code questions for the physical exam phase for six of the 32 interactions because they do not include a physical exam. Theoretically, open-ended questions allow patients to take the floor and comment in their own words in detail, not in words suggested by the physician; and closed-ended questions place either an explicit or an implicit restriction upon the patient’s response (Drass 1988). Examples of open-ended questions include: “Describe how you are feeling.” “Can you tell me more about that?” “What’s going on with you?” “How have you been feeling?” “Do you have any questions or concerns?” “What’s getting worse?” “Any other problems?” “How about the third time you had an episode?” and “What health problems do you have?” Closed-ended questions include tag questions, they are often used to ask for clarification, and they are often in the form of an either/or question in which the physician offers the patient acceptable responses to the question. Examples of closed-ended questions include: “How long have you been on birth control?” “Do you have problems sleeping?” “How much are you exercising?” and “Do you have any significant family history of any heart problems?” Cronbach’s alpha for inter-rater reliability is .90 for all physician questions for all phases; .92 for total closed-ended questions for all
phases; .80 for total open-ended questions for all phases; .95 for closed-ended questions during the history phase; and .77 for open-ended questions during the history phase.
CHAPTER V

RESULTS

To test hypothesis 1 that predicts the length of the medical encounter will vary with the gender composition of the physician-patient dyad, with the length of the encounter being longest when there is gender concordance with women, a mixed effects regression model was estimated to account for having more than one observation for each physician. A mixed effects regression model produces better parameter estimates for fixed effects and unbiased standard errors when the observations are not independent by allowing the residuals of this model to correlate within each physician. Physician race is controlled for in this analysis and in all further analyses. When patient gender is included, it is in essence controlling for the nature of the medical condition. Different medical conditions may require different needs within a medical interview that affect the length of the encounter. Including patient gender removes that effect. Among the eighteen patients, only one gender presents each condition except for ‘panic attacks,’ which both women and men portray. Therefore, patient gender mostly accounts for any variance in the dependent variables due to the nature of the medical condition.

Table 2 reports the mixed model regression results. As hypothesis 1 predicts, the length of the encounter is longest for the woman physician-woman patient dyad, with this dyad having encounters about one and a half more minutes (78.1 seconds) than the
comparison group of the man-man dyad. Women physicians and women patients are the only dyad that shows a significant mean difference (p< .05) from the man-man dyad in length of encounter. Descriptively, a means comparison shown in Figure 1 shows that women physicians have the longest encounters with women patients, then women physicians with men patients (43.07 seconds more than man-man), then men physicians with women patients (25.33 seconds more than man-man), and the shortest encounter occurs with men physicians with men patients. This suggests that it is the gender of the physician and not gender concordance between the physician and the patient that better predicts the length of the encounter.

Table 2: Length of Encounter by Gender Composition of Physician/Patient Dyad

<table>
<thead>
<tr>
<th>Physician/Patient</th>
<th>Estimate</th>
<th>Std. Error</th>
<th>df</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>880.06</td>
<td>37.66</td>
<td>50.42</td>
<td>23.366</td>
<td>.000</td>
</tr>
<tr>
<td>Woman/Woman</td>
<td>78.10</td>
<td>32.62</td>
<td>61.03</td>
<td>2.394</td>
<td>.020</td>
</tr>
<tr>
<td>Woman/Man</td>
<td>43.07</td>
<td>36.30</td>
<td>76.22</td>
<td>1.187</td>
<td>.239</td>
</tr>
<tr>
<td>Man/Woman</td>
<td>25.33</td>
<td>29.32</td>
<td>79.45</td>
<td>.864</td>
<td>.390</td>
</tr>
</tbody>
</table>

Dependent Variable: Overall Time in Seconds.
Statistical tests of the remaining hypotheses will be descriptive only. The sub-
samples used for answering these research questions are too small (n=59, n=32) to
generate reliable standard errors in the mixed-models method. Both simple linear
regression and means comparison analyses will be the methods for testing the remaining
five hypotheses. To examine further why women physicians tend to conduct longer
medical encounters, hypothesis 2 predicts that the ratio of physician talk to patient talk
will vary with the gender composition of the physician-patient dyad, with the most
symmetrical ratio occurring when there is gender concordance with women. In
accordance with the literature that states that physicians speak approximately sixty
percent of the total time (Roter and Hall 2006), here physicians speak, on average, fifty-
eight percent of the total amount of talking time. Table 3 shows the ratio of physician to
patient talk according to physician and patient gender separately. When the physician is
a man, he speaks slightly more relative to the patient than when the physician is a woman (b=.053). Therefore, men physicians have slightly less symmetrical encounters than women physicians do. However, when the patient is a man, the physician speaks less relative to the patient than when the patient is a woman (b= -.351). This means that there is less of a symmetrical encounter when the patient is a woman. Therefore, in terms of the ratio of physician to patient talk, the encounter is the least symmetrical when the patient is a woman.

Regression analysis results in Table 4 and means comparison results in Figure 2 both show how the ratio of physician to patient talk varies by the gender composition of the dyad. These analyses serve to indicate if it is gender concordance rather than physician or patient gender alone (as shown in Table 3) that is driving the ratio of physician to patient talk. The most symmetrical encounter occurs in the man-man dyad, the reference category (b= 2.99). The least symmetrical encounter occurs with the man-woman dyad with a mean of .622 higher of a ratio than the man-man dyad. This shows that it is not gender concordance that determines whether the encounter will be symmetrical, as measured by the ratio of physician to patient talk. If it were concordance driving these patterns, both sets of concordant pairs would produce significant effects in either direction. Here, while the man-man dyad contains a ratio of physician to patient talk that is extremely low, it does not matter for the woman-woman dyad whose ratio is close to the mean. It must be something about men physicians with men patients (or just men physicians) specifically as opposed to concordance generally. As illustrated in Figure 2, women physicians speak a ratio of talk close to the mean regardless of patient
gender. On the other hand, men physicians have substantially less or more symmetrical encounters than the mean depending on their patient’s gender. When men physicians are with men patients, the encounter is substantially more symmetrical; when they are with women patients, the encounter is substantially less symmetrical. Women physicians, on the other hand, do not divert significantly from the mean with either women or men patients.

It should be noted that the proportion of silence to the overall time of the encounter is minimal for both women and men physicians and is therefore not significantly influencing why women physicians have longer encounters. While the proportion of physician to patient talk cannot account for women physicians’ longer encounters, neither can the amount of silence or the length of the physical exam where there is likely to be less talk. Encounters with men patients tend to have a larger proportion of silence than with women patients, but men patients also tend to speak a larger proportion of the total talk time than women patients speak.
Table 3: Ratio of Physician to Patient Talk Time by Physician and Patient Gender

<table>
<thead>
<tr>
<th>Physician/Patient</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>B</td>
<td>Std. Error</td>
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<tr>
<td>(Constant)</td>
<td>3.418</td>
<td>.487</td>
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<tr>
<td>Physician Gender</td>
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<td></td>
</tr>
<tr>
<td>(man=1)</td>
<td>.053</td>
<td>.417</td>
</tr>
<tr>
<td>Patient Gender</td>
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<td></td>
</tr>
<tr>
<td>(man=1)</td>
<td>-.351</td>
<td>.435</td>
</tr>
</tbody>
</table>

Dependent Variable: Ratio of Physician to Patient Talk Time

Table 4: Ratio of Physician to Patient Talk Time by Gender Composition of Physician/Patient dyad

<table>
<thead>
<tr>
<th>Physician/Patient</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.988</td>
<td>.621</td>
</tr>
<tr>
<td>Woman/Woman</td>
<td>.370</td>
<td>.556</td>
</tr>
<tr>
<td>Man/Woman</td>
<td>.622</td>
<td>.617</td>
</tr>
<tr>
<td>Woman/Man</td>
<td>.289</td>
<td>.692</td>
</tr>
</tbody>
</table>

Dependent Variable: Ratio of Physician to Patient Talk Time
Figure 2: Ratio of Physician to Patient Talk Time by Gender Composition of Physician/Patient Dyad

Hypothesis 3 predicts that the frequency of minimal responses during patient talk will vary with the gender composition of the physician-patient dyad, with the greatest amount occurring when there is gender concordance with women. Hypothesis 3 is not supported, as it predicts that women physicians will use the most minimal responses, indicating an encouragement of patient talk. As shown in Table 5, women physicians use less minimal responses than men physicians do, about 2.04 less than the comparison group of man/man. The least amount of minimal responses occurs with women physicians with women patients. This is the direct opposite of the pattern predicted. Although, in all categories, the difference between the use of minimal responses is very small.
Table 5: Minimal Responses During Patient Talk by Gender Composition of Physician/Patient Dyad

<table>
<thead>
<tr>
<th>Physician/Patient</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>14.655</td>
<td>3.918</td>
</tr>
<tr>
<td>Woman/Woman</td>
<td>-2.040</td>
<td>3.462</td>
</tr>
<tr>
<td>Man/Woman</td>
<td>.437</td>
<td>3.935</td>
</tr>
<tr>
<td>Woman/Man</td>
<td>-1.927</td>
<td>4.343</td>
</tr>
</tbody>
</table>

Dependent Variable: Minimal Responses During Patient Talk

Contrary to predictions of hypothesis 4a, which states that the frequency of delayed minimal responses will vary with physician gender, with the most amount occurring by men physicians, there are very minimal differences in the use of delayed minimal responses by physician gender. Men physicians use 4.46 less minimal responses on average. However, physicians use approximately thirteen more delayed minimal responses when the patient is a woman rather than a man, as evident in the regression results in Table 6. These results seem to suggest that patient gender is more influential or predictive of physicians’ use of delayed minimal responses than their own gender.
Table 6: Delayed Minimal Responses by Physician and Patient Gender

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
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<td>5.051</td>
</tr>
<tr>
<td>Physician</td>
<td>-4.460</td>
<td>4.370</td>
</tr>
<tr>
<td>Patient Gender</td>
<td>-13.421</td>
<td>4.522</td>
</tr>
</tbody>
</table>

Dependent Variable: Physician Delayed Minimal Responses

Not only does the use of delayed minimal responses not follow the predicted gender patterns, but hypothesis 4b, which predicts that the amount of minimal responses during patient talk will be correlated with longer overall length of the encounter and the amount of delayed minimal responses will be correlated with shorter overall length of the encounter is also not supported. Table 7 shows the regression coefficients. Although minimal responses during patient talk encourage elaboration, their use is only minimally associated with a longer encounter. For every one more minimal response or delayed minimal response the physician uses, the encounter increases by an approximate, mere 1.5 seconds. Thus, there is no substantial impact on the length of the encounter by physicians’ use of minimal responses during patient talk or delayed minimal responses.
Table 7: Minimal Responses and Overall Length of Encounter

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>862.927</td>
<td>46.808</td>
</tr>
<tr>
<td>Delayed Minimal Responses</td>
<td>1.450</td>
<td>.726</td>
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<tr>
<td>Minimal Responses During Patient Talk</td>
<td>1.516</td>
<td>1.186</td>
</tr>
</tbody>
</table>

Dependent Variable: Overall Time in Seconds

Adding support to the supposed facilitative function of minimal responses during patient talk that is said to vary by gender, hypothesis 5 tests whether the total amount of open-ended questions will be correlated with minimal responses during patient talk and the amount of closed-ended questions will be correlated with delayed minimal responses (n=32). Contrary to the prediction that minimal responses will occur alongside open-ended questions, the opposite pattern emerges. Correlation coefficients shown in Table 8 indicate that delayed minimal responses positively correlate with open-ended questions (r=.477) and with closed-ended questions (r=.549). Physicians’ delayed minimal responses positively correlate with both types of questions. This is not surprising since questions of any type facilitate a response to patients’ answers. Furthermore, open-ended and closed-ended questions positively correlate with each other (r=.409) so that when physicians use more of one type of question, they also tend to use more of the other. On the other hand, minimal responses do not correlate with either type of question and, thus,
there is not support for hypothesis 5 because physicians do not use both types of speech forms that encourage patient talk in conjunction with one another.

Table 8: Correlations: Physician Minimal Responses and Questions

<table>
<thead>
<tr>
<th></th>
<th>Minimal Responses</th>
<th>Delayed Minimal Responses</th>
<th>Total Closed-Ended Questions</th>
<th>Total Open-Ended Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal Responses During Patient Talk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.103</td>
<td>.086</td>
<td>.165</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Delayed Minimal Responses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.103</td>
<td>1</td>
<td>.549**</td>
<td>.477**</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Total Closed-Ended Questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.086</td>
<td>.549**</td>
<td>1</td>
<td>.409**</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Total Open-Ended Questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.165</td>
<td>.477**</td>
<td>.409**</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
</tbody>
</table>

** Correlation is strong

Finally, hypothesis 6 tests whether the amount of physician open-ended questions for both the history phase of the encounter and for all phases will be greater for women physicians than for men physicians (n=32). Table 9 shows modest support for hypothesis 6, showing the regression coefficients for open-ended questions by physician and patient gender. Women physicians use slightly more open-ended questions on
average than men physicians (b = -.683) and when the patient is a woman, physicians use more open-ended questions (b = -2.874). Again, the gender of the patient rather than physician gender or gender concordance is the best predictor of physicians’ use of open-ended questions. Rather than physician or patient gender alone shown in Table 9, regression coefficients in Table 10 show the use of open-ended questions by gender composition of the physician-patient dyad. Here it shows that it is not gender concordance that increases physicians’ use of open-ended questions. Women physicians use 3.9 more open-ended questions with women patients than men physicians use with men patients, the comparison group. However, men physicians with woman patients use the most open-ended questions, 4.5 more than the man-man dyad.

Because the history phase of the medical encounter is of special interest concerning physicians’ different methods of eliciting information from patients, a separate analysis determines the use of questions during this phase. However, the history phase accounts for any variance of open-ended questions between physicians, as the amount of overall open-ended questions and the amount of open ended questions asked during the history phase are very highly correlated (r = .959).
Table 9: Open-Ended Questions by Physician and Patient Gender

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>5.543</td>
<td>1.170</td>
</tr>
<tr>
<td>Physician Gender (man=1)</td>
<td>-.683</td>
<td>1.019</td>
</tr>
<tr>
<td>Patient Gender (man=1)</td>
<td>-2.874</td>
<td>1.038</td>
</tr>
</tbody>
</table>

Dependent Variable: Open-Ended Questions

Table 10: Open-Ended Questions by Gender Composition of Physician/Patient Dyad

<table>
<thead>
<tr>
<th>Physician/Patient</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.121</td>
<td>1.458</td>
</tr>
<tr>
<td>Woman/Man</td>
<td>2.441</td>
<td>1.534</td>
</tr>
<tr>
<td>Woman/Woman</td>
<td>3.902</td>
<td>1.317</td>
</tr>
<tr>
<td>Man/Woman</td>
<td>4.504</td>
<td>1.483</td>
</tr>
</tbody>
</table>

Dependent Variable: Open-Ended Questions

In summary, results show that women physicians conduct longer encounters, especially with women patients. As measured through the ratio of physician to patient talk, even though women physicians speak slightly less of a ratio of talk on average than men physicians, the least symmetrical ratio occurs with men physicians and women patients and the most symmetrical ratio occurs with men physicians and men patients. The ratio of physician to patient talk for women physicians remains close to the mean regardless of patient gender. Contrary to predictions, women and men physicians use
approximately the same amount of minimal responses and delayed minimal responses on average, but physicians use significantly more delayed minimal responses with women patients than with men patients. Also contrary to predictions based on the literature, neither minimal responses during patient talk nor delayed minimal responses have an impact on the length of the encounter. Delayed minimal responses positively correlate with open-ended questions: one’s function is to discourage patient talk while the other’s is to facilitate it. Yet, a physician who tends to use one also tends to use the other. Women physicians do not use significantly more open-ended questions on average than men physicians as predicted (less than 1 more), but physicians use more open-ended questions with women patients for both the history phase alone and for the entire encounter. All together, these results indicate that it is the patient’s gender rather than physician gender or physician-patient gender concordance that is the best predictor of the doctor-patient communication behaviors examined here. The proportion of physician talk to patient talk, minimal responses, and open-ended questions do not vary significantly by physician gender as predicted and cannot account for women physicians’ longer encounters.
CHAPTER VI

DISCUSSION

This study set out to examine how women and men do gender in doctor-patient interactions. I first described the literature on women and men in interaction outside of the medical encounter to show how women and men do gender appropriately and to address Aries’ first question of determining the magnitude of gender differences. Both within and outside of the medical encounter, women use more communication behaviors that indicate partnership building and symmetry in interaction, which can have beneficial effects on medical outcomes. The results of this study do not support previous studies that conclude that women physicians have communication skills considered superior to those of men physicians. Some of the hypotheses are supported, but most are rejected. Overall, the results do not portray a picture of women physicians having more partnership building, patient-centered, or symmetrical medical encounters than men physicians have. Results do show that future studies should not neglect the influence of patients in forming doctor-patient interactions.

There are several explanations why the results of this study do not follow the patterns predicted and, in analyzing linguistic speech forms generally, and specifically here, several interpretations are possible. One possibility is the limited demographics of the sample participants. All of the physicians observed are at the same point in their career, as they are finishing medical school. There is very limited variability in the
physicians’ age, race, socioeconomic status, practice characteristics, and length of practice. Also common among the participants is the highly contrived nature of the evaluation setting that uses SPs.

Another possible reason that gender differences are minimal in this study is that medical education is designed to standardize students so that they can all provide the same quality of care. If physicians later on in their careers, perhaps even a year or two in practice, were studied, different patterns may emerge. This study cannot determine the gender effects on physicians further along in their careers, especially mature, experienced physicians. Medical school rigorously trains physicians and by their fourth year, it is likely that they are more alike than different in many ways and thus gender differences are diminished, at least temporarily (Boulis and Jacobs 2003).

These diminished effects do not mean that gender is not salient for physicians, but that gender differences are not visible to the measurement tools used in this study. Therefore, women and men in these interactions are still doing gender, but the ways in which they do gender do not manifest to a significant degree in the small sample used that measured minimal responses, question-asking, and the ratio of physician to patient talk. Medical socialization may have standardized students not so that they are no longer women and men, but that the ways in which they do gender are not visible to the measurement tools used in this study. As West and Zimmerman (1987) state, gender is complex and it is likely that measuring how women and men do gender in this standardized setting by measuring a few, particular speech forms was not optimal in capturing the complex phenomenon of doing gender.
One conceptual model proposes that there is a balance between social background (gender socialization) and professional socialization (medical education) that determines professional behavior. Some argue that professional socialization is more influential and predictive of behavior such as communication (John 1994), while others argue that professional socialization cannot obliterate early gender socialization (Martin et al. 1988). Another possible explanation why gender differences are minimal in this study is that medical socialization is more predictive of communication behaviors between women and men than early gender socialization. This study does not address that research question directly and an effective analysis would require longitudinal data that directly tests the effects of medical socialization on physicians’ behavior and communication. This study only addresses the similarities and differences of women and men at this point in their career, as they are just finishing medical school. Aries’ (1996) second question asks whether other variables such as role and status can account for gender differences. Here, they are certainly due, in part, to the specific role and status of a fourth year medical student under evaluation with SPs.

The findings concerning the ratio of physician to patient talk indicate one place in which status may matter in this study. Women physicians speak a ratio close to the mean regardless of patient gender. However, men physicians have more extreme symmetrical and asymmetrical encounters depending on the gender of the patient. It is possible that the stereotypical communication behaviors of men, that of being competitive and valuing status, found in the literature for both men generally and for men physicians, surface here. The effect of men physicians’ desire to dominate the conversation may cancel out
that of men patients’ attempts to dominate the conversation. Or, similarly, both men physicians and men patients are “doing dominance,” complimenting each other’s communication styles and resulting in the man-man dyad having the most symmetrical encounter. Men physicians’ dominance may interact with women patients’ deference, causing the man-woman dyad to be the least symmetrical encounter of the four dyads. Previous studies tend to neglect the influence of patients (Roter and Hall 2006) on physicians’ communication behaviors, and here it is especially evident the influence of patients should not be ignored.

The results found in this study are certainly dependent on the specific context of these interactions, which addresses Aries’ (1996) third question, to what extent do gender differences depend on the situational context. The structure of these encounters are remarkably similar. The encounter begins with an opening that includes something like “what brings you in today?” After the opening, the physician gathers data from the patient usually in the form of closed-ended questions. The physician, being the one who holds the expert knowledge that the patient scheduled the visit to receive, asks a series of usually closed-ended questions, assumed to be sufficient enough to elicit the information from the patient that the physician needs for proper diagnosis and management (Roter and Hall 2006). Physicians engage in a form of hypothesis testing and as long as they are well trained and conscientious, this question and answer format is assumed to be the best way to conduct the medical interview. Physicians are also apt to redirect patients back to the medical issue at hand if patients begin to divert from it and physicians usually do this in the form of questions (Roter and Hall 2006). Since medical school and national
standards carefully screen and rigorously train physicians to be standardized, and all medical students, at least until very recently, have the same male professors and mentors, it is not surprising that women and men physicians in this study do not differ drastically in their communication behaviors.

Patients are not trained in medical interviewing, nor are they being evaluated, which may be why they, rather than the physicians, seem to be driving the communication patterns found in this study. Patients bring certain expectations to the encounter and when those expectations translate into communication behaviors, it is likely that physicians adapt to their needs. Specifically, patients have gendered expectations and behaviors, or stereotypes, that are not standardized by medical socialization and this may account for why men patients talk a greater ratio of physician to patient talk and are not discouraged to talk by physicians’ delayed minimal responses. Both physicians and patients have gendered stereotypes that shape interactions, as Aries (1996) notes as the fourth broad factor to consider in studying gender and language. It is likely that physicians do not anticipate men talking too much or diverting talk away from the medical problem because of stereotypes that dictate that men are task-oriented and not overly talkative. Thus, physicians do not perceive the need to control or restrict men patients by using delayed minimal responses. Physicians hold women accountable for their sex category that dictates that females are overly talkative. Physicians may anticipate that their female patients will need to be directed or restricted in order to engage in effective hypothesis testing concerning the medical problem. They then use more delayed minimal responses with women patients. Again, it is seen here that patients
matter in how physicians communicate: Physicians do not simply use the same amount of minimal responses depending on their ‘style,’ but their use of minimal responses is dependent on the gender of the patient.

An alternative explanation for why physicians use more delayed minimal responses with women patients is that women patients may be attempting to speak more. When physicians recognize this, they employ delayed minimal responses to prohibit them. Using delayed minimal responses as a reaction to an overly-talkative patient might explain why the use of delayed minimal responses correlates with a longer overall length of the encounter despite their supposed function to discourage patient talk. Or, the use of delayed minimal responses may be unsuccessful attempts to restrict women patients who are actually over-talkative or diverting attention away from what the physician views as medically relevant information. Furthermore, since physicians are using more open-ended questions with women patients, they may need to restrict their answers even more by using delayed minimal responses. It is important to note that these analyses are speculative and not intended to assign a meaning to a specific communication behavior that is not wholly correct, as Aries (1996) warns against with her fifth question on studying gender and communication. Several interpretations are possible.

No gender differences for women and men physicians or patients in minimal responses during patient talk is not surprising given the much directed, standardized format of the medical interview in general and in this study. Patients do not typically speak long enough for physicians to insert encouraging minimal responses, as they are typically asking closed-ended questions, giving a standardized response such as “OK,”
and then asking another question. All together, where there are gender differences in this study, patients are likely to drive them. Additionally, as with all social interactions, the doctor-patient encounter is a reciprocal process in that the communication of one participant is likely to affect the communication of the other.

It is unclear why women physicians conduct longer encounters, especially with women patients, in this study. While this is the pattern found in previous studies and was therefore predicted, none of the specific communication patterns shown to encourage talk are associated with the longer overall length of encounters with women physicians in this study. Women physicians do not use significantly more minimal responses during patient talk, ask significantly more open-ended questions, use significantly less delayed minimal responses, speak significantly less of a ratio of physician to patient talk, or are silent for a greater proportion of the encounter. The only feasible explanation is that all of these factors together, although not individually significant, lead to a longer encounter.

One might question whether the minimal gender differences found in this study, as well as in other studies, makes a differences for medical outcomes or if all physicians’ communication skills are adequate enough to produce quality care despite small gender differences. Qualitatively speaking, almost every physician in these encounters concluded with the same, correct diagnosis and management plan. When the time limitation cut them off, they were usually in the process of repeating and clarifying the plan of action. Although mostly all of the physicians came to the right diagnosis, the portion of the encounter that is likely to get eliminated in this study, clarification and ensuring understanding, cannot be seen as insignificant to outcomes of doctor-patient
communication. When patients do not fully understand or agree with the physician, they are likely to be less satisfied and less likely to adhere to the medical regimen presented (Roter and Hall 2006). A minute or two may make a difference because it could result in a missed or wrong diagnosis. While this is also important, it is equally important to consider what else could be lost in a minute or two. In these encounters, a minute less may affect whether a patient fully understands the diagnosis and treatment plan.

Generally speaking, whether less time results in a missed or incorrect diagnosis, time restrictions do not allow the full potential of the doctor-patient encounter to be realized. A minute could make a significant difference.

Another explanation for the absence of gender differences observed here is the use of standardized patients (SPs) in this study. To become a licensed physician in the United States, medical students must pass a clinical skills assessment with SPs as part of their medical training (Brender, Burke, and Glass 2005). While these videotaped interactions are an important resource for student learning and indicate a greater emphasis on interactional skills once thought of as not as important as clinical skills, their use in research is tenuous. In several important review studies, the use of SPs was mentioned but it was not clarified which of the studies employed SPs (Hall and Roter 2002; Roter, Hall and Aoki 2002; Roter and Hall 2004). In those studies that found no gender differences, it is unknown whether those were the studies that used SPs or not.

Although I make the argument that physicians are standardized by medical socialization and patients are not, it is notable that in this case, patients are standardized. However, they are still accountable for doing gender despite the vignettes that they study.
and portray. The process of medical socialization is not equivalent to the few days of training and acting that the SPs go through. Therefore, although SPs are certainly standardized in regards to the presentation of symptoms and some life circumstances, it is still likely gender patterns in communication will emerge more readily than would physicians’. Nonetheless, the use of SPs rather than actual doctor-patient interactions has an effect on the participants’ behavior and the consequent results of this study. Furthermore, observing physicians evaluate medical students in these encounters and the results of the evaluations determine whether the medical students can receive licensure to become a physician. Like the use of SPs, this is a highly unnatural circumstance that affects the physicians’ behavior in this study.

Limitations

There are several notable limitations to this study. Most notably is the limited generalizability of this study because of the absence of a random sample. I solicited consent from the fourth year medical students at NEOUCOM and received consent from thirty-two, out of a hundred, medical students to view their tapes. There is no way to determine the difference between those who consented and those who did not. However, this sample that is 56% women is representative of the gender composition of NEOUCOM’s fourth year cohort, which is 59% women. This sample is also gender representative of NEOUCOM’s entire student body, which is 51.43% women. Results of this study describe this sample of students accurately but its generalizability is highly questionable.
Another limitation is that the sub-samples of fifty-nine (coded for minimal responses and doctor-patient talk time) and of thirty-two (questions) are not large enough to use a mixed effects model and thus repeated observations for the physicians could not be accounted for except in the analysis on length of encounter for which all one hundred and two cases are used.

The contrived nature of these encounters affects all results of this study. The use of SPs, the high stakes evaluation of the medical students, and the eighteen-minute time limit all have an effect on communication behaviors. While there is a great value in an authentic setting for studies on doctor-patient interactions, the use of SPs has been increasingly accepted in its thirty-year history (Roter and Hall 2006). Several valuable, well-cited studies employ SPs, using the standardized setting as a useful tool to disentangle the independent effects of characteristics such as race, gender, and social class (McKinlay, et al. 2002; Roter, Hall and Katz 1987; Schulman et al. 1999). In these studies, researchers note the behavior of physicians to be highly realistic and indistinguishable from their behavior with actual patients (Roter and Hall 2006). While an authentic setting is optimal for observational studies and the encounters in this study are incredibly standardized, gender patterns still emerge and thus results are likely to be conservative in this setting.

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4 Some of these studies use analogue patients, which are similar to standardized patients. They are distinct from SPs in that they are usually untrained subjects who are asked to imagine, through role-playing, that they are the patient depicted in some medical situation viewed in a simulated videotape or read in a written vignette (Roter and Hall 2006).
CHAPTER VII

CONCLUSION

This study set out to examine how women and men do gender in doctor-patient interactions. Results indicate that females and males do not always do gender appropriately, meaning that they do not always communicate in feminine or masculine ways. Yet, their patients hold them accountable for their sex category because “it does not seem plausible to say that we have the option of being seen by others as female or male” (West and Zimmerman 1987:130). After a rigorous process of medical socialization, women physicians learned how to be a doctor, with medicine generally described as a masculine profession and until recently dominated by men. It is not surprising that they, at least in this point in their career, may have internalized communication skills that are more like men’s communication for the specific communication behaviors I measured.

It is an important point that even though physicians are the ones who hold the expert knowledge, are generally in control of the doctor-patient interview, and patients are dependent upon that knowledge and skills, the doctor-patient relationship is still a reciprocal, mutually reinforcing process. Patients in this study appear to be driving the
communication patterns found. This does not mean that patients are in control per se, but that the way in which physicians and patients do gender here does not result in the patterns that would be predicted by stereotypes. Future studies should not neglect the influence of patients on physicians’ communication.

This study suggests that doctor-patient communication is improving because it shows that communication skills can be taught. The “essential” differences between females and males are minimized and do not hold for doctor-patient interactions here. Therefore, improvements in communication skills lie within medical education. Communication styles found in women and men in the lay public do not reproduce in doctor-patient interactions because medical students are taught how to communicate and patients are not. Communication differences between women and men are not “essential” differences between females and males. If they were, they would be consistent across different contexts. In doing gender in this study, men are not consistently doing dominance and women are not doing deference, which is also an optimistic indicator of an increasing equal social order, at least in regards to the division of labor within the profession of medicine. Since macro level systems of inequality are built from the interactional level, the diminished, counterintuitive gender differences found here do not add to the justification of the existing social order that is said to reflect natural differences between women and men.

Gender is always salient and even when women physicians do gender in a way that is characteristic of males, patients will still hold them accountable for their sex category of female. Perhaps as physicians continue to learn communication skills in
medical school and medical education emphasizes the importance of patient-centered, partnership-building, and humanistic care, not only will gender differences be minimized through medical socialization, but they will be standardized to a more feminine style of medical care, which is associated with increased patient satisfaction and several other positive medical outcomes. The gendered expectations that patients bring into the medical encounter would then change, as would the way in which women and men physicians do gender in doctor-patient interactions. Thus, the status of physician becomes more salient as the lower status of female becomes less salient. However, gender can never be completely insignificant, whether in individuals, in interactions, or in the social structure and so, it is always an important question to examine how women and men do gender in different contexts. This is especially true in doctor-patient interactions where one of the most fundamental values in any society, life and death, is realized.
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APPENDIX 1

CSA IV

Student Instructions

Schedule for the day:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:45-8:25am</td>
<td>Orientation</td>
<td>A-72</td>
</tr>
<tr>
<td>8:30-10:22am</td>
<td>4 Sessions</td>
<td>Start in Room 01</td>
</tr>
<tr>
<td>10:22-10:32am</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:32-12:21</td>
<td>4 Sessions</td>
<td>Start in Room 05</td>
</tr>
</tbody>
</table>

7-Physician Rated Sessions
1-Standardized Patient Rated Session

18 minute session encounters:

1. Log in to the computer at exam room.
2. Respond to the Honor Code dialogue box.
3. Wait for the verbal announcement to enter the room and start the session/
   - **Verbal announcement:** indicating you have 5 minutes for conclude encounter.
   - **Verbal announcement:** indicating 3 minutes for question response.
   - **Tone** indicating 4 minute feedback session.
   - **Verbal announcement:** ends at session.
4. Leave the room and click “Stop Encounter” on computer that displays your name.
5. Move to the next section, and repeat the process. Do not click “Stop Encounter” on the computer that displays someone else’s name.

CONSENT FOR USE OF RECORDING

Please check the appropriate box below, please sign and date.
____ I GIVE MY PERMISSION to use my recording for educational purposes to the
William G. Wasson, M.D. Center for Clinical Skills Training, Assessment and
Scholarship.

____ I DO NOT GIVE my permission to use my recording for educational purposes to the
William G.
Wasson, M.D. Center for Clinical Skills Training, Assessment and Scholarship.

Please provide your current address to forward your CSA IV comments. Thank you.

NAME: _____________________________________________

ADDRESS: __________________________________________
__________________________________________
_______________________________ Date:

Student signature
APPENDIX 2

NEOUCOM IRB Informational Sheet

Dear 4\textsuperscript{th}-year Medical Student,

My name is Kelly MacArthur. I am a graduate student at Kent State University in the Department of Sociology, specializing in medical sociology. I am currently working on my master’s thesis on doctor-patient interaction.

I am requesting your permission to examine some of the videotaped interactions that you made last academic year during your clinical skills assessment (CSA 4) at the Wasson Center. The purpose of my research is to study the effects of power, status, and gender in doctor-patient interactions. My research will not grade your overall performance nor will it have any bearing on your academic standing. In addition, you will not be penalized for not agreeing to participate in this research. This research has been reviewed and approved by the Institutional Review Board (IRB) at NEOUCOM.

If you agree to my request, I will be given a password that will allow me to access your videotape via the internet. This password will expire once data have been collected in August of 2008. No other researchers will view your videotape. I will collect no information that could personally identify you; thus, you will not be able to be identified by any data in my thesis and your privacy will be protected. No video images of you or your encounter will be retained.

I would greatly appreciate your participation in my study and what will hopefully be a significant contribution to the study of doctor-patient interaction. \textbf{To allow me to view your videotaped interactions for this research project, please simply reply by Friday April 4, 2008 to this message via email with the message: “You have my permission to view my videotape.”} The e-mail documenting your approval will be kept in a password-protected file and destroyed at the conclusion of the study.

For information regarding your rights as a research subject in this study you may contact Denese Shipp, Human Protections Administrator, at 330-325-6499.
Thank you in advance for participating.

Sincerely,

Kelly MacArthur  
Kmacart1@kent.edu  
(908) 361-7341

Paul J. Hartung, Ph.D.  
phartung@neoucom.edu  
(330) 325-6112