ADOLESCENT GENDER ATTITUDES: STRUCTURE AND MEDIA INFLUENCE

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ABSTRACT

KRISTIN KENNEAVY: Adolescent Gender Attitudes: Structure and Media Influence
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The exploration of gender identity is an important task during adolescence, and changes in gender attitudes are a crucial aspect of this process. This research draws on psycho-social theoretical perspectives to frame the analyses and attempts to contribute to our understanding of the ways in which adolescents select and apply media in the process of negotiating gender attitudes. Data drawn from the Teen Media Project, a longitudinal study of adolescent media use and its influence on social and health-related outcomes, are utilized.

First, a model of adolescent gender attitudes is developed using confirmatory factor analysis in a structural equation modeling format. Attitudes related to dating and relationships are found to be a key dimension of gender attitudes generally. Model form is found to fit very well across black and white, boys and girls. In addition, multi-group tests of measurement invariance reveal significant differences in categorical thresholds between boys and girls. Finally, indicators which load well on the latent variables raise questions related to the relative influence of masculinity versus femininity-related attitudes on overall conceptualizations of gender among adolescents.

Next, the model developed above is utilized as the dependent variable in a series of OLS regression models that investigate whether relationally-oriented portrayals of dating and romance in various media (television, films, magazines, and music lyrics) longitudinally predict changes in adolescent gender attitudes in an ecological model that includes parents,

peers, clergy, and teachers as competing sources of gendered information. Although peers appear to hold the most sway over gender attitudes, the media are found to rival parents as the second most influential agent of socialization. Among media, music lyrics are particularly influential. In general, media content predicted more "egalitarian" attitudes among adolescents, especially black boys.

Finally, magazines as a source of adolescent gender attitudes is explored using longitudinal Heckman selection models that account for exposure to content based on the selection of particular genres. White girls who read adult fashion magazines in early adolescence and strongly identify with magazine content report much less egalitarian gender attitudes. Descriptive information related to magazine genre readership across race and gender groups is also included.

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CHAPTER 1

ADOLESCENTS, GENDER, AND THE MEDIA

Recently, while sitting in the café at a large chain bookstore, I took a few minutes to look around and observe the other patrons. Given my area of research, the various teenaged boys and girls who wandered in and out of the café were of particular interest. A few tables over, an adolescent boy sauntered over to where his father sat reading a book about Warren Buffet. The teen had picked up a sports magazine from the nearby stacks and was idly flipping though it, looking for information about his favorite NBA basketball team. When he found a particularly interesting article, he quietly interrupted his father's reading to share the information with him. His father responded approvingly and discussed the team's prospects before returning to his book.

Not long after this, a mother with who appeared to be her daughter and her daughter's friends walked through the stacks. The girls were dressed as if coming back from an athletic practice. The mother paused briefly in front of a cycling magazine and pointed out its cover to the girls. "Look at this," she said, "It is so unrealistic. Why is she in those heels?" Shaking her head, the mother briskly walked toward the exit while the girls silently paused for a moment to observe the cover, which featured in the foreground a very slender woman with a shock of wild hair. She was provocatively posed and clothed from head to toe in skin-tight red spandex, including built-in red boots of the same material with five inch stiletto

heels. The background appeared to consist of male cyclists during a race, clothed in more traditional biking apparel.

In the events above, magazines, just one of many media forms, serve as a catalyst for people to communicate with each other about topics of interest or concern. The father's tacit approval of the topic of sports likely indicates to his son that this is a source of male bonding and a masculine pursuit. The mother's critique of the female figure on the cycling magazine says to the teenage girls in tow that perhaps they too should not buy into everything they see in print. The image itself says that women are on the cover for aesthetic purposes, rather than to illustrate a more active participation in a popular sport. After all, it is rather difficult to pedal in five inch stilettos.

Both of the incidents appear trivial; interactions that took place in a matter of minutes or seconds on a random Wednesday afternoon at an unremarkable bookstore in the suburbs. However, such "media moments" raise questions about the relationship between media consumption and how teenagers learn about cultural norms regarding gender. What aspects of gender are important in the lives of teens? To what extent do teens utilize what they see in the media to inform action and attitudes? Are the media a prominent source of gendered information, and do the messages conveyed compete or conform to those offered up by other sources of socialization, such as parents? Do media messages communicate to teens about masculinity and femininity and, if so, how much of what is communicated depends on the choices teens make regarding what they read, watch, or listen to? In the chapters that follow, the questions posed above are investigated through a series of analyses. The next sections provide an overview of the theoretical perspectives that inform the analyses, the research questions asked, and a summary of the chapters.

Theoretical Perspectives

The mass media are often characterized as purveyors of normative information; communicating cultural values, creating frames through which interaction may be understood, and setting agendas that shape cultural discourse. As such, the contention among those who study the media is that they have the ability to socialize individuals to culturally valued ways of being. This work explores the mechanisms and consequences of gender socialization during adolescence, a stage in which the media are often viewed to be a key force of influence. It is during adolescence that teens engage in intense exploration and construction their gender identities, which in turn shape their gender attitudes. Arnett (1995) contends that, in this process, teens use the media to self socialize, or to explore aspects of their developing identities that they may feel uncomfortable discussing with their parents or even their peers. However, Arnett also points out that adolescent socialization is not solely accomplished though media exposure. In the ecological approach to adolescence outlined by Bronfenbrenner (1979, 1986), parents, teachers, religious and spiritual leaders, and a teen's friends are all posited as potential sources of influence that shape an adolescent's behaviors and attitudes. The media should therefore be contextually situated within a framework that includes these other factors. The bookstore vignette illustrates this contention; various media may provide messages about gender, but so might parents. An ecological approach to media and adolescence is largely macro-structural, but other theories examine the processes by which adolescents are thought to learn from their media environment, as well as from other sources.

To help explain how media content may shape adolescent gender attitudes, a scripting perspective is also utilized throughout this research. Simon and Gagnon (1984) craft a model

of how culturally available norms and practices influence the behaviors and attitudes of individuals. While this perspective was initially developed to explain patterns of sexual interaction, it is easily adapted to other social practices, including the enactment of gender. Normative aspects of gender are thought to operate on three distinct levels. Cultural scenarios are the most abstract of the three, serving to inform general expectations about how an individual of a certain status (for instance, male or female) might think or act. This type of cultural information is like a guideline, but will unlikely be perfectly applicable within every context an individual encounters. At the next level, interpersonal scripting, the individual utilizes the scripted material derived from cultural scenarios and adapts it to the social situation at hand. Variation in the adaptation of scripts suggests that individuals will vary in the ways in which they choose to adhere to or contest gender scripts. Finally, cultural scripts may be conflicted and ambiguous, necessitating an "internal rehearsal" of their application. Here, an individual may contemplate how scripts may be incorporated into his or her behavior and imagine the meanings behind the scripting of others. This third level is termed intrapsychic scripting, and operates where individual desires and cognitions interact with cultural expectations.

A scripting perspective is particularly appropriate when studying the development of gender identity in adolescence. Adolescence has been characterized as a phase of life during which individuals negotiate the application of gender norms to their actions and attitudes, and therefore abstract cultural norms are being "tried on" through the process of interpersonal and intrapsychic scripting. This perspective compliments an ecological approach as well since cultural norms are presented and reinforced through interaction with socializing agents. Importantly, during adolescence, teens are thought to move away from the sources of

information that they utilized most during childhood, such as parents and teachers, and begin to shift their attention to the views of peers and the messages they see presented in various media. In the narrative, the model on the cover of the cycling magazine could lead young girls to believe that women are decorative rather then active. However, this learning is mediated by the mother's skepticism and dismissal of the image, thus demonstrating multiple sources of cultural messages as well as the potential competition and contradictions that such situations generate. In light of these contextual aspects of adolescence, a scripting perspective provides a uniquely appropriate frame, as this research primarily seeks to understand whether media content is utilized by teens in the process of gender attitude development.

Finally, the Media Practice Model (Steele & Brown, 1995) sensitizes researchers to the interactive nature of adolescent media use and importantly reminds us that, in an environment in which media are ubiquitous, it is necessary to consider the individualized choices that adolescents make based on demographic and identity characteristics. The boy in the bookstore had a wide range of media choices available. He could have grabbed a book on a variety of topics, listened to music in the rear of the store, perused the available DVDs, but he chose to pick up a magazine about sports. The media theories presented here suggest that these everyday choices, over time, have the ability to influence thought and behavior. The data utilized for this study, described in each of the following chapters, focuses on the actual media choices made by teens and the connection of these choices to reported attitudes and behaviors; an ideal fit to the primary goals of the research.

Paper Summaries

The three papers that comprise this research draw on the theoretical perspectives outlined above and attempt to contribute to our understanding of the ways in which adolescents select and apply media. The following questions guide the analyses. First, what shape do teen gender attitudes take? If we are to better understand how media influence attitudes, we must first examine the structure of those attitudes from a measurement perspective. Second, do media messages have the ability to actually produce a change in gender attitudes, even when teens can look to peers and parents, clergy and teachers for information regarding how to "do" gender? Third, in a diverse and media-rich environment, must we take into account individual teens' choice of media products when examining potential links between content and attitudinal change? Finally, in a multi-cultural society, can we expect and detect group differences based on ascribed characteristics such as sex and racial background? How might these characteristics shape our choice of media and our gender attitudes? What follows is a brief summary of the research goals of each paper and the contributions that they attempt to make in answering these questions.

A Model of Adolescent Gender Attitudes: Is Dating a Key Component?

The first of the three papers is primarily concerned with the measurement of gender attitudes among adolescents. In the past, the scales utilized to assess gender attitudes among teens were primarily modified versions of those designed to measure adult gender attitudes. While there is certainly some overlap between these two populations, adolescents may be less concerned with some aspects of adult life in which gender plays a role. For instance, teens may have thought very little about balancing work and family or women's political participation. However, how boys and girls are expected to act in romantic and dating

relationships is a high priority among teens and prior scales have failed to explicitly incorporate measures related to this domain into models of gender attitudes. Previous scale development has also somewhat neglected younger adolescents and non-white teens. This paper attempts to overcome these limitations by developing a model that taps into both general gender attitudes as well as those related to gender norms in a dating context. Confirmatory factor analyses within a structural equation modeling format allow for a theoretically informed model to be constructed and tested across various demographic groups (black and white, boys and girls) in order to establish gendered attitudes toward dating as an important component of gender attitudes generally. In addition, an exploration of the survey items that eventually are selected to measure the concepts raises questions regarding the relationship of masculinity and femininity to gender attitudes among the teens in the sample. Finally, strategies to reduce measurement error are proposed and tested.

Media as a Source of Gender Attitudes among Middle Adolescents

This paper takes its cue from the ecological and scripting approaches to adolescent media use in an attempt to evaluate whether media consumption patterns in early adolescence have an effect on a teen's attitudes toward what are considered appropriate behaviors for males and females in middle adolescence. As children age into adolescence, some sources of socialization, such as peers and media, may become increasingly important as teens move away from the influence of parents and other adults. Media consumption is operationalized through a measure that takes into account both the frequency with which a teen uses a particular medium as well as the percentage of the content that depicts dating and relationships, the best available proxy for gendered messages. This measure is uniquely created for each individual and is then contextualized with other measures of gendered

learning from parents, teachers, religious leaders, and peers in order to determine whether effects on gender attitudes remain after other sources of influence are taken into account. These analyses are performed separately within each demographic group in order to further our understanding of whether differing patterns of influence exist across the groups. The longitudinal aspect of these analyses, as well as the broad range of media and socialization sources included, improves on prior work by isolating changes in adolescent gender attitudes that are due to exposure to media messages.

My Genre, My Gender: Adolescent Magazine Reading and Gender Attitudes

This paper again examines the relationship between media use and gender attitudes, but restricts the investigation to one particular medium. Relying primarily on process theories of how adolescents learn from the media, this research investigates whether the genres of magazine that an adolescent reads contributes to his or her gender attitudes. Genres are created based on factor analyses, and the relationship and dating content within each genre is then used to predict gender attitudes expressed during middle adolescence. Using a longitudinal design, Heckman selection modeling is employed to account for the initial selection of a particular genre in understanding the impact of its content on attitudes. Few studies have linked the highly specific magazine choices of individuals (let alone teens) to attitudes using quantitative data and none have done so using a longitudinal design. In doing so, it is possible to do more than merely assert that content exposure should produce a change in attitudes, which is often the case in stand-alone content analyses. Furthermore, the longitudinal design paired with Heckman modeling facilitates a departure from a problem that plagues cross-sectional analyses; namely, the inability to determine whether attitudes drive selection or whether selections inform attitudes. In addition, a fair amount of research

has catalogued the content of magazines aimed at a teen girl audience, yet very little is known about the types of magazines that African American teens and white boys select. Race and sex differences are often theorized, and empirical differences in gender attitudes and media use preferences have been detected in past empirical work. However, research into magazine readership has not been as inclusive of multiple groups as have studies of other media. The gaps in knowledge regarding magazines outlined here are addressed in this paper.

Interdisciplinary Approach

Overall, this research attempts to use a valuable set of data that explores the media lives of adolescents to shed light on a number of related topics that are of concern to both sociologists who study media, as well as researchers coming from a mass communication background. A sociological approach to media asks that we consider the media as an element of social structure; an institution that communicates systems of values that potentially constrain individual action. This research speaks to this perspective by linking a macro-level concept, gendered media messages, to a micro-level outcome, whether such messages shape gender attitudes among teens. Also, by situating the media as one of several sources of socialization, the extent of their influence is considered "in context". Media scholars may find interesting the variability in influence across the media considered and the extent to which media content informs the "scripts" teens use to guide their attitudes.

Primarily, inquiry into topics of interest to social scientists is pursued. However, it should be noted that biological arguments related to the relationship between sex and gender remain unexplored in these analyses, largely due to the fact that the data are not able to

accommodate anything but the most rudimentary modeling of such influences. Arguments have been made suggesting that biological influences (such as gestational hormones, pubertal timing, and sex-differences in brain function) may play a part in determining the differences in behavior observed between boys and girls. Research into hypothesized biological determinants of gender is increasingly prevalent, as new longitudinal studies gather genetic samples in conjunction with social and demographic data. This may allow researchers to design studies that investigate whether social norms and expectations shape the expression of gendered behaviors that may contain a genetic component. Future research may very well demonstrate that both biological and social influences shape gendered behavior, and potentially even attitudes toward such behavior.

It is beneficial to take an interdisciplinary approach to the study of media in order to come to a more nuanced understanding of the ways in which media shape the lives of adolescents, to document whether there is cause for concern, and to address topics that have not been thoroughly addressed in past research. The development of the gender attitudes model addresses the need to more explicitly account for the form and composition of such attitudes among teens while focusing on social situations that teens actually find important. The second and third papers here contribute to a rich vein of research that has relied heavily on the thematic examination of content without subsequently linking such content to gender attitudes.

CHAPTER 2

ADOLESCENT GENDER ATTITUDES: IS DATING A KEY COMPONENT?

Gender attitudes have been linked to numerous constructs, many of which have very real consequences for the present and future lives of adolescents. These include *self-esteem* (Chu, Porche, and Tolman 2005; Tolman and Porche 2000), *depression* (Barrett and White 2002; Chu, Porche, and Tolman 2005; Tolman and Porche 2000), *body image and eating disorders* (Gershon et al. 2004; Tolman and Porche 2000), *acting out through mild to extreme deviant behaviors* (Chu, Porche, and Tolman 2005), *sexual behaviors* (Shearer et al. 2005), and *gender-based occupational stereotyping* (Morrison, et al. 1994), to name a few. A review of the scholarly literature on gender as social-psychological phenomenon notes that "few studies have examined children's stereotypes about the sexes in social relationships, such as…sex differences in dating behaviors" (Ruble and Martin 1998, p. 949). A number of scales of gender attitudes have been developed, but none have explicitly sought to incorporate gender attitudes related to dating as an important component of gender attitudes generally. Furthermore, scale development efforts have infrequently focused on early adolescents, and still less frequently been thorough in investigating group differences in gender attitudes within this age group. Some scales may also be inadequate for widespread use as many are designed to address a very narrow substantive focus. Clearly, given the importance of understanding the structure of gender attitudes among adolescents of various demographic backgrounds, inquiry into dating and relationships as a domain in which such attitudes operate is in order.

This research seeks to remedy these gaps in the literature by developing a model of gender attitudes that includes attitudes regarding gendered expectations for boys and girls within a dating context as an important component of a more general conceptualization of gendered attitudes toward behavior. First, a discussion of the theoretical perspectives underlying this research as well as a survey of already existing gender attitudes scales is presented. This model is informed by psycho-social theories of gender schema[1], most notably, Simon and Gagnon's scripting perspective (1984). The use of survey data drawn from the Teen Media project allows for analyses to be performed across race and sex groups, including black and white girls, and black and white boys who range in age from fourteen to sixteen (9th and 10th grades). Model development will include Confirmatory Factor Analyses within a structural equation modeling framework to allow for investigation into competing modeling structures, an exploration of potential measurement error among the selected indicators as a result of methodological artifacts, as well as multi-group tests of measurement invariance.

Gender Attitudes in Adolescence

Theoretical Approach

Gendered learning is commonly thought to begin at a very early age. Children as young as two years have been found to use gender schemas (Bauer 1993). By adolescence, a great deal of gendered learning had already been accomplished, but adolescence remains a developmental stage at which gendered norms and practices become increasingly salient. It has been observed that strict compliance with behaviors that have historically or stereotypically been associated with one sex or the other may intensify during adolescence

[1] Gender schema may be defined as "networks of gender-related information" (p. 935, Ruble and Martin 1998).

(Hill and Lynch 1983). In addition, research shows that adolescents express more sexist attitudes relative to adults (Galambos et al. 1985; Urberg 1979) and that adolescents reinforce conformity to stereotypical gender norms within their peer groups (Chambers, Tincknell, and Van Loon 2004). The earlier stages of adolescence thus present a unique phase of life at which to examine expectations and attitudes regarding gendered behaviors.

Two overarching paradigms present somewhat opposing ways of understanding gender. One is the functionalist approach to gender. Indeed, it is from functionalism that the term "gender role" is derived and such roles may be defined as different but complimentary for males and females. Functionalism posits that roles are learned at an early age and are largely unvarying and unproblematic, suggesting an adaptation to larger social structures, such as the division between the home and workplace (Fox and Murry 2000). The advent of feminist scholarship challenged this paradigm and suggested that gender and gender roles were socially constructed. This view of gender suggests that gender is a performance and that only continual social reinforcement produces the compliance with stereotypical behaviors and modes of presentation that are taken as given in the functionalist approach. Social constructionists point out that those traits, norms, and attitudes that comprise gender vary across cultures, historical eras, and even over a person's lifetime. Gender is mutable rather than fixed; gender is something you "do" as opposed to something you "are" (Ferree 1990). Furthermore, gender acts as a mechanism by which societal resources are distributed, and unequal distribution of those resources serve to reinforce a hierarchically organized gender structure (Fox and Murry 2000).

Although the social constructionist perspective more accurately captures how modern feminist scholars view the operation of gender in society, at least one concept appears to link

these two disparate perspectives. Both functionalism and social constructionism have been associated with the notion of gendered "scripts". For example, Fox and Murry (2000) state that, within a functionalist framework, "gender is enacted or played out according to scripts that are carefully taught and repeatedly rehearsed until behavior governed by one's gender role script becomes so natural as the be seen as an integral part of oneself" (p. 1163). At the same time, in an essay detailing the evolution of their thinking surrounding the concept of the *sexual script*, Simon and Gagnon (2003) attribute this concept to a social constructionist perspective that rejected purely biological sexual drives and included the possibility of social influences. Most closely related to the gender role script used by Fox and Murry (2000) above is Simon and Gagnon's idea of *cultural scenarios*, the most abstract level of scripting that refers to institutionalized role requirements and practices. On a more concrete level, *interpersonal scripting* takes place when abstract role scripts are applied by individual actors to specific situations that arise (Simon and Gagnon 1984). As such, the notion of scripting appears to bridge these very different perspectives[2]. A simple compromise between the two would allow that gendered scripts exist (as stereotypical modes of behavior or clusters of attitudes), but that individuals are variable in their adherence to such scripts. A scripting perspective carries with it implications for the measurement of gender constructs.

Approaches to Measurement

The notion of scripts is frequently evoked by researchers who investigate how teens learn to enact gender and are especially pertinent to the study of the romantic and sexual domain of adolescent life (Ward 1995). As adolescents reach puberty and become more interested in romantic relationships, they may utilize culturally available scripts as guidance

[2] This argument should not be understood to imply any endorsement of the "naturalized" roles for men and women suggested by a functionalist paradigm, merely the utility of a scripting approach.

regarding how to proceed in a novel domain for them, such as dating. Dating and romantic relationships in adolescence are also a prime arena in which to understand teen's attitudes related to gendered behavior. Not only are relationships inherently gendered[3], but romantic relationships are exceedingly important to many teens (Bouchey and Furman 2003), even if they are only hypothetical[4].

Much of the development of gender attitude scales has focused on gendered expectations about family, work, and political roles, all of which may seem like distant problems to the average teenager. Answers to standard questions, such as, "In general, the father should have greater authority than the mother in making family decisions" or "I don't think a husband should have to do housework" may say little about the scripts teens enact in their daily lives. Dating and relationship behavior, in contrast, is a focus for many teens.

Examples of gender scales that primarily use items adapted from scales originally designed for use with adults include the Male Role Attitude Scale (*MRAS*; Pleck, Sonenstein, and Ku 1994) and the Attitudes toward Women Scale for Adolescents (*AWSA*; Galambos et al. 1985)[5]. While each scale contains at least one item that could potentially relate to dating relationships, more often items intended to tap into differences in attitudes toward romantic relationships are focused on the division of labor in the home, or on the respect a husband should be accorded relative to a wife. Galambos et al. (1985) discovered that, when asked about how they might combine work and family roles in the future, adolescent participants in

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[3] Relationships are gendered regardless of whether they are heterosexual or homosexual, although the types of questions asked of the teens in these data generally refer to heterosexual relationships.

[4] Simon and Gagnon (1984) include in their conceptual framework a third level, *intrapsychic scripting*, which refers to an "internal rehearsal" (p. 53) in which an individual imagines themselves crafting a personal script for a given scenario that involves alternative outcomes. Therefore, hypothetical dating scenarios are not out of bounds within a scripting framework.

[5] The *MRAS* is based on the Male Role Norms Inventory (*MRNI*; Levant and Fischer 1998). The *AWSA* is based on the Spence-Helmreich Attitudes toward Women Scale (*AWS*; Spence, Helmreich, and Strapp 1973).

their study had simply not thought much, if at all, about the topic. They also found that family and work attitudes correlated weakly with the AWSA, further demonstrating that such domains might prove only marginally relevant to the study of gender attitudes among adolescents.

Recent work with adolescent gender attitude measurement has sought to refine the conceptual frameworks employed, but have restricted scale development to include only boys or girls, not both. Examples of this approach include the Adolescent Masculinity Ideology in Relationships Scale (*AMIRS*; Chu, Porche, and Tolman 2005) and the Adolescent Femininity Ideology Scale (*AFIS*; Tolman and Porche 2000). Each is carefully constructed to assess masculine and feminine ideology, respectively, utilizing a normative approach to gender attitudes. The *AMIRS* situates masculine ideology within a relational framework, highlighting male need to maintain the appearance of having power and privilege in relationships, but distinguishes the attitudes measured from attitudes toward gender relations. While some items relate to attitudes regarding dating and sexual norms, this is not the scale's focus. Unlike the *AMIRS*, which its creators determined to be unidimensional, the *AFIS* measures two aspects of feminine ideology considered to be particularly pertinent to female adolescents: bringing an inauthentic self to relationships and having an objectified relationship with one's body. Both the *AMIRS* and the *AFIS* utilize items appropriate to the age group they target and each has been tested quite thoroughly with populations diverse in both class and race/ethnicity. However, neither is designed with a focus on the dating domain of adolescent life, and each is designed for use with only boys or girls. The former characteristic neglects what may prove an important aspect of teen gender attitudes, while the latter limits the broad applicability and use of the scales.

Some scales do focus on dating, but are quite specific regarding the aspects of dating that they measure. Two examples of this are the Hyperfemininity Scale (Murnen and Byrne 1991) and the Attitudes toward Dating and Relationships Measure (Ward and Rivadeneyra 1999). The Hyperfemininity Scale focuses on the degree to which women's attitudes reflect the following suppositions: that relationships with men are of primary importance, that physical attractiveness and /or sexuality can be 'used' to help secure or preserve a romantic relationship, and that "traditional"[6] patterns of sexual behavior in men are preferred (p. 481). While this scale has clear implications for gender attitudes, it taps a very narrowly defined construct. Furthermore, the scale was developed using college aged females only and many of the items are worded for use with this population.

The Attitudes toward Dating and Relationships Measure was specifically constructed to reflect the types of attitudes and values likely to be seen by youth on television based on a prior content analysis of that medium (Ward 1995). This content was organized into two subscales, one measuring endorsement of recreational sex attitudes and the other endorsement of traditional dating norms. Unfortunately the individual items were not listed, but the inclusion of a separate gender attitude scale (the *AWSA*, described above) indicates that the authors did not feel that these subscales adequately assessed general gender attitudes. Like the Hyperfemininity Scale, the Attitudes toward Dating and Relationships Measure was tested among college aged students (ethnically diverse males and females). Each of these

[6] In this research, the term "traditional" is utilized to refer to one end of the hypothesized continuum of gender attitudes. Among gendered *dating* attitudes, it suggests that these attitudes stem from what is known as the "sexual double standard", in which men play an active role in dating and sexual practices, while females are largely passive and reactive to male advances. The sexual double standard also informs beliefs that sexual activity is an approved component of masculinity, while pre-marital sexual activity among women is looked down upon. More generally, the term "traditional" refers to attitudes related to the belief that behavioral expectations will differ between males and females. The term "egalitarian" is used to connote attitudes on the opposite end of this continuum, e.g. that males and females should be expected and allowed to behave similarly in both dating situations and in general.

scales arguably explores gender attitudes in a dating domain, but their specificity of purpose and focus on older teens leaves room for further exploration.

Dating and relationship norms are interesting for another reason as well: they remain contentious while disagreement over the need for gender equality in other domains, e.g. schooling, has declined. For example, little variability in response was found when adolescent girls were asked about gender equality in the pursuit of educational and career goals, but a great deal of disagreement remained about whether adolescent girls should conform to traditional dating scripts (Bakken and Myrliss 1990). Adolescent's views on gender can therefore be accessed by asking about adherence or rejection of gendered dating scripts.

When considering adolescent gender scripts, potential differences across sub-populations are of interest as there are both theoretical and empirical reasons to suspect that both a teen's sex and his or her racial background may play a part in determining gender attitudes derived from such scripts. The next section outlines why such differences may exist and hypothesizes the direction of potential differences across race and sex groups.

Potential Race and Sex Differences

Researchers acknowledge that scripts vary across individuals and groups. The theoretical underpinnings of sex differences are perhaps more easily explained. As noted previously, feminist theory suggests that there is a hierarchical gender organization, rooted in patriarchy, which confers advantage on men relative to women (Fox and Murry 2000). In order to maintain their superior status, in general, men (and boys) may subscribe to beliefs that perpetuate their power and privilege, or that put women (and girls) at a disadvantage in various domains, including interpersonal dating relationships.

For instance, differences between males and females in terms of power within relationships have historically been rooted in what is known as the "sexual double standard". This "script" dictates that men take an "active" role in determining how the relationship will unfold: asking a girl out, making logistical plans for a date, leaning in for the goodnight kiss (or more). Women are generally seen as reactive in this scenario (accepting a date, fending off sexual advances), except where interpersonal relationship facilitation is needed (making small talk). This script is thought to be tied to the public/private sphere divide that has defined men's and women's "roles" during recent historical eras.

Race and ethnic differences[7] in gender attitudes are not as fully theorized as sex differences, but some literature does speak to this issue. Research into gender attitudes among black adolescent girls has shown that they may be better equipped to critique and subvert stereotypical gender portrayals than white girls. Much of this research has been conducted through focus groups in which girls were asked to demonstrate to researchers how they would typically read teen-oriented fashion magazines. The images in these magazines often portray teen girls as being very thin, beautiful, and the advice pages and stories carry messages that reinforce a passive female role (Duke 2002; Durham 1999; Kaplan and Cole 2003). Black adolescent girls' ability to critique the magazines' content is hypothesized to stem from their ability to recognize that such content represents a Caucasian feminine ideal. Such representations are not perceived as "real", and are therefore subject to ridicule and disbelief. Consequently, the "ideal" associated with the images and text is less likely to be incorporated into one's personal views on gender (Duke 2002). Since such reactions have been identified using a primary adolescent source of information about dating and

[7] Since this paper's empirical sample contains only black and white teens, discussion will be confined to differences between these two groups.

relationships (magazines), it is plausible that similar beliefs may be evident when assessing gendered beliefs about dating norms.

Much less is known about differences in gender attitudes between black and white adolescent boys, and one reason for this is that there is very little research that includes black boys. Information describing their gender attitudes must be inferred from analyses of adult black males, and as such the literature is generally confined to attitudes regarding family, employment, and political rights, rather than dating. Still, such research may shed some light on the potential sources of variability. A recent review produced a mixed picture when national probability samples of adults were considered. African Americans men were more likely to express egalitarian views regarding women's participation in the workforce, but were less egalitarian than whites when it came to attitudes about gender roles within families and women in positions of power (Kane 2000). Some authors have sought to explain this pattern by suggesting that racial discrimination may encourage black males to compensate by emphasizing male dominance, which may take the form of aggressive masculinity (Ransford and Miller 1983; Rowan, Pernell, and Akers 1996). This emphasis then creates tension between a more traditional form of masculinity and the egalitarian work roles observed in African American families (Hunter and Davis 1992). The ramifications of these potential patterns are unclear when applied to adolescents. However, since family roles are more closely related to dating roles than are work roles, it stands to reason that black male teens may be somewhat more likely than white male teens to espouse traditional dating attitudes.

Based on the information provided by the studies outlined above, it is hypothesized that boys will be less likely to espouse egalitarian gender attitudes than girls. While black boys are likely to hold more traditional gender attitudes than white boys, theoretically, it is

possible that black girls may be somewhat more egalitarian than white girls when it comes to gender attitudes. These hypotheses are generally born out in empirical studies. Using a national probability sample of adolescents (ages 13-19), researchers found that males and racial minorities (African Americans, and an "Other" category) expressed more traditional gender attitudes than females and white respondents (Canter and Ageton 1984). This was true for an overall scale of sex role attitudes as well as for sub-scales measuring attitudes toward division of labor in the home versus more general gender stereotypes, although more agreement between girls and boys were found on the regarding division of household labor norms. A notable exception is that black girls were *not* found to express more egalitarian gender attitudes than white girls, although the authors note that inter-group racial differences for both females and males were relatively small (e.g. respondent sex was more strongly predictive of gender attitudes than was respondent race).

The goal of this research is to develop a model, for use with adolescents, which focuses on dating and relationship norms as a particularly relevant domain for the expression of gender attitudes. This research attempts to move beyond the limitations of already existing scales by exploring the dating and romantic relationship aspect of such attitudes as a key component of attitudes toward gendered behavior generally. In addition, the utility of this model within sex and gender groups will also be explored. The next section outlines the data used for this purpose and the methodology employed.

Data

Data for this study were collected as a part of the Teen Media study. The primary purpose of this project was to establish whether sexual content in the media consumed by

early and middle adolescents influenced their sexual behavior. In addition to these primary concepts, a number of other attitudinal items thought to be related to sexual behavior, including gender attitude items, were included in the surveys. Survey data were collected using an Audio-CASI (Audio Computer Assisted Self Interview) approach to assure privacy. The sampling frame for the study included three school districts in the Southeastern United States located in rural, suburban, and urban areas. Of the sixteen schools eligible, fourteen agreed to participate. No demographic differences were detected between participant and non-participant schools.

The Teen Media sample contains data collected from equal strata of male and female, black and white teens. Each of the four stratified demographic groups represent between 24 and 26 percent of the total sample. This allows for testing across sex and race groups without having to collapse categories due to small numbers of respondents. The variables used in these analyses come from questions asked during the second wave of data collection when the adolescent respondents were between the ages of 14 and 16 (9th and 10th grades). A total of 1017 teens responded during this wave[8]. Table 2.1 provides a snapshot of the demographic profile of the respondents.

Eleven items thought to measure gender attitudes were included in the second wave of survey data collection. Among these are a number of items that are potentially linked to gender attitudes related to dating and relationships. Some of these measures are borrowed (using the original wording) from other scales, whereas others were borrowed with modifications to the wording. Table 2.2 lists the items utilized in the Teen Media survey (including abbreviated names for the variables), as well as the likely source of these items,

[8] The retention rate between the two survey data collection points was very high (94.7%) and no significant demographic differences were detected between those who did not participate and those who did (Brown et al. 2006).

the original construct they were designed to measure, and the wording of the original item. The availability of gender attitude items, the age of the teens included in the sample, as well as the equal stratification of the sample by race and sex all contribute to the appropriateness of the Teen Media data for use in these analyses.

In order to explore the relationships among these variables listed above, the use of Confirmatory Factor Analysis in a structural equation modeling framework is utilized. This style of analysis provides a theoretically informed and methodologically sophisticated approach to model development which allows for the testing of explicit assumptions about the structure of the underlying data and the equivalence of measurement across groups (such as whether the covariance matrices and threshold cutoffs are the same across groups). Due to the ordered categorical nature of the gender variables, software that allows for the explicit modeling of categorical data is employed[9]. The next sections detail the methodological strategy and the theoretical bases for the proposed model forms.

Model Development

Theoretical Bases for Modeling Strategies

Confirmatory factor analyses require that a theoretical basis for a particular model be articulated. Two potential models are outlined here, one based on gender schema theories and the other on psychological models of self-esteem. Model fit statistics will be compared to evaluate which of the hypothesized forms best captures the structure of the underlying data. Figures 2.1 and 2.2 depict the models using path diagrams and will be elaborated in the next part of this section.

[9] Specifically, Mplus, version 4.1 (Muthén and Muthén 1998-2007). Such modeling has been shown to be necessary in order to achieve reliable results in multi-group confirmatory factor analysis models (Lubke and Muthén 2004).

The first model is informed by gender schema theories which are cognitive in nature. Broad conceptualizations of gender schema assert that abstract theories about gender groups guide behavior (Martin 1993; Martin, Eisenbud, and Rose 1995) or that gender provides a "lens" that colors perception and thinking (Bem 1993; see Ruble and Martin 1998 for a review of gender schema theories). These views of how gender operates are analogous to the *cultural scenarios* described in Simon and Gagnon's scripting perspective (1984). Therefore, the hypothesis for Model 1 is that all items will load onto one underlying construct, "GENDER", which would capture the idea that a variety of gender attitudes toward behaviors stem from higher order cognitive structures.

The second model takes into account domain-specific clusters of gender attitudes by proposing two nested latent constructs. Items that are primarily concerned with dating scenarios are hypothesized to load on one latent construct, labeled "DATING". This latent construct is hypothesized, in turn, to load onto a second latent variable, "GENDER". The overarching "GENDER" construct is multi-dimensional. "DATING" represents one dimension and the remaining indicators each represent other potential dimensions that are hypothesized to each load independently onto "GENDER". This modeling strategy is comparable to the approach taken by psychologists interested in self-esteem. *Global* self-esteem assumes that adolescents will summarize an aggregate self-esteem from across domains and that each domain is of equal importance (Dusek and McIntyre 2003). Researchers found these assumptions problematic and proposed that *domain-specific* self-esteem measures be utilized. This model takes the same approach to gender attitudes. The latent "DATING" construct is free to load strongly or weakly on the more general latent variable, which is likely informed by a number of domains in addition to dating (the

individual indicators). In keeping with a scripting approach, this model allows abstract cultural scenarios to be applied in a more limited and concrete fashion, similar to the notion of *interpersonal scripting*. In order to test which of these models is a better fit to the data, indicators of the latent constructs must first be selected.

Selecting Indicators of the Latent Constructs

The Teen Media data contain eleven items chosen to measure gender attitudes. Models were originally formulated using all of the available items, and items with low reliability estimates (measured by the item's r^2 value[10]) were flagged. The models were then reformulated without the low reliability items and the fit (measured by the Bayesian Information Criterion, or BIC[11]) of the two sets of models were compared. Since the two sets of models contained different indicators, the models are not considered nested[12] and therefore a χ^2 difference test could not be conducted. However, the very low r^2 values of the eliminated items in conjunction with the dramatic improvement in fit of the models from which they had been removed both support this decision. Tables 2.3 and 2.4 summarize these findings. Figures 2.1 and 2.2 only include the seven of these that are eventually utilized within the models.

A rather striking pattern is noticeable among the eliminated items: all of the statements concern norms regarding female behavior. Why did these items not perform well? Two different reasons are hypothesized. For the item, "Girls are better leaders than

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[10] See Bollen (1989, p. 218-222) for a discussion of an item's r^2 value as a measure of its reliability in a structural equation modeling framework.

[11] A BIC with a smaller value indicates a better model fit and a negative value suggests that the hypothesized model fits better than the saturated model. BIC statistics are calculated by the author using the following formula: $BIC = \chi^2 - (df * \ln(N))$.

[12] This statement refers to the constraints of the software package used for these analyses (Muthén and Muthén 1998-2007).

boys", it is likely that the item is poorly worded for its intended purpose. All other gender attitude measures considered here are phrased in such a way that a high score should reveal a more egalitarian stance on gendered behaviors, i.e. boys and girls should be allowed to engage in the same sorts of activities and behaviors regardless of gender. The phrasing of the leadership item is such that the middle response category would actually be the most egalitarian response, indicating that the respondent thinks that BOTH boys and girls can be good leaders. Measures of central tendency across race and sex groups demonstrate this pattern (see Table 2.5). This item does not appear to generate enough variability to discriminate among adolescents' gender attitudes.

The low reliability of the remaining three items may be explained through a theoretical argument presented by Pleck, Sonenstein, and Ku (1994) regarding attitudes toward masculine and feminine ideologies[13]. It is asserted that these sets of attitudes are conceptually distinct, and that is it entirely possible to hold liberal beliefs regarding female roles while simultaneously holding conservative attitudes regarding those for males (and vice versa)[14]. Two of the eliminated items are explicitly about female behaviors ("It's alright for a girl to make the first move in a relationship" and "Sometimes girls have to compete with other girls to get the guy they want"). The remaining item is phrased differently based on the sex of the respondent, but refers in either case to a behavior more often associated with

[13] Argument originally formulated in Pleck (1981).

[14] However, acknowledging that attitudes toward men or women are typically found to have modest correlations, Pleck points out that many individual items actually address implicit or explicit comparisons of the sexes, and are therefore impurely measure only one or the other ideology. Thus, attitudes regarding gender may form a three-part system: (1) male-specific attitudes, (2) female-specific attitudes, and (3) comparative attitudes.

expectations regarding female dating behavior ("acting sexy"[15]). Thus, these items are likely tapping into feminine ideological constructs. The items that remain in the model appear to relate more strongly to masculine ideology and are therefore unlikely to correlate very highly with feminine ideology measures, resulting in poor model fit and low reliability.

The implications of this interesting result are twofold. First, masculine and feminine ideologies likely represent two dimensions of adolescent gender attitudes, and, among the middle adolescents included *in this sample*, indicators of masculine ideology may more strongly reflect gender attitudes than do indicators of feminine ideology. This may be particularly true when it comes to dating norms. Second, the reason for this may be that there is more variability in attitudes among adolescents regarding their expectations for male behavior than for female behavior. This is quite surprising as gender attitudes toward women have largely been regarded as changing more rapidly over recent decades than attitudes toward male behaviors. However, as noted previously in this paper, gender attitudes expressly related to dating have remained contentious among teens while attitudes related to women's educational, family, and political roles have not.

While this result raises very interesting questions regarding the relative importance of masculinity as a defining aspect of adolescent gender attitudes, the available data are ill-equipped to facilitate definitive answers. Numerous attempts were made to explicitly model the contention that a latent variable comprised of (hypothesized) masculinity-related measures would load more strongly onto a general latent gender construct than one comprised of femininity-related measures. Unfortunately, the proposed models were unable to achieve convergence. Therefore, the questions raised above remain speculative and in

[15] Recall that this item, while rephrased for use with both boys and girls, was originally drawn from the Hyperfemininity Scale (Murnen and Byrne 1991). In fact, all of the eliminated items were originally used in either this scale or from the Attitudes toward Women Scale for Adolescents (Galambos et al. 1985).

need of further research. An expanded discussion of these points is included in the conclusion section of this paper.

Model Comparison and Selection

Table 2.6 compares the results of Models 1 and 2[16]. A stated above, in Model 1, all indicators load onto one latent construct, and all do so at a high level of statistical significance. Significant factor loadings with high values (values closer to 1) indicate that the measures are valid[17]. However, the fit indices for this model reveal that it may not be capturing the underlying structure of the data. Hu and Bentler (1999) suggest the following conventions for assessing fit[18]:

TLI > 0.95
CLI > 0.95
RMSEA < 0.06
SRMR < 0.09 for categorical indicators

According to the acceptability thresholds detailed above, three of the indices would characterize this model as having a less than adequate fit. Further evidence of this conclusion is shown in the high BIC and the large and significant χ^2 statistic.

Model 2 separates the indicators into two groups. One of the groups loads onto "DATING", a construct defined as gender attitudes about appropriate behavior for males and females in a dating scenario. The rest of the indictors load on "GENDER", a construct defined as encompassing general gender attitudes. As with Model 1, all of the measures load

[16] In the analyses presented in this section and the next, model parameters, such as factor loadings and indicator thresholds, will be allowed to vary freely across groups in instances where various groups are compared since the models are run separately within each group.

[17] See Bollen (1989, p. 197-206) for a discussion of factor loadings as an indicator of validity in a structural equations modeling framework.

[18] There is some disagreement in the literature regarding exact cutoff points for various fit statistics. However, the cutoffs listed here do not appear to be out of keeping with other suggestions.

strongly and significantly on their respective latent constructs, indicating a high degree of validity. However, the indices for Model 2 show that the fit of the model is quite a bit better than Model 1. Only the RMSEA for Model 2 indicates a weak fit. The χ^2 statistic remains significant, but a comparison of the BIC (a measure which is less sensitive to the number of cases included than the χ^2 statistic) demonstrates a much better fit for the two factor model. Based on these results, further analyses are restricted to Model 2.

The selection of this model affirms the hypothesis outlined earlier that gendered attitudes regarding dating and relationships will be an important and unique component of gender attitudes among adolescents generally. Further support of this contention is shown in the loading of the latent "DATING" construct onto the latent "GENDER" construct (labeled Gender by Dating), which is quite large and significant, thus demonstrating that attitudes related to dating and relationships comprise one dimension of a multi-dimensional adolescent gender construct. While the current form of the model is quite good, the fact that the BIC is not negative demonstrates that the model is not yet saturated. The next section will explore whether accounting for a methodological artifact may lead to an improvement in model fit both generally and across demographic subgroups.

Sources of Measurement Error

Sometimes, methodological artifacts may contribute to shared error among construct indicators. There is reason to suspect that this may be the case for the indicators of gender attitudes included in the above model. Since the measures utilized in these analyses were drawn from source scales that had already established these measures as indicators of other constructs, it is hypothesized that, as a result of having been developed for a shared purpose,

the errors associated with the indicator variables may be systematically related, thereby causing an increase in the correlation between these measures (Saris and Aalberts 2003). Taking this into account may improve the model's fit to the data[19]. The methodological strategy employed allows the errors of items from the same source scale to correlate. See Figure 2.3 for a visual representation. This strategy draws upon actual knowledge of the source scales, as well as the hypothesized separation between masculine and feminine ideological constructs proposed by Pleck (1981) to inform modeling choices. The modeling approach initially allowed the errors among the indicators thought to tap into feminine ideology to correlate (MAN and CHARGE), however, these additional correlations were dropped after repeated reformulations demonstrated that their presence provided no improvement in model fit. Therefore, modeling proceeded focusing solely on the items

Table 2.7 presents the results of the correlated error strategy. The indices demonstrate a dramatically improved model fit using this approach. The factor loadings are high and significant, and the r^2 values remain within acceptable levels. Here, the BIC is utilized as the primary fit index by which a preferred model is chosen. As Table 2.7 shows, the BIC associated with the correlated error model is now negative and all other fit indices provide support for the conclusion that this model is an excellent fit to the data overall. Therefore, the model which includes the correlated errors hypothesized to occur due to some groups of indicators being derived from pre-existing scales is found to be superior to the model which does not include these errors. However, the question of fit for race and sex-based subgroups remains.

[19] A second fit improvement strategy that utilized a third latent variable to model associations among variables derived from the same source scales was also developed but was unable to conform across demographic groups. The results of this strategy are summarized in Appendix 2A.

Table 2.8 presents the results of Model 2 across race and sex groups in which the correlated error strategy is employed. Of key interest is whether the model fits adequately for each group. Accordingly, each model is run separately for each group, so that factor loadings and other parameters may vary freely[20]. A review of the fit indices shows that the form of the model holds across all demographic groups[21]. In each instance, the BIC is negative, and for the most part, all other fit indices are within the guidelines outlined above. Only among white boys is the fit of the model unable to be deemed excellent since the TLI and RMSEA statistics border on acceptability. The next step in the analysis is to perform tests of measurement invariance in order to determine whether key model parameters are static across groups.

Multi-group Tests of Measurement Invariance

The establishment of measurement invariance on specific parameters within a model is suggested when substantive cross-group comparisons are of interest, as they are here (Vandenberg and Lance 2000). Research that has sought to develop scales of adolescent gender attitudes has not previously utilized this technique but has mainly relied on tests of scale means to determine differences across groups. These tests are valuable in that they serve to identify the specific parameters within a model where group differences manifest.

[20] This is different than running the model as a multi-group analysis, which would require some parameters to be the same across groups.

[21] The inclusion of correlated errors also produces group-specific improvements in fit relative to Model 2 when correlated errors are not explicitly modeled. Appendix 2B contains results from Model 2 without correlated errors across race and sex groups for comparison.

The first test of invariance involves assessing whether the *form* of a given model is equivalent across groups[22]. The fit of a model (as indicated by various fit indices) across groups is typically indicative of form equivalence. The adequacy and relative consistency of fit across groups evident in Table 2.8 indicates that Model 2 takes the same form across the race and sex groups included here. This means that, for each group, an overarching and multi-dimensional gender construct on which various indicators of specific gender attitude domains (including the multiple indicator dating construct) load is a good description of the data patterns for this sample.

The next step in the investigation of measurement invariance is an omnibus test of covariance matrices across groups. There is general agreement within the literature that further tests of measurement invariance should not proceed until such a test determines that the groups are not invariant (Vandenberg and Lance 2000, p. 17). Table 2.9 presents the results of both χ^2 difference tests and Wald χ^2 tests across groups. Generally, these tests determine whether a model in which the covariances among variables as well as the thresholds associated with categorical indicators are constrained to be equal across groups fits better than a null model in which these parameters are free to vary. Statistical significance associated with the test statistic indicates that the constrained model has produced a worse fit than the free model.

As the results in Table 2.9 indicate, the covariance matrices are not found to be invariant across any group comparison for either type of test. What this means is that the pattern of correlations among the measures utilized in the articulation of the model are not the same across groups. Interestingly, the differences between boys and girls are greater than

[22] Bollen (1989) states that "two models have the same form if the model for each group has the same parameter matrices with the same dimensions and the same location of fixed, free, and constrained parameters."

those between black and white teens, indicating that gender attitudes among adolescents are more strongly patterned by a teen's sex than by his or her racial identity. Since these tests reveal that the underlying covariance matrices across groups are not invariant, further tests of invariance are conducted.

There is less agreement among scholars as to the ordering of further tests of measurement invariance (Vandenberg and Lance 2000), and Bollen (1989) suggests that such testing is often determined by the substantive questions being asked by the researcher. As the measures used in these analyses are categorical in nature, the thresholds, or breaking points between categories, may vary across groups. These in turn will influence the factor loadings of the categorical indicators on the proposed latent variables within the model. If the tests performed below reject the null hypothesis that the cut points are invariant across groups, then measurement differences likely exist. If measurement is not uniform across groups, then we risk attributing difference stemming from a measurement artifact to substantive difference.

Initial runs of the threshold invariance model revealed that, among black respondents (both boys and girls), standard errors associated with the factor loadings for the variables "ROUGH" and "RESPECT" were large relative to those associated with the other indicators. Further inspection of the descriptive output related to these variables showed an insufficient percentage of cases at the lower end of each of the indicators' distributions, meaning that few teens were likely to strongly agree that promiscuous boys deserve respect or that girls should never participate in rough sports. Therefore, the lower two categories of these indicators were collapsed, creating four category indicators across groups in those instances[23]. This

[23] Mplus requires that a variable have the same number of categories across all groups in the analyses (Muthén and Muthén 1998-2007).

correction reduced the size of the standard errors such that they became comparable to those associated with the other indicators. It should be noted, however, that this procedure reduces the number of thresholds to be tested. The following test investigates whether the thresholds of the categorical indicators are invariant across groups.

Table 2.10 shows the fit statistics and Wald χ^2 tests across groups for the models testing threshold invariance[24]. The Wald χ^2 tests indicate that in each model, the thresholds across groups are not found to be invariant, as indicated by the statistically significant test statistic[25]. This result precludes further invariance testing as the factor loadings are typically tested next and these are likely to also be different across groups if the thresholds prove to be. Additional investigation into the fit of a multi-group model in which all possible thresholds are freed versus one in which they are fully constrained across groups may shed further light on the treatment of the thresholds.

Fit statistics resulting from such models are displayed in Table 2.11. Multi-group models are run using all four demographic groups separately, black versus white teens, and boys versus girls[26]. In order for the less constrained model to be identified, not all of the thresholds are allowed to be freed. Those associated with the indicators that set the scale for each latent variable (the first listed variable in each latent variable modeling statement) must be constrained to equality across groups. This means that 5 of the possible 7 indicator

[24] In keeping with suggestions made by Jöreskog (2005, see section 2.7), the first and second thresholds of each indicator variable are set to "0" and "1" respectively. This parameterization of the categorical indicators allows the means and standard deviations of the variables to be utilized, rather than standardized. In addition, identification procedures for multi-group invariance testing using ordered categorical variables in Mplus are followed (Millsap and Yun-Tein 2004).

[25] The threshold estimates produced within these models also demonstrate group differences and can be found in Appendix 2C.

[26] Rather than pursue the more complex Jöreskog (2005) specifications, these models simply follow typical strategies for freeing and constraining parameters. In Mplus, the Delta parameterization is used. In this specification with categorical variables, the scale factors for each indicator must be set to be equal across groups when thresholds are freed (Muthén and Muthén 1998-2007).

variables have freed thresholds in the less restricted model. While not all thresholds are free, this model is as unconstrained as modeling specifications allow. In addition, categories in "READY" and "RESPECT" with too few cases remain collapsed as described above.

The majority of the fit statistics included in the table clearly demonstrate that the models in which parameters are freed are a much better fit to the data than those in which the thresholds are constrained. However, there are some discrepancies within this general pattern. For instance, due to the greater number of degrees of freedom in the constrained models, the BIC measures for these models generally produce lower negative values, which indicate a better fit (the exception being the models in which boys are compared to girls). This statistic is at odds with all other conventional measures of model fit included here, and so it is difficult to conclude in this instance that the BIC should guide model selection. Another interesting finding is that, much like the models above, the differences generated between boys and girls are much more pronounced than those produced by race differences. Both the constrained and freed versions of the model that compared black and white teens produce fit statistics that fall within acceptable guidelines. This may indicate that the threshold cutoffs are not particularly pronounced between race groups but that such differences are quite distinct between boys and girls. In the latter case, there is a substantial difference in fit between the freed and constrained models. Implications of this finding are explored in the discussion section.

Discussion

This research sought to develop a model of gender attitudes for use with adolescents that included dating and relationship-related attitudes as a key component of gender attitudes

generally. In addition, explorations of potential differences across race and sex groups as well as the influence of methodological artifacts on measurement error were also included. The results presented in the preceding sections inform discussion of these topics.

First, two theoretically informed models of adolescent gender attitudes were proposed. The first of these was conceptualized within a broad gender schema framework, analogous to the cultural scenarios described by Simon and Gagnon (1984). This theory predicts that a variety of gender attitudes across various situations would be generally informed by an overarching and abstract gender construct, therefore, a one-factor model of gender attitudes among adolescents was designed to represent this idea. However, the fit of this model to the data revealed that such a conceptualization is inadequate to capture the complexities inherent to the structure of adolescent gender attitudes.

A second model drew upon the idea that gendered attitudes may be domain specific, and that a general conceptualization of adolescent gender attitudes will be informed more or less strongly by various domains. Given the goals of this research, emphasis was placed on developing a model in which a domain related to dating and relationships was highlighted. In doing so, a model which proposed two latent constructs was developed. In this model, a latent variable measuring gender was hypothesized to load onto a general gender attitude latent variable. The fit of this model is demonstrably better than the fit of the first model, suggesting that not only is a domain specific approach to gender warranted, but that attitudes about gender as expressed through attitudes regarding dating relationships comprise an important part of the picture among young adolescents. From a scripting perspective, it is insufficient to focus solely on abstract cultural scenarios. The results of the modeling

support the notion that measurement should take place at the level of interpersonal scripting, where adolescents apply cultural scenarios to specific domains, such as dating.

While it remains of substantive interest to inquire about adolescent gender attitudes regarding work, family, and political roles, the findings here indicate that gender is also at play in the realm of dating, an arguably more salient aspect of the lives of younger adolescents. These results provide support for the assertion that dating and relationship-related gender attitudes are one facet of a larger, multi-dimensional conceptualization of "gender". In practice, including a wider variety of gender related measures in a survey design would allow for the consideration of multiple latent constructs that would correspond to additional "domains", or clusters of attitudes, informed by the overarching gender construct. Statistical testing could be performed across domains to determine which are the most important for this age group and whether the importance of dating attitudes remains robust when other included dimensions are more fully informed by multiple measures. In addition, a wider array of items might also allow for a more explicit modeling of Pleck's (1981) hypothesis regarding the exclusivity of masculine and feminine ideological constructs.

Within the domain-specific model developed here, the primacy of attitudes originally designed to measure masculine behavioral norms within this age group is a surprising finding which also deserves further scrutiny. Psycho-social research has suggested that adolescence may represent a time during which gender attitudes initially become less flexible than during childhood, but eventually regain elasticity as adolescents move toward adulthood (Huston and Alvarez 1990). However, these findings suggest that ebbs and flows within this developmental pattern may differ between boys and girls. Future research should look

closely at the relative rigidity of adolescent gender attitudes and whether such attitudes differ based on the sex and gender of the individuals about whom the attitudes are held.

Additionally, an investigation into *whether* and *why* beliefs related to male dating behavior may be more indicative of general gender attitudes than female dating behavior is in order. These are especially interesting questions since some recent theorizing has attributed the increasingly power of girls to direct dating relationships to the convergence of rates of sexual intercourse between boys and girls. Risman and Schwartz (2002) link changes in what currently constitutes the "sexual double standard" among adolescents to changes in the pattern of teen sexual practice. This altered "dating script" may be slower to condemn girls who have sex within the confines of a dating relationship, but is a far cry from equality when it comes to sexual freedom without social sanctions for boys *and* girls. In light of such changes, one might argue that attitudes toward female dating behavior should be more indicative of gender attitudes overall as they have been increasingly subject to revision and, therefore, potentially more variable. The findings resulting from these analyses, however, raise questions about this assumption. Clearly, given the complex nature of the interaction between teen sexuality and gender norms, further empirical and theoretical work is required.

Methodologically, the relative influence of masculine versus feminine ideologies may also be an important aspect of model development. Here, strategies that sought to model the shared variance of items derived from the same source scales produced substantial improvements in fit. Specifically, items known to be from source scales concerned with masculine ideology were found to have correlated errors, and also loaded onto a latent construct. The results indicate the importance of taking this sort of methodological artifact into account when modeling gender attitudes, and also the necessity of testing

methodological strategies across demographic groups, as only the correlated error approach proved workable across all groups in these analyses.

Establishing the structure of a model of adolescent gender attitudes across race and sex groups was the third and final goal of this research. The results suggest two conclusions. First, the fit indices generated when the model was run in each group separately suggest that the overall form of the model is equivalent across groups. The model fit was best among white girls, followed very closely by black girls, and was found to be least good among white boys (although completely adequate). In addition, the relationship of the latent "DATING" variable to the more general "GENDER" variable was found to be significant in every group, providing further evidence that dating attitudes comprise an important aspect of gender attitudes generally, even when the race and sex of the respondents differ.

Despite the commonality of the form of the model across groups, invariance testing revealed that the measurement parameters of the models, including the underlying covariance matrices and indicator thresholds, were not equivalent across groups. Theoretically, this is expected as the groups are hypothesized to differ in terms of the relative degree of conservatism or progressivism evident in their gender attitudes. For instance, prior empirical research indicates that boys and African American teens may be more likely to espouse traditional gender attitudes (Canter and Ageton 1984). The implication of the threshold tests for the future use of this scale is twofold. First, if there are theoretical reasons for investigating race and sex differences in analyses that utilize this model, then the statistically significant threshold differences support the derivation of group-specific factor scores for use in such analyses. Second, factor scores may also be output for a general model that includes all demographic groups if such a model allows for freed thresholds across those groups,

which have been shown to produce a better fit to the data. It should also be noted that, in keeping with past empirical findings, differences between boys and girls were found to be of greater magnitude than those between races, within a single sex group. In future analyses that utilize this measure, it is recommended that boys and girls be evaluated separately. There are theoretical reasons to separate groups of black and white teens in analyses as well, but empirically, there is less of a measurement issue when doing so if using this model.

More generally, these results indicate that research efforts to develop gender attitudes models or scales should seek to be precise in determining the source of those differences, as inadequate attention to multi-group invariance may result in inaccurate interpretation of group differences in a substantive context (Vandenberg and Lance 2000). With respect to the previous literature, it is possible that some of the substantive difference between groups may be attributable to measurement error or methodological artifacts. This is not to say that substantive differences do not exist (there are clearly theoretical reasons to believe that they do), rather to point out that previous work has not always closely investigated these issues. Moving forward, confirmatory factor analyses provide an alternative to more conventional scale development techniques.

Although the results of these analyses are compelling, the generalizability of the findings should also be considered. The sample is not nationally representative. In addition to being limited to two racial groups, the findings are also restricted to middle adolescents (14 to 16 years of age), and the sample is drawn from only one southeastern state. It is possible that the results are specific to the teens in the sample. Future work would benefit from a more representative sampling frame that potentially includes adolescents from a wider range of ages. Furthermore, this model's utility may be limited to research in which dating

and relationship attitudes are of interest. As was suggested above, the domain-specific modeling approach implemented here could profitably be paired with a wider array of measures to create a scale suitable for general use. As the review of already existing scales indicates, many important aspects of adolescent gender attitudes have been identified. What remains is to combine these into a general and inclusive model suitable for use with early and middle adolescents from diverse backgrounds.

In summary, this research demonstrates that expectations and prescriptions regarding dating behaviors for boys and girls are tied to their overall gender schema. Further research into the relationship between gendered dating attitudes and other social and behavioral outcomes should be undertaken as these attitudes likely have important implications within the adolescent developmental stage, as well as for decisions that adolescents today might make regarding their future careers, educational aspirations, and romantic relationships.

Table 2.1 Demographic Profile of Sample

Demographic Characteristics	*Percentage of Sample (N)*
Race	
Black	51.7 (526)
White	48.3 (491)
Sex	
Boys	50.4 (513)
Girls	49.6 (504)
Age	
14	23.9 (241)
15	45.6 (460)
16	30.5 (308)
SES	
Free Lunch	25.6 (249)
No Free Lunch	74.4 (723)
Parent Education	
High school or less	17.9 (252)
College/some college	51.9 (440)
Graduate school	30.2 (256)

Table 2.2 Teen Media Gender Attitude Items

Teen Media Item	Source	Theoretical Concept	Original Item
ACTS: It bothers me when a guy acts like a girl.	Pleck, Sonenstein, & Ku (1994)	Male Ideology: Anti-Femininity	It bothers me when a guy acts like a girl.
TOUGH: A young man should be physically tough even if he's not big.	Pleck, Sonenstein, & Ku (1994)	Male Ideology: Toughness	A young man should be physically tough, even if he's not big.
READY: A guy should always be ready for sex.	Levant & Fischer (1998)	Male Ideology: Attitudes toward Sex	A man should always be ready for sex.
RESPECT: A guy who has sex with many girls deserves respect.	Pleck, Sonenstein, & Ku (1994) **and/or** Mosher (1998)	Male Ideology: Status **and/or** Hypermasculinity: Callous Attitudes toward Women	It is essential for a guy to get respect from others. Any man who is a man needs to have sex regularly.
ROUGH: It is all right for a girl to want to play rough sports like ice hockey.	Galambos et al. (1985)	Sex-Role Attitudes, Women	It is alright for a girl to want to play rough sports like football.
LEADER: Girls are better leaders than guys.	Galambos et al. (1985)	Sex-Role Attitudes, Women	Boys are better leaders than girls.
MOVE: It's all right for a girl to make the first move in a relationship.	Galambos et al. (1985)	Sex-Role Attitudes, Women	It is alright for a girl to ask a boy out on a date.
MAN: Most women need a man in their lives.	Murnen & Byrne (1991)	Hyperfemininity	Most women need a man in their lives.
COMPETE: Sometimes girls have to compete with other girls to get the guy they want.	Murnen & Byrne (1991)	Hyperfemininity	Sometimes women have to compete with one another for men.
SEXY: I sometimes act sexy to get what I want from a guy or a girl.	Murnen & Byrne (1991)	Hyperfemininity	I sometimes act sexy to get what I want from a man.
CHARGE: In a dating relationship, the guy should be in charge.	Galambos et al. (1985) **and/or** Murnen & Byrne (1991)	Sex-Role Attitudes, Women **and/or** Hyperfemininity	On a date, the boy should be expected to pay for all expenses. I expect the men I date to take care of my expenses.

Table 2.3 Comparison of Model Fit: All Items versus Most Reliable Items

	Model 1 BIC	Model 2 BIC
All Items	384.174	308.367
Reliable Items Only	111.150	19.357

Table 2.4 Reliability Estimates of Eliminated Items (r^2)

	Model 1 r^2	Model 2 r^2
Girls are better leaders than guys.	0.021	0.021
It's all right for a girl to make the first move in a relationship.	0.013	0.010
Sometimes girls have to compete with other girls to get the guy they want.	0.052	0.059
I sometimes act sexy to get what I want from a guy or girl.	0.073	0.088

Table 2.5 Response Patterns for "LEADER"

	Mean	Median	Mode	% No Opinion (Category 3)
White Girls	2.93	3	3	41.6
White Boys	2.57	3	3	51.6
Black Girls	3.38	3	3	41.4
Black Boys	2.60	3	3	52.7

Table 2.6 Comparison of Models 1 and 2

Model 1					Model 2				
LV	Indicators	Factor Loading	Estimate/ S.E.	R^2	LV	Indicators	Factor Loading	Estimate/ S.E.	R^2
Gender	READY	1.00	0.00	0.50	Gender	TOUGH	1.00	0.00	0.40
	RESPECT	0.92	18.97	0.43		ACTS	0.97	14.45	0.37
	CHARGE	0.88	22.84	0.39		ROUGH	0.96	15.05	0.36
	MAN	0.79	19.26	0.31	Dating	READY	1.00	0.00	0.55
	TOUGH	0.77	18.70	0.30		RESPECT	0.92	18.75	0.46
	ACTS	0.74	16.46	0.28		CHARGE	0.87	22.53	0.41
	ROUGH	0.74	17.31	0.28		MAN	0.78	19.10	0.34
						Gender by Dating	0.85	14.32	
						Dating			0.52
	Latent Variables	Variance	Estimate/ S.E.			Latent Variables	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.50	16.70			Gender	0.40		11.32
						Dating		0.26	9.12
	Fit Statistics					Fit Statistics			
	$\chi 2$	194.13	CFI	0.90		$\chi 2$	102.33	CFI	0.95
	p	0.000	TLI	0.91		p	0.000	TLI	0.95
	BIC	111.15	RMSEA	0.12		BIC	19.36	RMSEA	0.09
	N	1007	SRMR	0.06		N	1007	SRMR	0.05
	df	12				df	12		

Table 2.7 Inclusion of Correlated Errors to Improve Model Fit

Model 2 With Correlated Errors				
LV	Indicators	Factor Loading	Estimate/ S.E.	R^2
Gender	TOUGH	1.00	0.00	0.38
	ACTS	0.98	14.36	0.36
	ROUGH	0.92	12.28	0.32
Dating	READY	1.00	0.00	0.48
	RESPECT	0.92	17.64	0.41
	CHARGE	0.92	17.73	0.41
	MAN	0.82	16.08	0.33
	Gender by Dating	0.96	11.17	
	Dating			0.73
Correlations				
		Corr.	Estimate/ S.E.	
	ACTS with			
	TOUGH	0.05	1.43	
	READY	-0.11	-3.93	
	RESPECT	-0.08	-2.32	
	with			
	READY	-0.03	-1.10	
	RESPECT	-0.17	-5.41	
	with			
	RESPECT	0.13	4.02	
	Latent Variables	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.38		8.87
	Dating		0.13	3.78
	Fit Statistics			
	$\chi 2$	11.51	CFI	1.00
	p	0.074	TLI	0.99
	BIC	-29.97	RMSEA	0.03
	N	1007	SRMR	0.02
	df	6		

Table 2.8 Model 2 with Correlated Errors, Girls

White Girls					Black Girls				
LV	Indicators	Factor Loading	Estimate/ S.E.	R^2	LV	Indicators	Factor Loading	Estimate/ S.E.	R^2
Gender	TOUGH	1.00	0.00	0.28	Gender	TOUGH	1.00	0.00	0.55
	ACTS	1.01	5.74	0.28		ACTS	0.56	3.89	0.18
	ROUGH	1.22	4.52	0.41		ROUGH	0.52	3.80	0.15
Dating	READY	1.00	0.00	0.25	Dating	READY	1.00	0.00	0.39
	RESPECT	0.93	4.69	0.22		RESPECT	0.60	2.97	0.14
	CHARGE	1.02	4.70	0.26		CHARGE	0.77	4.77	0.23
	MAN	1.25	4.54	0.39		MAN	0.79	4.77	0.24
	Gender by Dating	0.71	4.02			Gender by Dating	0.69	3.09	
	Dating			0.57		Dating			0.69
Correlations					Correlations				
		Corr.	Estimate/ S.E.				Corr.	Estimate/ S.E.	
	ACTS with					ACTS with			
	TOUGH	0.14	1.78			*TOUGH*	-0.06	-0.55	
	READY	-0.15	-2.27			*READY*	-0.26	-3.60	
	RESPECT	-0.06	-0.73			*RESPECT*	-0.19	-2.16	
	TOUGH with					TOUGH with			
	READY	0.00	0.06			*READY*	-0.18	-2.02	
	RESPECT	-0.13	-1.48			*RESPECT*	-0.33	-3.43	
	READY with					READY with			
	RESPECT	0.40	5.22			*RESPECT*	-0.06	-0.62	
	Latent Variables	Variance	Residual Variance	Estimate/ S.E.		Latent Variables	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.28		3.59		Gender	0.55		3.05
	Dating		0.11	2.10		Dating		0.12	1.19
	Fit Statistics					Fit Statistics			
	$\chi 2$	4.14	CFI	1.00		$\chi 2$	5.85	CFI	1.00
	p	0.657	TLI	1.01		p	0.440	TLI	1.00
	BIC	-28.79	RMSEA	0.00		BIC	-27.46	RMSEA	0.00
	N	242	SRMR	0.02		N	258	SRMR	0.03
	df	6				df	6		

Table 2.8 Continued. Model 2 with Correlated Errors, Boys

White Boys					Black Boys				
LV	Indicators	Factor Loading	Estimate/ S.E.	R^2	LV	Indicators	Factor Loading	Estimate/ S.E.	R^2
Gender	TOUGH	1.00	0.00	0.35	Gender	TOUGH	1.00	0.00	0.31
	ACTS	0.97	7.40	0.33		ACTS	0.60	4.11	0.11
	ROUGH	1.04	6.52	0.38		ROUGH	0.55	4.08	0.09
Dating	READY	1.00	0.00	0.14	Dating	READY	1.00	0.00	0.52
	RESPECT	1.12	4.97	0.17		RESPECT	0.93	9.21	0.45
	CHARGE	1.64	4.45	0.37		CHARGE	0.83	7.29	0.36
	MAN	1.36	4.51	0.25		MAN	0.78	6.96	0.32
	Gender by Dating	0.57	4.06			Gender by Dating	1.21	2.91	
	Dating			0.83		Dating			0.86
Correlations					Correlations				
		Corr.	Estimate/ S.E.				Corr.	Estimate/ S.E.	
	ACTS with					ACTS with			
	TOUGH	0.15	2.19			*TOUGH*	0.19	2.07	
	READY	-0.09	-1.54			*READY*	-0.12	-1.84	
	RESPECT	-0.22	-3.18			*RESPECT*	0.02	0.21	
	TOUGH with					TOUGH with			
	READY	0.04	0.64			*READY*	0.00	-0.04	
	RESPECT	-0.20	3.17			*RESPECT*	-0.07	-1.12	
	READY with					READY with			
	RESPECT	0.33	5.45			*RESPECT*	0.02	0.20	
	Latent Variables	Variance	Residual Variance	Estimate/ S.E.		Latent Variables	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.35		4.67		Gender	0.31		2.71
	Dating		0.02	0.97		Dating		0.08	0.45
	Fit Statistics					Fit Statistics			
	$\chi 2$	17.15	CFI	0.97		$\chi 2$	9.55	CFI	0.99
	p	0.009	TLI	0.94		p	0.145	TLI	0.98
	BIC	-15.86	RMSEA	0.09		BIC	-23.86	RMSEA	0.05
	N	245	SRMR	0.04		N	262	SRMR	0.03
	df	6				df	6		

Table 2.9 Invariance Tests of Covariance Matrices across Groups

	All Groups	Black versus White Teens	Boys versus Girls
χ^2 Difference Test	**1145.87** p = 0.000 df = 75	**197.41** p = 0.000 df = 27	**966.67** p = 0.000 df = 27
Contribution to χ^2 from each group			
White Girls	353.99		
White Boys	163.34		
Black Girls	199.51		
Black Boys	429.03		
Black Teens		81.13	
White Teens		116.28	
Boys			496.45
Girls			470.22
Wald χ^2 Test	**1004.10** p = 0.000 df = 126	**233.12** p = 0.000 df = 42	**576.80** p = 0.000 df = 42
BIC	627.27	10.71	779.97
CFI	0.00	0.89	0.17
TLI	0.36	0.90	0.20
RMSEA	0.24	0.13	0.26
N	1007	1007	1007

Table 2.10 Tests of Threshold Invariance across Groups

	All Groups	Black versus White Teens	Boys versus Girls
$\chi 2$ test statistic	119.27 p = 0.000 df = 45	132.92 p = 0.000 df = 25	107.93 p = 0.000 df = 25
Contribution to χ^2 from each group			
White Girls	33.47		
White Boys	21.76		
Black Girls	29.02		
Black Boys	35.01		
Black Teens		59.89	
White Teens		73.03	
Boys			50.72
Girls			57.21
Wald χ^2 Test	124.12 p = 0.000 df = 36	55.57 p = 0.000 df = 12	92.45 p = 0.000 df = 12
BIC	-191.89	-39.95	-64.94
CFI	0.93	0.94	0.93
TLI	0.93	0.95	0.93
RMSEA	0.08	0.09	0.08
N	1007	1007	1007

Table 2.11 Freed versus Constrained Thresholds in a Multi-group Specification of Model 2 with Correlated Errors

	All Groups		Black versus White Teens		Boys versus Girls	
	Constrained	Freed	Constrained	Freed	Constrained	Freed
$\chi 2$ test statistic	276.25 p = 0.000 df = 73	58.100 p = 0.011 df = 36	112.45 p = 0.000 df = 29	27.35 p = 0.038 df = 16	192.78 p = 0.000 df = 29	40.44 p = 0.001 df = 16
BIC	-331.93	-190.83	-88.08	-83.29	-7.75	-70.20
CFI	0.81	0.98	0.95	0.99	0.85	0.98
TLI	0.87	0.97	0.96	0.99	0.87	0.97
RMSEA	0.11	0.05	0.08	0.04	0.10	0.05
N	1007	1007	1007	1007	1007	1007

Figure 2.1 One Factor Model of Adolescent Gender Attitudes

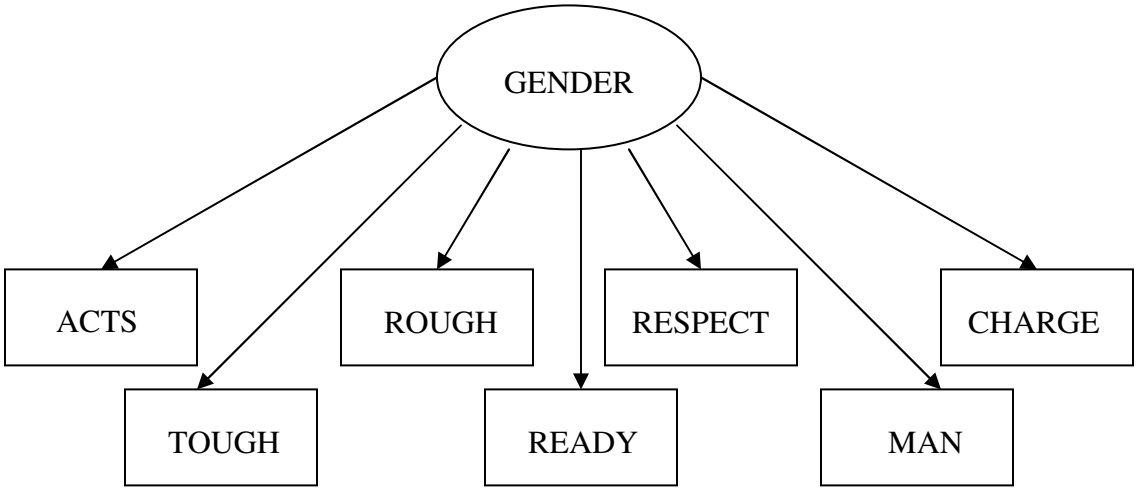


Figure 2.2 Two Factor Model of Adolescent Gender Attitudes

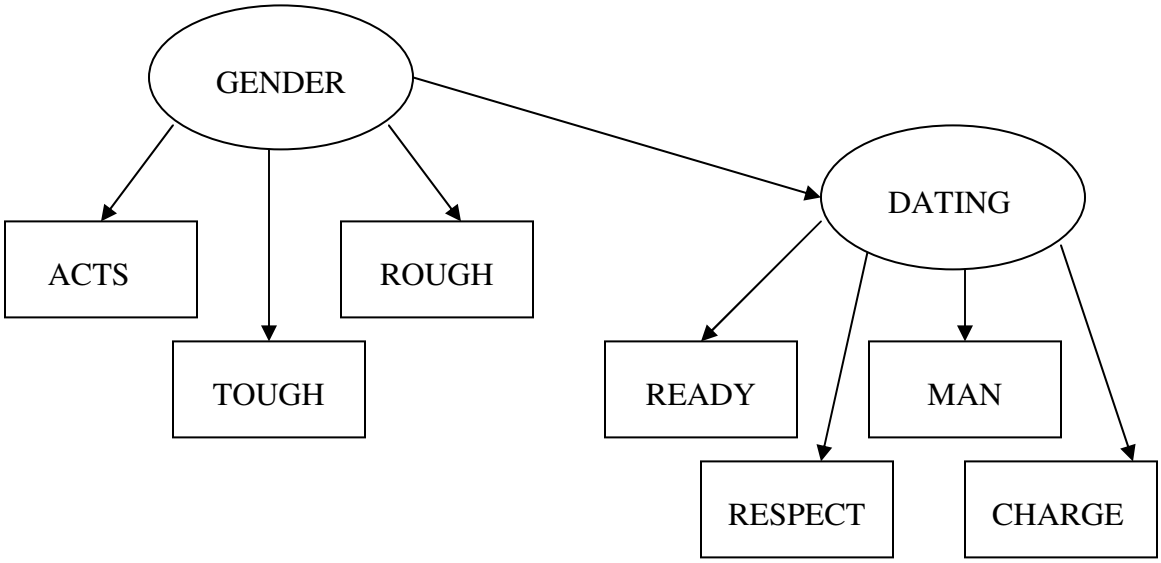
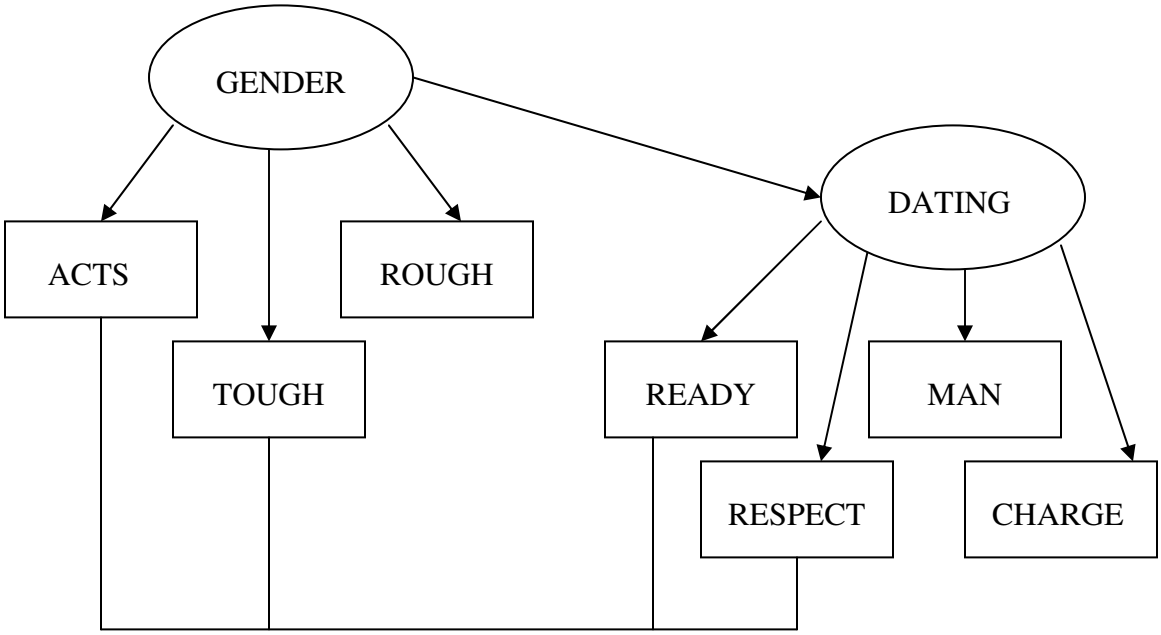


Figure 2.3 Two Factor Model of Adolescent Gender Attitudes with Correlated Errors



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CHAPTER 3

MEDIA AS A SOURCE OF GENDER ATTITUDES AMONG MIDDLE ADOLESCENTS

Adolescents live in a media world saturated with prescriptive messages about appropriate gender behavior and attitudes, sometimes referred to as gender "scripts". Over the past several decades, research has revealed that adolescents increasingly consult and utilize media messages as they engage in the process of exploring and creating identity. Media representations of gender are often hypothesized to play a part in the formation of adolescent attitudes, especially in recent years as media availability has increased and adolescents turn more frequently toward the media as a source of information. However, very few studies speak to this process.

This research seeks to address this gap in the literature. First, a scripting perspective is utilized to elaborate how gender scripts operate during adolescence, followed by a discussion of how the sources of such scripts, including the media, shift as children become teens. The prevalence and nature of gender content across various media (including television, movies, magazines and music lyrics) is reviewed. Using longitudinal data from the Teen Media project, the analyses explore whether adolescent consumption of media content related to dating and relationships predicts gender attitudes when the media are considered in an ecological framework that incorporates a number of other potential socializing agents, including parents, peers, teachers, and religious leaders. In light of the

theoretical and empirical rationales set forth in the previous chapter, differences across race (black and white) and sex groups are also considered.

Scripting Gender in Adolescence

Socialization is the process by which we acquire culture – the norms, expectations, and values that make up the social world around us (Milkie 1994). Expectations regarding appropriate behaviors and attitudes associated with being male or female comprise one aspect of this culture. Children become aware at a young age that boys and girls are "different" and that belonging to either status brings with it a diverse array of behaviors that are considered appropriate (McHale and Crouter 1999). Learning about the normative aspects of gender performance continues into adolescence. As teenagers examine the culture that surrounds them for clues about expectations regarding gender, sources of socialization provide "scripts" that adolescents may consult as they construct potential lines of action and attitudes (Arnett 1995; Simon and Gagnon 1984; Steele 1999).

Simon and Gagnon (1984) propose that scripting is operative at three distinct levels. *Cultural scenarios* are the most abstract of these levels and represent the "instructional guides that exist at the level of collective life" (p. 53). These symbolic systems are not completely determinative of behavior, especially in societies that tolerate a fair amount of divergence from ritualized and uniform practice (the U.S. falls into this category). Rather, cultural scenarios may be said to convey general expectations about how an individual of a certain status (for instance, male or female) might think or act. These general guidelines are not specific enough to be applicable in all circumstances. Therefore, *interpersonal scripts* allow the individual to adapt the cultural material to the situation at hand. Sometimes,

conflicts and ambiguities arise from the cultural scripts available and the individual may need an "internal rehearsal" to satisfy the need to script his or her behavior and to imagine the meanings behind the scripting of others. This third level is termed *intrapsychic scripting* and operates where "individual desires are linked to social meanings" (p. 53).

A scripting perspective may be particularly useful when examining a transitory life stage like adolescence when guidelines for attitudes and behavior are in the process of being renegotiated. Teenagers are likely to encounter new cultural territory that calls into question the "organization of the self," including gendered expectations regarding dating and romantic relationships. With the onset of puberty, more attention is paid to sexuality and dating relationships and more pressure is experienced as conformity to peer group norms becomes increasingly salient (Brown, Eicher, and Petrie 1986; Chambers, Tincknell, and Van Loon 2004; van Roosmalen 2000). Commenting on the foundational aspect of "sexual" scripts during this developmental period, Simon and Gagnon (1984) state that…

> The major cultural scenarios that shape the most common interpersonal scripts tend to be almost exclusively drawn from the requirements of adolescence and young adulthood. *There are virtually none tied to the subsequent segments of life.* The interpersonal scripts of these early stages, along with the intrapsychic elements they facilitate, may become in part the fantasied components of the intrapsychic at later stages, particularly the confirmation of attractiveness and displays of passionate romantic interest. (p. 59, italics added for emphasis)

In essence, the romantic scripts of adolescence are so powerful that they continue to define our notions of the romantic ideal throughout adulthood.

Empirical research has investigated the existence of scripts as they relate to gendered dating norms. Using samples of undergraduate students, Rose and Frieze (1989, 1993) asked whether shared expectations regarding patterns of behavior on a first date (a first date "script") could be identified. The studies revealed that participants agreed upon a number of

common “first date” elements. These included actions like “grooming and dressing” or “confirming plans”. They also found that the expected patterns of behavior differed between men and women, and that the gender differences conformed to male and female stereotypes regarding dominance and submission. For instance, men were more likely to report that they would ask for the date, pay for the meal, provide transportation, and potentially initiate physical contact – actions that evoke the physical and economic resources associated with the “public sphere” as well as a more dominant approach to interaction. Women, on the other hand, reported more reactive behaviors, like being “asked for the date” and “rejecting sexual contact” and were more concerned with “private sphere” aspects of the date such as checking their appearance and facilitating conversation. These studies suggest that scripts actually do exist at the level of cultural scenario *and* that gender and romance are intricately linked. But from what sources might adolescents come to learn the elements of these scripts? And if there are multiple scripts available, from which socialization source might they choose?

Shifting Sources of Socialization during Adolescence

As adolescents attempt to negotiate the gendered landscape of dating and relationships, they draw upon a number of socializing influences for source material. Ecological models of adolescence (Bronfenbrenner 1979; Bronfenbrenner 1986) assert that researchers should examine the contexts in which adolescent lives are embedded, rather than treating behaviors and attitudes observed during this period as autonomous. This approach involves examining interpersonal relationships as well as more “structural” characteristics of an adolescent’s environment (Dornbusch 1989), such as the varying degrees of influence across prominent domains of socialization. The primary sources of gender role socialization

likely shift between childhood and adolescence (Arnett 1995). Although there is scant research that documents this assertion directly regarding gender norms, the trend *away* from parents and *to* other sources is demonstrable in a number of related topics, including information related to dating and sexual relationships. The following studies empirically document this shift.

In a comprehensive review of research that examined contextual sources of learning about sexual information over three decades, Sutton et al. (2002) found that, during the 1980s and 1990s, teens increasingly reported getting most of their information about sex from their peers and schools rather than from their parents. The results of their own survey revealed that, by the late 1990s, schools actually outranked both parents *and* peers as teens' primary source of sexual knowledge (Sutton et al. 2002). A study completed by Yankelovich Partners (1993) indicates that the ordering of sources of information on sexual behavior is different for middle and late adolescents. Younger teens (13-15 years old) listed their parents as their primary source whereas older teens (ages 16-17) listed their friends. This study also found that media sources were consulted more often by older than younger adolescents.

Sebald (1986) also investigated changing patterns of parental consultation over time and found that teens consulted parents less in the 1960s than in the 1970s, but that there was a slight increase in parent consultation in the 1980s. The more conservative tenor of the 1980s and a return to more traditional information sources are cited by Sebald as a possible reason for this finding. In their review, Sutton et al. (2002) conclude that the same conservative trend may have been responsible for the increasing likelihood that teens would turn to *other* sources than parents for advice. However, differences in the studies might account for these contradictory explanations. Sutton et al. focused on sources for sexual

information (including contraception and STDs) whereas Sebald (1986) looked at a variety of topics, including choices about finances, education and career. His research indicates that parents are more often consulted about the above topics, and peers are more often consulted about issues surrounding sociability and dating.

Although the reasons for this shift are not fully understood, one explanation is that the shifts represent a natural part of adolescent development (Brown 1990; Lapsley et al. 1988). Adolescence is not an undifferentiated period of life. Among early adolescents, role exploration and self-knowledge of interpersonal identity become increasingly salient developmental tasks (Erikson 1953; Erikson 1968; Grotevant, Thorbecke, and Meyer 1982). Psychologists who have researched identity formation in teens have reported that early adolescents are in the initial stages of exploring and incorporating a variety of interpersonal identity domains, including gender, although mental schema relating to this topic more stable among older teens (Allison and Schultz 2001; Blasi and Milton 1991).

Developmentally, teens have consistently demonstrated an urge to explore the world with more independence relative to their childhood years, and some assert that the media are an important context in which this exploration occurs (Arnett 1995; L'Engle, Brown, and Kenneavy 2006). In recent years, the number and variety of media outlets available to adolescents has greatly increased. Televisions, VCRs, DVD players, computers, MP3 players, and a host of other electronic devices have become cheap and abundant, and the majority of teenagers report having at least one such device available in the privacy of their own bedrooms (Roberts 2000). Some report spending upwards of six hours per day using various media (Roberts et al. 2004). Thus, the intersection of a consistent developmental trend (identity exploration during adolescence) with a relatively recent upswing in media

availability (especially in private settings) may explain why teens have begun to list media as a primary source of information and socialization in recent decades.

The findings above indicate that adolescents may utilize information provided by various socializers depending on the topic at hand. It is likely that adolescents, and particularly early adolescents, are in a period of flux regarding to whom they turn when attempting to sort out issues related to gendered behavior and attitudes. This research asks: do teens turn to the *media*, an increasingly primary socializer, as a source of information regarding gender attitudes, especially those which relate to expectations regarding appropriate gender behavior in the realm of dating? And if they do, what is the nature of the content to which they are exposed? The next section reviews literature that examines media content and its hypothesized relationship to adolescent gender attitudes.

The Content of Media Scripts

In recent decades, adolescents have consistently ranked the media as one of their top sources when it comes to seeking information about dating and relationships (Sutton et al. 2002). Arnett (1995) contends that adolescents use the media in a process of "self socialization." Others propose that media's role is that of a "super peer" that is turned to when consultation with adults or actual peers may result in potential embarrassment or sanctions (Brown, Engle, and Halpern 2005). In addition, theories of cultural convergence (Brooker 2001) depict adolescents as media-savvy, utilizing multiple media simultaneously as content increasingly "overflows" from one medium to the next (e.g. websites that treat television characters as "real" people, music and music artists who are featured within television programs). All of the above ideas provide a picture of adolescent media use as

intentional, meaningful, varied, and ubiquitous; therefore, teens may turn to the media as a source of scripted material in the form of cultural scenarios.

By some estimates, adolescents spend approximately six to seven hours per day with a variety of media. The average teen spends three hours watching television, an hour watching videos or movies, two hours listening to music, and another forty-five minutes reading (Roberts et al. 2004). Teens utilize media for a variety of purposes, including entertainment, identity formation, and as a coping mechanism (Arnett 1995). They also use a diverse array of media, and messages sent by these media have the potential to reinforce existing gender stereotypes, or to contest (Signorielli 1997). Research suggests that the media may do both as the scripts provided are inconsistent regarding expectations of gendered behavior and attitudes.

In addition, the type of content across various media differs. Some scholars, particularly those who approach this question from a feminist perspective, are critical of the content they contain. Magazines marketed to adolescent girls have been described as "training manuals" that constrain definitions of femininity by adhering to heterosexually normative and patriarchal scripts (Garner, Sterk, and Adams 1998; Massoni 2004; van Roosmalen 2000). The product advertisements and advice columns are characterized by common themes that suggest that passivity and beauty are important and desirable female characteristics (Evans et al. 1991; Peirce 1993). When women are depicted in work situations, the occupations shown are often stereotypical or emphasize glamorized professions like acting and modeling (Massoni 2004). Boys' magazine content is arguably as gender stereotypical as that presented in girls' magazines, encouraging boys to pursue "birds, booze, and football" while remaining hands-off when it comes to taking responsibility for the

emotional aspects of relationships and contraception (Tincknell et al. 2003; Willemsen 1998). Responses to content may also differ depending on the demographic background of magazine readers. Studies that included a more diverse array of racial, ethnic, or class groups frequently found that respondents could draw on the difference between their own culture or appearance and the content of the magazines as a means to critique and subvert the dominant scripts (Duke 2002; Durham 1999).

Popular television programs and commercials have also been coded for gender and dating content (Signorielli 1993; Signorielli, McLeod, and Healy 1994; Stern and Mastro; Wroblewski and Huston 1987). A particularly detailed study that examined themes of gender and sexuality in programs that were watched most by children and adolescents found mixed messages related to these topics (Ward 1995). The most prevalent sexual content, comprising approximately one third of the coded interactions, portrayed heterosexual dating relationships as a competition, depicted males regarding females as sexual objects and valuing women for their physical appearance, and linked masculinity with being sexual. However, a substantial amount of content (17.7 percent) was coded as reflecting a "relational orientation". Here, aspects of a sexual relationship such as friendship, affection, and intimacy are highlighted. Positive relationship elements, such as expressing love and caring, comprised 8.8 percent of all coded content, whereas less positive relational aspects, like experiencing pain after a break-up or missing a partner during a physical separation, comprised about 8.6 percent of the total. Notably, portrayals of women as passive players in sexual interactions were scant, and "counterscripts", or material at odds with the dominant content, were relatively prevalent (9.5 percent of all coded content). Examples of a

counterscript messages included instances where men did not appear to be interested in sex at all times or where women made assertive sexual advances.

Those who have linked television content to gender attitudes and dating norms have generally found only a modest relationship (Morgan 1982; Morgan 1987). The nature of the exposure seems to play a part, as weak effects were detected when the type of content and viewer identification with the material were investigated (Ward 1995), but at other times finding a strong effect on gender attitudes when watching a particular type of show was the primary predictor (Ward and Friedman 2006). However, these studies utilized experimental exposure to television clips rather than content that the respondents would have normally watched on their own.

Content analyses of movies have also been conducted (Brown, Greenberg, and Buerkel-Rothfuss 1993; Signorielli 1997; Stern 2005; Strasburger 1995) and some shed light on the gendered scripts found in films viewed by adolescents. Pardun (2002) coded all interactions between males and females in a sample of 15 movies viewed by large numbers of teens during 1995 to identify themes related to sex and relationships and found a "plethora of conversation – rather than action – about romantic relationships in the movies" (p. 217). Despite this, teens were frequently found to engage in romantic behavior (approximately one-third of the coded incidents). The script that Pardun (2002) identifies depicts romance as "innocent." Romantic encounters rarely lead to more serious and committed relationships, but rather exist without context among young people who barely know each other.

The prevalence of dating scripts in movies marketed to teens likely relates to Simon and Gagnon's (1984) contention that much of what is defined throughout life as "romantic" is defined during adolescence. In addition, the relationships portrayed may inform

interpersonal scripts regarding how boys and girls should "do" romance and what their respective roles might be. Although the messages described by Pardun (2002) seem fairly benign, studies that have focused on other gender-related content illustrate that some film messages can be construed as sexist. Hylmö (2006) coded vocational messages in films marketed to teenage girls and concluded that such films deemphasize the importance of careers for girls, and rather, suggest that they should rely on males (such as fathers and boyfriends) for "protection, guidance, and financial support" (p. 167).

Researchers have systematically analyzed music lyrics as a source of gender script content (Christenson and Roberts 1999; Dukes et al. 2003). Whereas some focus on very select material, such as original rap lyrics written by disadvantaged youth (Weinstein 2007) or a particular artist (Calhoun 2005), others attempt to link such content to gendered attitudes (Fischer and Greitemeyer 2006; Squires et al. 2006). One recent study of the effect of music lyric content on adolescent sexual behavior demonstrates that the type of content analyzed plays an important role. Martino et al. (2006) developed a coding scheme which separated "degrading content" present in the lyrics of artists popular among adolescents from non-degrading content across a variety of musical genres. The degrading content was found to significantly predict an increase in the rate of intercourse and pre-coital sexual activity among adolescents (this effect was robust to a very inclusive list of control variables)[27]. Non-degrading lyrics were found to have no effect on sexual behavior, although prior to controls being added to the model, their effect was actually determined to be negative. These findings relate to gender scripts in that the degrading lyrics "depicted sexually insatiable men pursuing women valued only as sex objects" (p. 437), in keeping with definitions of masculinity related to the sexual double standard. Similarly, in an experimental study which

[27] This study included the sex of the respondent as a control but did not perform analyses separately by sex.

distinguished misogynous and man-hating lyrics from neutral lyrics, both men and women exposed to the former were more likely to express aggression toward the opposite sex (Fischer and Greitemeyer 2006).

In studies of multiple media, the documented gender content is also varied. A comprehensive report that examined the portrayal of women in six contemporary media (Signorielli 1997) found that a substantial proportion of the messages portray women in a positive light. Women are seen as being independent problem solvers (35% of portrayals in TV and movies) capable of achieving their own goals (39% in TV, 62% in movies). Women are also seen as being direct, honest, and intelligent (between 35 and 69% of women are shown as such in movies and television shows and 16% of magazine articles reference these types of behavior). Analyses of depictions of males in the media reveal that they are also portrayed positively along the same dimensions as women, and in similar proportions (Signorielli 1997). Unfortunately, the same study shows that women are generally underrepresented across media (except in magazines devoted to women). This signals that they are less important than men and gives fewer opportunities to fully develop complex female characters (Milkie 1994). Alongside the positive portrayals listed above are messages stressing the importance of being attractive for women, and women are also less likely to be seen in work situations relative to men (41% of men versus 28% of women).

Studies that document script content make clear the fact that the media are rife with messages regarding how males and females may be expected to act. On the whole, current research is decidedly mixed regarding the relationship between media content and gender attitudes. However, many of these studies do not link these scripts to actual attitudinal shifts because gender attitude data was not collected from the hypothesized teen audiences,

resulting in a weak and non-specific connection between these concepts. Studies that do link these concepts are often experimental in nature, and therefore may rely on content that individuals would not choose to consume in their everyday lives. It is clear from empirical studies that do link these concepts that the type content measured must be clearly specified, as different types of content may result in differences in the size and direction of the results. Also clear is the need to look at various media separately, as the availability and nature of gendered messages is likely to differ.

Media Use in Context

As noted earlier, gender attitudes are a central component of adolescent identity formation and have been found to correlate with and predict a number of key social and health outcomes among adolescents; from sexual behavior to educational outcomes. Despite their reputed importance, few studies have attempted to link the actual media use habits and content of media directly with adolescent views of gender (Katz and Boswell 1985; McGhee and Freuh 1980; Rosenwasser, Lingenfelter, and Harrington; Signorielli 1990). Research designs frequently rely solely on content analysis and assert influence, or utilize experimental formats that expose participants to content they might not have selected otherwise. Any investigation into the relationship between media content and adolescent gender attitudes will benefit from data that rely on teen reports of the media they actually choose to consume as well as responses to questions about gender attitudes. These analyses seek to overcome prior limitations by linking the idiosyncratic and actual media content choices of teens to their reported gender attitudes[28].

[28] A detailed description of the Teen Media data will be provided in the next section of the paper.

Media studies are often cross-sectional, which makes it difficult to disentangle the direction of the effects. Without longitudinal data, it is debatable whether their pre-existing gender attitudes lead teens to select certain types of media or whether the media influence such attitudes. Although longitudinal data may not entirely clear up issues of causality, it may still have some advantages relative to cross-sectional research designs, especially when baseline gender attitudes are available as controls. The data used for these analyses are longitudinal, with exposure to media content measured during the first wave of data collection, and gender attitudes measured at both time points. This design allows earlier exposure to predict subsequent gender attitudes, controlling for gender attitudes concurrent with the initial media content selection. Such a model therefore predicts the change in attitudes that may be attributable to content exposure, accounting for the influence of other control variables.

The themes and availability of gendered messages in media have been documented, but the question of whether the presence of such themes can be assumed to result in a change in adolescent attitudes remains understudied. As noted above, the variability of messages across media forms suggests that the inclusion of multiple media may be a productive endeavor. The data for this study encompass four different types of media (movies, television, music, and magazines), which will allow for observations to be made regarding which media in particular are most influential. It is also essential to articulate the type of content one is examining, as research has shown that varying content produces varying results. In this study, sexual media content argued to have a "relational" quality will be

examined (Ward 1995). Relational sexual content focuses more on relationship maintenance and communication[29].

Based on the premises outlined above, the following research questions are formulated:

Research Question 1: Does the dating and relationship-related content consumed by early adolescents predict a change in their gender attitudes two years later? Does the prediction still hold when baseline gender attitudes are taken into account?

Research Question 2: Does the relationship between dating and relationship-related content and gender attitudes differ across various media (specifically, television, magazines, movies and music)?

An ecological perspective suggests that, although the media are certainly becoming increasingly important and pervasive in adolescent lives, other sources of influence must also be taken into account when considering adolescent attitudes (Bronfenbrenner 1979; Bronfenbrenner 1986). As was noted earlier, adolescence is a time during which sources of information are shifting, especially regarding topics such as dating and romance. Therefore, the media should be situated in a multi-domain context that takes into account other agents of gender socialization (i.e. other potential sources of gender "scripts").

*Parent*s (Bohannon and Blanton 1999; Burt and Scott 2002; Cunningham 2001; Ex and Janssens 1998; Hardesty, Wenk, and Morgan 1995; Huttunen 1992; Kulik 2005a; Kulik 2005b; McHale, Crouter, and Whiteman 2003; O'Bryan, Fishbein, and Ritchey 2004), *peers* (Chambers, Tincknell, and Van Loon 2004; Dornbusch 1989; Durham 1999; Milkie 1994), *schooling* (Hyde and Jaffee 2000; Sutton et al. 2002), and *religion* (Harrison and Pennell

[29] A detailed description of the type of content used to predict gender attitudes will be outlined in the measures section of this paper.

1989) have all been identified as potential sources of adolescent gender role attitudes.[30] Despite this, most studies focus on one source in isolation of the others. It is rare to see empirical studies in which the media are considered within an ecological framework that includes a number of potential sources of gender attitudes. The inclusion of media within such a model would provide information about the media's strength of influence relative to these other sources. In the model proposed here, two aspects of the potential influence of a particular socialization source are taken into consideration: potential exposure to gendered communication and the strength or "goodness" of the relationship in question.

The following research question addresses this issue:

Research Question 3: Does dating and relationship-related content remain predictive of gender attitudes when other contextual influences (including parents, peers, schooling, and religion) are taken into account?

Finally, media research has emphasized the need to investigate subgroup differences when looking at media effects. In general, males express more conservative gender attitudes than females (Canter and Ageton 1984) and media effects based on sexual content have been more consistently found for girls than for boys (Ward 2003)[31]. Ward (2003) groups the reasons for gender differences in media effects around several themes that are applicable to this research, although she maintains that, in general, they are under-theorized and often post-hoc: (a) males may depend less on the media for their sexual learning, instead turning to other sources such as friends and siblings; (b) there may be ceiling effects for male responses

[30] The literature that addresses the relationship of these influences to adolescent gender attitudes and schemas (particularly for parents and peers) is vast and a full review beyond the scope of this paper.

[31] There is very little research which directly addresses demographic differences in gendered learning from media sources. Reviews that address learning about sexuality (which generally includes exposure to information about dating and relationships, a source of gendered learning) are an arguably acceptable proxy in a discussion of potential race and sex differences.

regarding issues of sex and gender; (c) the definitions of masculinity are more clearly, and consistently, articulated whereas messages about femininity are often contradictory.

Ward (2003) also notes that empirical studies of media effects that include various racial and ethnic groups are scant. Of the 25 studies she reviewed, 80 percent employed predominantly white samples. However, racial and ethnic minorities are usually found to be more likely to report conservative gender attitudes (Canter and Ageton 1984) and the small number of media studies which explicitly include and investigate racial and ethnic subgroups have found differences (Brown and Pardun 2004; Brown et al. 2006). The above observations suggest that an investigation into the media's relationship to gender attitudes would benefit from an exploration of potential differences across race and sex groups. The analytical design employed in this research will therefore investigate differences across available subgroups included in the dataset:

Research Question 4: Does the relationship between dating and relationship-related content and gender attitudes differ based on the race (black vs. white) and sex (male vs. female) of the adolescent respondent?

In the next section, the data and methodological approach utilized to address the above questions is described.

Data and Measures

Data

The data for this research come from the Teen Media Study[32], a data collection effort primarily designed to investigate the relationship between consumption of sexual media and sexual behaviors among early and middle adolescents. The sampling frame for the study included three public school districts in the Southeastern United States. The middle schools

[32] The research is supported by grant number R01HD38508 from the National Institute for Child Health and Human Development.

were located in urban, suburban, and rural areas. Of the sixteen schools asked to participate, two declined. These schools were determined not to have different gender and racial profiles than schools that participated.

The first phase of data collection included a survey investigating the media use patterns among the sampled adolescents. Content analyses of the teens' media choices were performed and are described in the next section of this paper. Students who completed the initial media questionnaire[33] were eligible to participate in an Audio-CASI administered health and sexuality survey. From this sample, 1200 students were randomly selected from within race (black and white) and gender (male and female) strata. Of the 1200 students initially chosen, 1074 completed the survey (an 89.5 percent response rate). Each of the four stratified demographic groups represent between 24 and 26 percent of the health survey sample. 1074 completed the survey (an 89.5 percent response rate) [34].

The final phase of data collection, a combined health and media survey, was completed two years after the first, during the spring of 2004. Eligible participants included those who had completed the first health survey. Of the 1,074 initial respondents, 1,017 also completed the second survey (a 94.7 percent retention rate). No significant differences in race, gender, age, or sexual behavior were detected between the group who completed the second survey and those who did not[35] (Brown et al. 2006). The 1,017 respondents to both health surveys are included in these analyses. Table 3.1 contains the demographic profile for respondents to each wave of the data collection.

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[33] The media survey reached 81% of the total students enrolled in the three school districts, and the response was 64.8%.

[34] A complete description of the data collection protocol for the media and initial health survey can be found in L'Engle, Pardun, and Brown (2004).

[35] Of those who did not did not complete the second health survey, 57 could not be contacted, 6 were adolescent refusals, and 7 were parent refusals.

Measures

To reiterate, the primary goal of these analyses is to determine whether exposure to dating and relationship content in various media consumed during early adolescence longitudinally predicts gender attitudes when such consumption is situated within a context that includes a number of other socializing influences, including the family, religion, schooling, and peer group. The following sections describe the measures used to operationalize these concepts.

The Adolescent Gender Attitudes Measure

The measure of gender attitudes is a unique factor score created for each teen in the sample. The factor score is derived from a latent factor model in which both general and domain-specific gender attitudes are incorporated[36]. In this case, the domain-specific attitudes relate to gendered norms of behavior in a dating and relationship context. It is argued that, relative to other domains in which gender attitudes figure prominently (such as women in the workforce or the division of household labor), gender attitudes stemming from behavioral expectations surrounding romantic relationships are more relevant to adolescents since such relationships are important to teens and the negotiation of romance and gender are central developmental tasks during adolescence (Bouchey and Furman 2003; Huston and Alvarez 1990).

Extensive testing of this model through confirmatory factor analyses in a structural equation modeling format revealed that gender attitudes relating to dating relationships comprise an important aspect of adolescent gender attitudes generally. The form of the model was an excellent fit to the data and worked well across demographic groups.

[36] A thorough discussion of the development of this measure can be found in the previous chapter of this dissertation, "A Model of Adolescent Gender Attitudes: Is Dating a Key Component?"

However, testing also revealed that the indicator thresholds were not invariant across groups, therefore the factor scores were output separately for each group and regression models which use these as the dependent measure will also be run separately by race and sex group. Figure 3.1 illustrates the relationship between the two latent constructs as well as the measures found to load on each. The exact wording of the measures, the original scales from which they are derived, and the gender concepts that they measure are outlined in Table 3.2.

Although additional measures of gender attitudes were available in the dataset, they did not demonstrate adequate levels of validity or reliability for inclusion in the measurement model. This has interesting implications for the interpretation of the results since most of the excluded variables were more closely tied to definitions of femininity, whereas the remaining indicators are more indicative of masculinity norms. Therefore, the focus of the dependent variable on masculinity should be kept in mind as should the "flavor" of masculinity which these measures tap[37]. This is a definition of masculinity reminiscent of the "sexual double standard" as opposed to a more modern view of masculinity that may feature what Ward (1995) defines as a "relational orientation", or a focus on relationship maintenance and communication.

The scores derived from this model are coded such that low scores indicate gender attitudes consistent with the sexual double standard and with other stereotypical, sexist, or "traditional" views of masculinity and femininity. High scores represent attitudes that are more flexible or "egalitarian" regarding gender norms in both general and dating domains.

[37] Masculinity as a "more definitive" aspect of adolescent gender attitudes is not generalized beyond the creation of the dependent variable using the data drawn from this sample of teens.

The Dating and Relationship Content Exposure Measure

This measure is based on content analysis of the top media vehicle[38] choices reported by teens in the sample[39]. The goal of these analyses was to determine the unique amount of sexual media content (of which dating and relationship content exposure is a subset) to which each adolescent in the sample was exposed. Lists of potential choices were developed by determining popular television shows, music artists, theater movies, rental movies, and magazines at that point in time. Both official sources (e.g., Nielsen ratings, top-grossing movie lists) and the suggestions of actual students (obtained through focus groups) were utilized to ascertain appropriate lists of media vehicles.

Vehicles were chosen to be content analyzed if at least 10 percent of any of the four demographic subgroups reported using the vehicle regularly (black and white, boys and girls). The only exception to this rule was television, for which the cut-off point was set at 20 percent due to the sheer number of programs that the respondents reported watching. All told, 71 television programs, 94 movies, CDs by 67 music artists and 32 magazines were analyzed[40]. "The final coding sample included one episode of each television show (with embedded commercials), each movie (including trailers), one issue of each magazine (including all advertisements and photographs), [and] all songs on the most recently released CD of each music artist" (p. 79, Pardun, L'Engle, and Brown 2005).

The measure of dating and relationship content in various media (or Dating Media Diet, DMD) is uniquely calculated for each individual teen in the dataset. The media survey

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[38] The term vehicle refers to a particular show, artist, magazine or movie.

[39] These choices were indicated in the media questionnaire administered during the first wave of data collection.

[40] In addition, 34 Internet sites and 3 newspapers were also analyzed, but these media are not included in this research.

asked each teen to circle the vehicles he or she listened to, read, or watched regularly. Based on the results of the content analyses, each media vehicle was assigned a percentage of total content that was related to dating and relationships. Using the pattern of results for each teen, a percentage of his or her total media exposure that was related to dating and relationship content was for each medium separately. This score was then multiplied by the frequency with which the teen reported using that particular medium, resulting in the final DMD. A higher score on this measure therefore indicates greater amounts of overall exposure to dating and relationship-related content.

Unfortunately, this content was not explicitly coded for gender-related messages. However, this does not preclude a description of the types of coded scenarios nor does it prevent inference as to how this content may affect gender attitudes. The content included in this media measure is explicitly articulated in the instructions to the Teen Media coders specified in the project's content analysis handbook. The following excerpt from that manual provides a detailed description of the included content:

> **Dating / Relationships / Marriage / Divorce**
>
> *What It Is:* Talk or depiction of informal boy-girl activities such as meeting at a mall, sporting event, or park, as well as more formal dating activities, such as going to the prom, meeting a date's parents. Talk or depiction of two people who are romantically interested in each other or married or divorced. Or when someone talks about wanting to date/marry someone. Also includes advice (expert or from friends) on dating, maintaining a relationship or marriage, or divorce. There <u>must</u> be a direct reference to creating or maintaining the relationship, and there must be potential for the relationship to occur. Includes flirting.
>
> *Examples*:
> - Seeking relationship advice.
> - Advice on how to choose or get a boyfriend/girlfriend.
> - Depicting people on a date or at the prom together.
> - Article that talks about how celebrities balance work and family to maintain their relationship.
> - "Madonna is pregnant with her third child and husband Ritchie is thrilled!"

- A cute boy is trying to flirt with a girl that he finds attractive, but he trips over his shoelace and falls down.

What It's Not:

- Young unmarried people who live together or hang out together, but are not romantically interested in each other (e.g., Will and Grace). If not sexual do not code.
- "Tom is divorced from Nicole."

Based on this description, the coded dating and relationship content is largely what would be defined as "relational" in nature (DeLamater 1989; Sprecher and McKinney 1993; Ward 1995)[41]. Relational content can be defined as that which emphasizes the importance of trust and communication, as well as the potential for conflict and pain that relationships present. Although not all of the material coded as relational will be completely devoid of potentially sexist messages, the majority of material is unlikely to be "degrading" (as defined above by Martino et al. 2006)[42].

The nature of the content included in the DMD has interesting implications when considered in tandem with the nature of the dependent gender attitudes measure. As was noted earlier, this measure is largely comprised of indicators that measure masculinity-related norms, especially in the latent factor devoted to the dating and relationship domain. A low score on this measure corresponds to attitudes that are consistent with an endorsement of a more "traditional" masculinity (males as the dominant actors in dating relationships, entitled to sexual gratification), whereas a high score would likely indicate a greater adherence to attitudes more consistent with the "relational" messages described here, where relationships

[41] See the listed citations for a description of the complete paradigm, which constructs three classifications regarding cultural views of sexuality, including relational (described above), recreational, and procreational orientations.

[42] Appendices 3A through 3C document high dating and relationship content vehicles, the most popular vehicles by group, and the initiation of sexual activity by sex. With the exception of music lyrics, much of the material is actually contains very little dating content, and the material that is high in dating content would typically not include degrading messages.

are viewed as a partnership (more "egalitarian"). Therefore, it is expected that teens who report a greater amount of relational content consumption of the type measured here will actually profess more egalitarian gender attitudes where effects are evident (i.e. will have higher scores on the dependent variable).

Baseline Gender Attitudes

A baseline measure of adolescent gender attitudes will be included in some of the following models so that change in the dependent variable between two time points can be investigated. To assess these attitudes, a ten-item scale utilizing gender attitude variables available at Time 1 was constructed ($\alpha = 0.73$). Rotated factor analyses (in SPSS) confirm that all items loaded on one underlying construct. The indicators of gender attitudes available at baseline were not identical to those available in the follow-up survey. Therefore, the best possible scale that could be assembled using Time 1 measures is utilized in the modeling[43].

Additional Media Measures

In addition to the DMD, a second group of variables ask whether the respondent learned about dating from each of the four media included here. These individual, dichotomous variables are combined to create a count variable where a score of "4" indicates that the teen learned about dating from all four media. Since various media theories suggest that greater attachment, interest, or identification with the media may amplify media effects (see Ward and Rivadeneyra 1999 for a review), two scales are included to take this into account. The first assesses the extent to which an adolescent identifies with the characters in the media. The scale asks, for each medium separately, whether the teen tries to emulate

[43] Regression models were run using a scale which included only those items at Time 1 which were also used in the conceptual model at Time 2 (5 measures fit this criteria, $\alpha = 0.577$). When compared to the regression results using the 10-item scale, the pattern and direction of results remained unchanged.

people in the media (characters or artists, depending on the medium), and whether he or she finds portrayals of teens in the medium realistic. Likert-scored items from across the four included media are combined to create this scale (11 items, Cronbach's $\alpha = 0.83$). The second scale asks whether teens are interested in sex when they see it in the media. Measures from across the four included media are combined (4 items, Cronbach's $\alpha = 0.92$).

Other Sources of Gender Scripts

Since respondents to the survey were not asked directly whether they had learned about gender attitudes from potential socializers, proxy variables must be utilized in order to ascertain the amount of exposure to communication regarding such attitudes. For the non-media socializing agents included in these analyses (parents, peers, teachers, and clergy), the best approximation of communication regarding gender scripts is a group of variables that measure whether an adolescent reports talking about "dating" with his or her parent or guardian, friends, favorite teacher, or minister, rabbi, or religious youth group leader. Each of these variables is coded dichotomously.

Relationship Strength/Goodness

In addition to whether the teen communicated about dating with friends or adults, variables or scales that measure the "goodness" or strength of the relationship between the adolescent and the person representing each domain were utilized. These include the quality of the teen's relationship with his or her parents (the average of two items for teens' with two parents or a single item for those who interact with only one parent), whether the teen reports getting along well within his or her friendship group (4 items, Cronbach's $\alpha = 0.78$), whether the teen gets along well at school and with teachers (4 items, Cronbach's $\alpha = 0.59$), whether

the teen finds religion important (1 item) and how often the teen attends religious services (1 item).

Teens were also asked their perceptions of whether their friends, parents, teachers, and religious leaders would approve of them having sex at their current age (one item per domain, Likert scored). This measure should provide information regarding whether the teen takes the opinions of peers and adults into account. Finally, assorted measures of interaction with socializing agents were included to the extent they were available. Among these are measures of the number of parenting activities reported (8 items, Cronbach's $\alpha = 0.74$) and a scale of peer dating and sexual norms (5 items, Cronbach's $\alpha = 0.71$).

Control Variables

To isolate the effects of the independent variables of interest, a number of controls were added to each model in order to rule the possibility of differences due to demographic and socio-economic characteristics. Prior research suggests that age (Dornbusch 1989; Strasburger 1995), socio-economic status (Durham 1999), and parent education level (Cunningham 2001; Hardesty, Wenk, and Morgan 1995) have also been shown to correlate with gender attitudes. Additionally, the gender intensification hypothesis, formulated by Hill and Lynch (1983) suggests that sex-typed socialization should be most evident during or after puberty, when secondary sexual characteristics emerge and adult roles are imminent, so pubertal development were also controlled. Since the analyses are run separately for race and gender groups, the inclusion of these variables is unnecessary. Table 3.3 outlines the covariates and control variables included in the models.

Statistical Approach

The statistical analyses are designed to address Research Questions 1 through 4 above. To briefly restate, these ask whether exposure to gendered content in four media predicts gender attitudes, and whether this prediction holds when baseline gender attitudes taken into account. Further, will the content across various media produce varying degrees of influence, will they remain robust to the inclusion of competing sources of gender attitudes, and will the pattern of effects also differ across demographic groups. Multiple OLS regression modeling is utilized as the dependent variable is continuous is nature. Independent and control variables are drawn from the surveys fielded during the first wave of data collection when teens in the sample were in 7th and 8th grades (12-14 years old). The measures of gender role attitudes were assessed two years later during the second wave of data collection when teens were in 9th and 10th grades (14-16 years old). Regression models are executed separately across the four included media and the four demographic subgroups[44].

Results

Research Question 1 asks whether there is a relationship between dating and relationship content and adolescents' gender attitudes and whether these effects described are robust to the addition of the adolescents' baseline gender attitudes. Table 3.4 presents the results of bivariate regressions that relate these two concepts[45]. Examining the bivariate

[44] Models that combine all media or all groups will not be presented as analyses revealed that such aggregation obscures important cross-group and cross-media differences and may therefore be misleading.

[45] In both Tables 3.4 and 3.5, the results will be restricted to those cases that provide information on all variables included in the final model. The pattern of results is slightly different when all potential cases with information on these variables are included. Please see Appendix 3D for these results.

relationships prior to incorporating the full range of covariates will provide a baseline against which to assess whether, and which, media effects are robust within an ecological model. In terms of media influence, music appears to inform gender attitudes across the most groups, but there are also interesting differences between groups. The results among black respondents are positive, suggesting that music lyrics encourage more egalitarian gender attitudes. The opposite is true for white boys; greater exposure to music content produces more traditional gender attitudes. While the effects of exposure to various types of music are not specifically investigated here, the consumption of different genres of music (e.g. hip hop versus heavy metal) could potentially explain these differences. Black boys show the widest range of media influence, with significant effects evident for television, magazines, and movies, all of which are positive. For white boys, only music content predicts gender attitudes and the result is negative. Music lyrics also have an effect on black girls' gender attitudes, but it is marginally significant and positive. Television exerts a significant and negative effect on white girls' gender attitudes.

Table 3.5 summarizes the results of the regression models to which baseline gender attitudes have been added. Although the coefficients for baseline gender attitudes are not included here (to ease comparison to results presented in Table 3.4), they are always strong, positive predictors of later gender attitudes across all groups. The substantial size of the baseline gender attitude coefficients indicates that, overall, these attitudes remain fairly consistent between early and middle adolescence. This pattern is evident across all demographic groups. It should also be noted that, by including baseline gender attitudes, what is being predicted is a *change* in gender attitudes between the time of initial exposure and when gender attitudes were subsequently assessed. Once baseline gender attitudes have

been included, most of the results remain consistent, although the size of the effect is generally reduced. This is because the addition of the baseline attitudes reduces the amount of variation left to be explained by media exposure. One exception to this pattern is the effect of television content on white girls' gender attitudes, which disappears once baseline gender attitudes are controlled. It appears that, in this case, the there is little change in attitudes for television content to explain once baseline gender attitudes are taken into account.

The next group of analyses responds to Research Questions 2, 3, and 4, which ask which, if any, media are most influential, whether their influence is still detectable when other sources of influence on gender attitudes are considered, and whether differences between boys and girls, and black and white teens are present. Tables 3.6 though 3.9 summarize the results of regression models run separately by media across groups. These models contain the full array of ecological covariates, control variables, and baseline gender attitudes.

As was the case with the less inclusive models, it is clear that baseline gender attitudes are the strongest positive predictor of subsequent gender attitudes. In addition, the results provide information regarding the relative importance of different media. Music content produces the most effects. Although they are positive in direction for black teenagers (both boys and girls), they are negative for white boys. Movie content only produces significant effects among white boys, but the influence of television and magazine content is restricted to black boys. It would appear that, other than music, none of the media explored here have broad influence on gender attitudes. The effects of content on gender attitudes for each medium are situated here in models that take into account a host of other ecological

factors. Had these effects disappeared once competing sources of attitudes had been added, this would indicate that exposure to media content does not explain a statistically significant change in gender attitudes between the two time points. However this is not the case. When compared to the results presented in Tables 3.4 and 3.5, most media effects are robust, suggesting that the media do act as a source of script material for adolescent gender attitudes.

Differences are also evident across demographic groups. Black boys' gender attitudes are significantly and positively influenced by dating content in television, magazines, and music. Surprisingly, white girls show no effects of media content. However, unlike all other demographic groups, white girls' gender attitudes are subject to influence by other media measures. For instance, white girls who report "learning about dating" from media sources are less likely to report egalitarian gender attitudes, whereas those who expressed an interest in attending to sex when it was featured in the media were more likely to report egalitarian attitudes. Black girls' gender attitudes continue to be influenced in a positive direction by music content in the full model. Only for white boys is the pattern of the full model somewhat out of step with the restricted model results. The effect associated with music lyrics remains negative and marginal. However, movie content, which had been positive but insignificant in the restricted models, becomes marginally significant in the full model. It is not readily apparent why this is the case.

The pattern of results across the other domains is also of interest. *Peers* clearly play an important part in determining gender attitudes as well. Every demographic group shows effects within this domain, although the source of those effects is not always the same. For instance, black and white girls, and black boys, who report that their friends have permissive dating and sexual attitudes also report greater adherence to more rigid and stereotypical

views of gender. This result is rather unexpected and its implications will be elaborated in the discussion. For white boys the effects of having discussed dating with friends are also negative, as are those for white girls who report getting along with their peers. The influence of *parents* on gender attitudes is somewhat scattered. White boys report no influence whatsoever. Having discussed dating with a parent (black boys), having a parent who disapproves of teen sex (black girls), and having a good relationship with one or both parents (black girls and boys), are all associated with less egalitarian gender attitudes among black teens. However, all results among black teens are marginally significant. Only among white girls do parent interactions have a consistently significant and positive effect. Having a good relationship with one or both parents predicts less rigid gender attitudes among white girls. *Religion* as a source of gender scripts is only consistently evident among black girls. Those who report that they believe religion to be important are more likely to have traditional gender attitudes, whereas those whose religious leader expresses disapproval for teen sex are more likely to profess egalitarian gender attitudes. Only one aspect of the *schooling* domain appears to predict gender attitudes and that is whether or not the teen gets along well at school. This effect is particularly strong among girls, but is also evident among black teens as well. Getting along well at school is associated with more egalitarian attitudes among black girls, whereas it is associated with more inegalitarian attitudes among white girls. Adding to this unusual mix is the fact that the effect, where evident, is also negative for black boys.

Discussion

The development of gender identity is a central and important task during adolescent development. The shaping of normative gender attitudes is one aspect of this process, and such attitudes have been shown in prior research to be associated with a number of social and health-related concepts, such as occupational stereotyping, depression, and sexual behavior. This research sought to shed light on the relationship between relationally oriented dating content and adolescents' gender attitudes. Media dating content is thought to contain "scripts" that may guide adolescent attitudes and expectations as they move through a life stage in which the negotiation of gender and romantic norms is a task central to identity development. It was hypothesized that a greater degree of exposure to dating and relationship-oriented scripts would predict more egalitarian gender attitudes. This prediction is at odds with the characterization in much of the literature that media content upholds aspects of the sexual double standard; a narrative that portrays men as pursuers of objectified sexual conquests and women as coy and passive subjects, protecting their sexual virtue.

However, recent studies have begun to take a more nuanced view of various forms of sexual and gendered content in the media, specifying that not all content carries messages that are harmful or "degrading" to girls, particularly. Detailed content analyses such as those conducted by Signorielli (1997) and Ward (1995) demonstrate that content which portrays women in a positive light *is* present in the media used by teens. The content utilized here as the primary predictor of gender attitudes is more likely to portray "relational" aspects of romantic relationship, or those aspects that show the process by which relationships are maintained and negotiated. In a sense, relationally-oriented content implies that it takes "two to tango," which may actually privilege the role that girls play in a heterosexual dyad.

However, relational content, while unlikely degrading, may not necessarily be "progressive". It is possible that, rather than encouraging boys to take a more traditionally "feminine" approach to relationships, norms have simply shifted such that girls are now allowed to behave in a more "traditionally masculine" way. This may be "empowering" for girls, but whether it is a positive development is up for debate. Risman and Schwartz (2002) suggest that contemporary adolescent sexual activity increasingly takes place within mutually defined romantic relationships. Within such relationships, the rules for girls appear to have changed. They may have greater freedom to be sexual initiators, thereby rewriting at least some of the expectations regarding dominance and submission in romantic scripts.

The results of the analyses here are largely consistent with the argument above. The direction of the effects is almost universally positive, meaning that exposure to a relationally-oriented style of media content generally predicts more egalitarian gender attitudes among teens. These media effects remain detectable after a host of competing sources known to influence gender attitudes, such as parents, peers, schools, and religion, were taken into consideration. Although peers appear to hold the most sway over gender attitudes, the media rival parents as the second most influential agent of socialization. Furthermore, media content continues to predict adolescent gender attitudes, even when baseline attitudes have been controlled in the model.

Multiple kinds of media were investigated. Music lyrics, higher in dating and relationship content than any other medium, were particularly important, whereas effects attributed to movie, television, and magazine content were less consistently present. Why is music so influential? There are numerous reasons why this might be the case. Christenson and Roberts (1999) assert that popular music is very important to adolescents, who use it for

a variety of purposes. Sometimes music is used to manipulate mood. In this case, lyrics may not be the listener's main focus. However, sometimes the lyrics are the most important aspect of music listening and a great deal of weight may be given to their meaning. Recent changes that make accessing lyrics easy, such as their inclusion in the jackets of CDs and teens' ability to look them up online, may contribute to their salience. Furthermore, songs may be listened to again and again, so lyrics that are deemed important are heard repeatedly, thereby increasing their impact. These analyses were not designed to delve deeply into any one medium, but the results suggest that the empirical connection between music lyrics and gender attitudes is certainly worthy of further research, especially with regard to the potential for variation in influence across music genres.

These results also speak to differences across race and gender groups. Due to the characterization of media content as detrimental to girls (which some aspects of it certainly are), this group has been much more frequently studied. However, few media-related effects among girls are detected. Among black girls, only exposure to music content predicts a positive change in gender attitudes, suggesting that the music chosen by black female teens leads to more egalitarian gender attitudes. No significant content exposure effects are evident among white girls, although other measures of media interaction, such as reporting having learned about dating from the media and having an interest in sexual media content, do predict gender attitudes (although the results are marginally significant). It would seem that, for white girls in this sample, exposure to content is not enough to produce a change in attitudes – intentionality associated with media use may need to be considered.

Other aspects of girls' interaction with media may help to explain the lack of findings. First, the models developed here, by controlling for baseline gender attitudes, only

reflect "changes" in gender attitudes over time. The baseline gender attitude coefficients in the models are generally larger for girls than for boys, indicating a greater continuity of gender attitudes among girls between early and middle adolescence. It is possible that exposure to gendered media messages targeted at girls begins so early that, by middle adolescence, the ability of the media to actually "change" attitudes among girls may already be long past. Second, as Ward (2003) notes, messages about how to enact culturally approved versions of femininity may be more consistent in media content than similar scripts for masculinity. The ubiquity of such messages may produce a "fishbowl effect" among girls, who are unaware that alternatives to such scripts exist. This contention is, in part, supported by research that has uncovered evidence that girls able to critique media messages may do so from social locations that make them "outsiders" to an extent (e.g. being an ethnic minority or being home-schooled). A third explanation is that there is simply a ceiling effect among the girls in the sample, who tended to express fairly egalitarian gender attitudes at each time point[46], leaving little room for exposure to relational content to effect change.

These analyses reveal that the media may exert greater influence on boys' gender attitudes than on girls'. Black boys in particular appear susceptible to gendered media messages, with effects due to content exposure evident across several media (television, music, and magazines). For white boys, the effects are marginal and limited to movie and music content. However, the effect of exposure to relational media content on black boys' gender attitudes consistently produces more egalitarian attitudes, whereas among white boys the results are mixed. Movie content produces more egalitarian attitudes while music content encourages marginally more traditional attitudes. Very little is known regarding the process

[46] The mean for girls on gender attitude scales created at each time point was 3.9 (both times). The highest possible score was 5.

by which media messages may affect boys of *any* racial background, which makes it difficult to state broadly what these effects may indicate. However, more of the detected effects are positive, suggesting that relational content *typically* does not encourage attitudes among boys that are consistent with a version of masculinity rooted in the sexual double standard. More explicit theorizing regarding the connection between messages about images of masculinity in the media and their effect on teen boys is needed, as are more studies that primarily investigate boys.

In keeping with ecological suppositions, both the availability of potentially gendered messages, as well as the "goodness and strength" of the relationship with a socializing agent are important components of the process by which adolescents learn gender attitudes. As past research has noted, peers, even more so than media, appear to be a primary socializing force among teens when it comes to gender attitudes. The consistently negative effects of peer influence detected in these analyses are consistent with developmental theories of adolescence which suggest that peers sometimes act as gender "police", enforcing very rigid views of adherence to gender stereotypes (Brown, Eicher, and Petrie 1986). However, peers' permissive *sexual* attitudes, which might ordinarily be associated with more liberated views of gender (women should also be allowed to enjoy and pursue sexual pleasure), are found in these analyses to predict more traditional gender attitudes. This may indicate that both stereotypical dating attitudes (e.g. "boys should make the first move") and attitudes toward the appropriateness of sexual behaviors (e.g. the permissive girl as "slut" versus the permissive boy as "stud") share a common link to the sexual double standard narrative which, here, is operative in a peer context (Chambers, Tincknell, and Van Loon 2004). Unlike other measures within this domain, whether teens reported "getting along" with their

peers was not predictive across most groups, with the exception of white girls, for whom getting along with peers was generally, although marginally, predictive of more inegalitarian gender attitudes. The lack of effects for peers could be due to the fact that many of the questions were actually about "friends". Presumably, one's friends are those with whom one gets along, so perhaps the wording of the question precluded the detection of an effect.

Effects on gender attitudes across other potential socializing domains are less consistent than those produced by aspects of peer culture. Parents were not found to be particularly influential in shaping gender attitudes. Only among white girls did parenting appear to play a strong role. White girls who reported having good relationships with their parents were more likely to express egalitarian gender attitudes. Black boys were the only group in which parent communication regarding dating and relationships predicted gender attitudes. Having such discussions predicted more traditional gender attitudes among black boys. These results are all marginally significant, but seem to be in keeping with the general finding that gender attitudes tend to be more conservative among black adults (Kane 2000), who may be passing their views on gender onto their teens. Religion as a source of gender attitudes was only confirmed among black girls, but the results do not produce a clear pattern. Black girls who believe religion to be important reported more traditional gender attitudes. Interpretation of this effect is speculative since denominational affiliation is unavailable in this dataset, and some denominations are more conservative than others regarding gendered behavior. The direction of the effect here would seem to be more in keeping with exposure to conservative religious messages regarding gender among black girls. Black girls who perceived that their religious leader disapproved of teen sex were more likely to report egalitarian gender attitudes. This is surprising since one would expect

conservative gender and sexual attitudes to go hand in hand. However, it is possible that religious leaders' disapproving attitudes toward sex are indicative of lower adherence to traditionally *masculine* norms since such norms promote a greater permissiveness regarding sexuality among males, thereby producing more egalitarian attitudes as they are measured here by the dependent variable (e.g. neither male nor female teens should be sexually permissive). In the schooling context, only getting along well at school was predictive of gender attitudes, but the direction was inconsistent across groups. White girls and black boys who reported getting along well at school were more likely to report traditional gender attitudes while black girls who got along well were more likely to report egalitarian attitudes. This predictive variable for schooling includes peer interaction and, therefore, it is possible that among white girls and black boys, adherence to traditional gender attitudes is more strongly connected to peer conformity than for black girls. However, the somewhat arbitrary direction of results for schooling prohibits a clear interpretation of this domain's influence on gender attitudes. In general, across non-media domains, it is not only the content and availability of gendered messages that matter, but also the relationship that a teen reports having with that person or institution. This is consistent with the tenets of an ecological perspective, which stresses both the structural and relational aspects of social life (Dornbusch 1989).

Although the analyses performed here shed light on a number of understudied aspects of the relationship between media content and adolescent gender attitudes, the study is not without its limitations. First, limitations stemming from measurement may play a role in the nature of the results. The coding underlying the measure of dating and relationship content in the media was not specifically developed to address gender issues. Future research in this

substantive area would benefit greatly from content analyses of media vehicles that focused more concretely on issues of gender in addition to issues of sexuality, given the complex interconnection between these two concepts. Also, more direct measures of gendered learning across ecological sources would provide beneficial information if such sources are to be directly compared. For instance, the actual content of parent discussions regarding what constitutes appropriate behavior for a boy or girls on a date would allow for directional hypotheses regarding parent influence on gender attitudes to be formulated. Survey variables are often assumed to be accurate reflections of the "real life" concepts that they are designed to measure. However, when these measures are imperfect, error resulting from the discrepancy between variable and construct may lead to biased regression parameters or standard errors. In these analyses, some of the predictor variables act as proxies for unmeasured constructs (such as the 'gendered learning' variables mentioned above). However, bias results from systematic measurement error, and it is difficult to say whether the error potentially produced by the measures included in these regressions is systematic or not. Where possible, multiple measures of a construct (often in the form of scales, whose reliability estimates were within accepted ranges) were included as a strategy to minimize the instances in which a construct might have been inadequately captured. Nevertheless, future studies that included more precise measures will be needed to verify these results and, perhaps, structural equation models that are better equipped to detect measurement error could be employed in the analytic process.

Additional concerns arise from the nature of the data and sample. The sample of respondents to these surveys is not nationally representative, and therefore care should be taken in making broad generalizations to all American teens. Along these lines, the data

collected here reflect content at a particular point in time, but media content is not static. The content of cultural scenarios delivered to adolescents through media messages is unlikely to remain consistent, necessitating research that documents changes in content trends as well as a continued focus on the changing nature of the ways in which adolescents consume media (e.g. new media forms).

Finally, these analyses predict attitudes among middle adolescents only. Since adolescence is marked by continual developmental change, work that investigates the media as a source of gender attitudes among both older and younger teens may help to confirm or dispute general theories of gender identity formation. This may be particularly important when doing research among girls, as it is suspected that adolescent girls may already be past the point at which media messages are operative in attitude change. Despite these limitations, this study does establish a link between freely chosen media content exposure among teens and subsequent changes in gender attitudes. The fact that this finding is robust to the inclusion of a wide variety of competing sources of gendered scripts only strengthens this claim.

Adolescence will undoubtedly continue to be a primary locus for learning about gender and romance, and the world is unlikely to become any less media saturated. Much is still not understood about media as source of gendered scripts and further investigation should be undertaken to elucidate the ways in which teens come to create and reinforce their attitudes about what it is to be male or female in this culture.

Table 3.1 Demographic, Socio-Economic, and Developmental Control Variables

Demographic Characteristics	Percentage of Sample (N) Time 1	Percentage of Sample (N) Time 2
Race		
Black	51.7	51.7
White	48.3	48.3
Sex		
Boys	51.7	51.7
Girls	48.3	48.3
Age		
12	18.2	
13	46.9	
14	34.9	23.9
15		45.6
16		30.5
SES		
Free Lunch	31.6	25.6
No Free Lunch	68.4	74.4
Parent Education		
High school or less	22.3	17.9
College/some college	47.3	51.9
Graduate school	30.5	30.2
Perceived Puberty Onset (relative to peers)		
Earlier	23.6	26.9
Same Time	51.2	49.2
Later	25.2	23.9
Total N	1017	1017

Notes: Percentages as based on the total number of adolescents who responded to both waves of survey data collection (N = 1017). The sample was stratified to include roughly equal numbers of black and white, boys and girls.

Table 3.2 Teen Media Gender Attitude Items

Teen Media Item	Source	Theoretical Concept	Original Item
ACTS: It bothers me when a guy acts like a girl.	Pleck, Sonenstein, & Ku (1994)	Male Ideology: Anti-Femininity	It bothers me when a guy acts like a girl.
TOUGH: A young man should be physically tough even if he's not big.	Pleck, Sonenstein, & Ku (1994)	Male Ideology: Toughness	A young man should be physically tough, even if he's not big.
ROUGH: It is all right for a girl to want to play rough sports like ice hockey.	Galambos et al. (1985)	Sex-Role Attitudes, Women	It is alright for a girl to want to play rough sports like football.
READY: A guy should always be ready for sex.	Levant & Fischer (1998)	Male Ideology: Attitudes toward Sex	A man should always be ready for sex.
RESPECT: A guy who has sex with many girls deserves respect.	Pleck, Sonenstein, & Ku (1994) **and/or** Mosher (1998)	Male Ideology: Status **and/or** Hypermasculinity: Callous Attitudes toward Women	It is essential for a guy to get respect from others. Any man who is a man needs to have sex regularly.
MAN: Most women need a man in their lives.	Murnen & Byrne (1991)	Hyperfemininity	Most women need a man in their lives.
CHARGE: In a dating relationship, the guy should be in charge.	Galambos et al. (1985) **and/or** Murnen & Byrne (1991)	Sex-Role Attitudes, Women **and/or** Hyperfemininity	On a date, the boy should be expected to pay for all expenses. I expect the men I date to take care of my expenses.

Table 3.3 Survey Items Included in the Models

Concept	Representative Item(s)	Number of Items Cronbach's α
Baseline Gender Attitudes	It bothers me when a guy acts like a girl.	10 items α = 0.73
Learning about Dating from Media Sources	Have you ever seen or heard about how you should act on a date from watching movies?	4 items count variable (0-4)
Identification with Media Characters/Realistic Messages	I would like to be more like the teenagers I see in movies. Movies show the real life concerns of teenagers like me.	11 items α = 0.83
Interest in Sex and Dating in Media Portrayals	When you see something about dating, sex, and relationships in movies, how interested are you in watching it?	4 items α = 0.92
Communication about Dating across Domains	Have you ever talked about how you should act on a date with your parents or guardians?	1 item per domain Dichotomous
Disapproval of Teen Sex	How would your parents (or guardians) feel about you having sex at this time in your life? Would they…strongly disapprove?	1 items per domain Likert scored
Parental Involvement	How aware are your parents or guardians of how you're doing in school?	8 items α = 0.74
Relationship with Parent(s)	How would you describe your relationship with your mother or female guardian?	1 or 2 items
Importance of Religion	How important would you say religion is in your life?	1 item
Frequency of Religious Service Attendance	How often do you attend religious services?	1 item
Relationship with School/Teacher	How happy are you to be at your school? How much do you feel that your teachers care about you?	4 items α = 0.59
Relationship with Friends	I am very happy with my friendships. My friends accept me as I am.	4 items α = 0.78
Friends' Dating and Sexual Norms	Most of my friends believe it's OK for people my age to have oral sex.	5 items α = 0.71
Age	Age in years and months	1 item
Socio-Economic Status	Do you receive a free or reduced price breakfast or lunch at school this year?	1 item
Parent Education	What is the highest level of education completed by your mother/father?	1 or 2 items
Pubertal Development	Do you think your body development is earlier or later than most other girls/boys your age?	1 item

Table 3.4 Bivariate Regression Results in which Dating and Relationship Content Predicts Adolescents' Gender Attitudes across Race and Sex Groups: Unstandardized OLS Regression Coefficients (Standard Errors)

	Movies	**Television**	**Magazines**	**Music**
Black Boys	-0.55 (1.53)	4.49 (1.08)***	2.56 (1.11)*	0.57 (0.15)***
White Boys	0.24 (1.66)	0.36 (1.58)	0.56 (1.56)	-0.27 (0.15)¶
Black Girls	0.28 (1.69)	-0.39 (1.40)	1.38 (1.08)	0.40 (0.23) ¶
White Girls	0.55 (1.29)	-1.63 (0.75)*	0.60 (0.67)	-0.18 (0.13)

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$
Note: Results limited to respondents with no missing values on any variables in the full model.

Table 3.5 Bivariate Regression Results in which Dating and Relationship Content Predicts Adolescents' Gender Attitudes across Race and Sex Groups, Controlling for Baseline Gender Attitudes: Unstandardized OLS Regression Coefficients (Standard Errors)

	Movies	**Television**	**Magazines**	**Music**
Black Boys	-0.11 (1.29)	2.88 (0.97)**	2.17 (0.95)*	0.32 (0.14)*
White Boys	0.82 (1.43)	-0.98 (1.38)	-0.08 (1.39)	-0.23 (0.13) ¶
Black Girls	0.42 (1.54)	-0.76 (1.27)	0.37 (0.99)	0.35 (0.20) ¶
White Girls	1.26 (1.11)	-0.82 (0.66)	0.08 (0.57)	-0.14 (0.11)

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$
Note: Results limited to respondents with no missing values on any variables in the full model.

Table 3.6 Dating and Relationship Content in Movies Predicting Gender Attitudes, Full Model: OLS Regression Results, Unstandardized Coefficients and Standard Errors

	White Girls	Black Girls	White Boys	Black Boys
Dating and Relationship Content	0.29 (1.18)	0.60 (1.64)	3.24 (1.88) ¶	1.52 (1.34)
Baseline Gender Attitudes	0.47 (0.07) ***	0.47 (0.10) ***	0.40 (0.08) ***	0.29 (0.06) ***
Demographic Controls				
Age	0.03 (0.04)	0.00 (0.06)	0.07 (0.06)	-0.02 (0.05)
Receives free lunch	0.35 (0.12) **	-0.02 (0.09)	-0.07 (0.13)	-0.10 (0.07)
High parent education	0.06 (0.03) *	-0.03 (0.03)	0.01 (0.04)	0.01 (0.03)
Early Puberty	-0.03 (0.03)	-0.07 (0.04) ¶	0.06 (0.05)	-0.01 (0.04)
Media Measures				
Learned about dating from media	-0.05 (0.03) ¶	0.00 (0.03)	0.02 (0.03)	-0.03 (0.03)
Higher media identification	-0.05 (0.04)	0.03 (0.06)	-0.09 (0.07)	-0.04 (0.05)
Interest in Sex in the Media	0.05 (0.04)	-0.03 (0.04)	-0.01 (0.05)	-0.01 (0.03)
Parents				
Discussed Dating with Parent(s)	0.08 (0.06)	-0.09 (0.09)	-0.03 (0.09)	-0.15 (0.07) ¶
Parent(s) disapproves of teen sex	-0.07 (0.10)	-0.16 (0.09) ¶	0.02 (0.09)	0.04 (0.04)
Parent(s) is “hands on”	-0.02 (0.02)	0.00 (0.03)	0.01 (0.03)	0.03 (0.02)
Good relationship with parent(s)	0.09 (0.04) *	-0.05 (0.05)	-0.07 (0.05)	-0.05 (0.04)
Religion				
Discussed dating with clergy	0.06 (0.10)	-0.21 (0.17)	-0.05 (0.19)	-0.10 (0.14)
Clergy disapprove of teen sex	0.01 (0.06)	0.14 (0.07) ¶	-0.06 (0.07)	-0.05 (0.05)
Religion is important	-0.05 (0.05)	-0.13 (0.07) ¶	-0.05 (0.06)	0.06 (0.06)
Attend religious services often	0.00 (0.03)	0.04 (0.03)	-0.04 (0.04)	-0.06 (0.03) ¶
Schooling				
Discussed dating with teachers	0.10 (0.11)	0.06 (0.15)	0.05 (0.20)	0.04 (0.10)
Teacher disapproves of teen sex	-0.01 (0.06)	0.02 (0.07)	0.05 (0.07)	0.05 (0.04)
Gets along well at school	-0.13 (0.05) *	0.18 (0.07) *	-0.12 (0.07)	-0.13 (0.05) *
Peers				
Discussed dating with friends	0.07 (0.08)	0.12 (0.10)	-0.20 (0.08) *	0.09 (0.07)
Friends disapprove of teen sex	-0.08 (0.04) ¶	-0.07 (0.05)	0.04 (0.05)	-0.05 (0.04)
Gets along well with peers	-0.09 (0.05) ¶	-0.05 (0.06)	-0.02 (0.08)	-0.06 (0.05)
Peers have permissive dating attitudes	-0.15 (0.09)	-0.31 (0.10) **	0.05 (0.09)	-0.24 (0.07) **
N	152	162	117	141
Total r^2	0.44 ***	0.34 ***	0.42 ***	0.50 ***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3.7 Dating and Relationship Content on Television Predicting Gender Attitudes: OLS Regression Results, Unstandardized Coefficients and Standard Errors

	White Girls	Black Girls	White Boys	Black Boys
Dating and Relationship Content	-0.74 (0.74)	-0.73 (1.36)	-0.46 (1.48)	3.23 (0.98) **
Baseline Gender Attitudes	0.44 (0.07) ***	0.50 (0.10) ***	0.43 (0.09) ***	0.26 (0.06) ***
Demographic Controls				
Age	0.02 (0.04)	-0.01 (0.06)	0.05 (0.06)	0.00 (0.04)
Receives free lunch	0.22 (0.12) ¶	0.03 (0.09)	-0.06 (0.13)	-0.10 (0.06)
High parent education	0.06 (0.03) *	-0.02 (0.03)	0.00 (0.04)	0.02 (0.03)
Early Puberty	-0.03 (0.04)	-0.08 (0.04) ¶	0.05 (0.05)	-0.02 (0.03)
Media Measures				
Learned about dating from media	-0.04 (0.03)	0.01 (0.04)	0.03 (0.03)	-0.01 (0.02)
Higher media identification	-0.04 (0.04)	0.02 (0.06)	-0.08 (0.08)	-0.02 (0.05)
Interest in Sex in the Media	0.07 (0.04) ¶	-0.01 (0.04)	-0.01 (0.05)	0.02 (0.03)
Parents				
Discussed Dating with Parent(s)	0.09 (0.06)	-0.07 (0.09)	-0.05 (0.09)	-0.13 (0.07) ¶
Parent(s) disapproves of teen sex	-0.06 (0.11)	-0.14 (0.09)	-0.01 (0.09)	0.04 (0.04)
Parent(s) is “hands on”	-0.02 (0.02)	0.00 (0.03)	0.00 (0.03)	0.03 (0.02)
Good relationship with parent(s)	0.09 (0.04) *	-0.04 (0.05)	-0.06 (0.06)	-0.06 (0.04) ¶
Religion				
Discussed dating with clergy	0.05 (0.10)	-0.17 (0.07)	-0.09 (0.19)	-0.07 (0.14)
Clergy disapprove of teen sex	0.01 (0.07)	0.13 (0.07) ¶	-0.06 (0.07)	-0.06 (0.05)
Religion is important	-0.04 (0.05)	-0.15 (0.07) *	-0.04 (0.06)	0.05 (0.06)
Attend religious services often	-0.01 (0.03)	0.05 (0.03)	-0.04 (0.04)	-0.04 (0.03)
Schooling				
Discussed dating with teachers	0.14 (0.11)	0.03 (0.15)	0.08 (0.21)	0.07 (0.09)
Teacher disapproves of teen sex	-0.03 (0.06)	0.05 (0.06)	0.05 (0.08)	0.03 (0.04)
Gets along well at school	-0.14 (0.07)	0.18 (0.07)	-0.10 (0.08)	-0.10 (0.05) ¶
Peers				
Discussed dating with friends	0.03 (0.08)	0.12 (0.10)	-0.19 (0.08) *	0.05 (0.07)
Friends disapprove of teen sex	-0.08 (0.04) ¶	-0.06 (0.05)	0.02 (0.05)	-0.03 (0.04)
Gets along well with peers	-0.10 (0.05) ¶	-0.06 (0.06)	-0.03 (0.08)	-0.04 (0.05)
Peers have permissive dating attitudes	-0.21 (0.09) *	-0.29 (0.10) **	0.05 (0.10_	-0.24 (0.07) ***
N	156	165	116	146
Total r^2	0.44 ***	0.34 ***	0.40 **	0.54 ***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3.8 Dating and Relationship Content in Music Predicting Gender Attitudes: OLS Regression Results, Unstandardized Coefficients and Standard Errors

	White Girls	Black Girls	White Boys	Black Boys
Dating and Relationship Content	-0.15 (0.12)	0.45 (0.21) *	-0.27 (0.15) ¶	0.35 (0.14) *
Baseline Gender Attitudes	0.44 (0.07) ***	0.48 (0.10) ***	0.40 (0.09) ***	0.26 (0.06) ***
Demographic Controls				
Age	0.03 (0.05)	0.02 (0.06)	0.05 (0.06)	-0.02 (0.04)
Receives free lunch	0.24 (0.12) *	0.02 (0.09)	0.05 (0.14)	-0.08 (0.07)
High parent education	0.06 (0.03) *	-0.01 (0.03)	0.04 (0.04)	0.01 (0.03)
Early Puberty	-0.03 (0.04)	-0.08 (0.04) *	0.04 (0.05)	-0.02 (0.04)
Media Measures				
Learned about dating from media	-0.04 (0.03)	0.00 (0.03)	0.05 (0.03) ¶	-0.03 (0.02)
Higher media identification	-0.03 (0.05)	0.00 (0.06)	-0.08 (0.08)	-0.04 (0.05)
Interest in Sex in the Media	0.07 (0.04) ¶	0.02 (0.04)	0.01 (0.05)	-0.02 (0.03)
Parents				
Discussed Dating with Parent(s)	0.08 (0.06)	-0.06 (0.09)	-0.08 (0.09)	-0.12 (0.07) ¶
Parent(s) disapproves of teen sex	-0.07 (0.11)	-0.14 (0.09)	-0.01 (0.10)	0.06 (0.04)
Parent(s) is “hands on”	-0.02 (0.02)	0.01 (0.03)	-0.01 (0.03)	0.03 (0.02)
Good relationship with parent(s)	0.09 (0.04) *	-0.08 (0.05)	-0.02 (0.06)	-0.04 (0.04)
Religion				
Discussed dating with clergy	0.03 (0.11)	-0.13 (0.17)	-0.10 (0.26)	-0.09 (0.15)
Clergy disapprove of teen sex	0.01 (0.07)	0.13 (0.07) ¶	-0.10 (0.08)	-0.04 (0.05)
Religion is important	-0.05 (0.05)	-0.14 (0.07) *	-0.03 (0.06)	0.05 (0.06)
Attend religious services often	0.00 (0.03)	0.05 (0.03)	-0.04 (0.04)	-0.05 (0.03) ¶
Schooling				
Discussed dating with teachers	0.16 (0.11)	0.04 (0.14)	0.01 (0.23)	0.09 (0.10)
Teacher disapproves of teen sex	-0.03 (0.06)	0.04 (0.06)	0.10 (0.08)	0.03 (0.04)
Gets along well at school	-0.15 (0.07) *	0.15 (0.07) *	-0.03 (0.08)	-0.13 (0.05) *
Peers				
Discussed dating with friends	0.03 (0.08)	0.11 (0.09)	-0.24 (0.09) **	0.06 (0.07)
Friends disapprove of teen sex	-0.08 (0.04) ¶	-0.06 (0.05)	0.02 (0.05)	-0.05 (0.04)
Gets along well with peers	-0.09 (0.05) ¶	-0.05 (0.06)	-0.02 (0.08)	-0.05 (0.05)
Peers have permissive dating attitudes	-0.23 (0.09) *	0.32 (0.10) **	0.08 (0.10)	-0.22 (0.07) **
N	154	165	105	144
Total r^2	0.44 ***	0.37 ***	0.42 **	0.52 ***

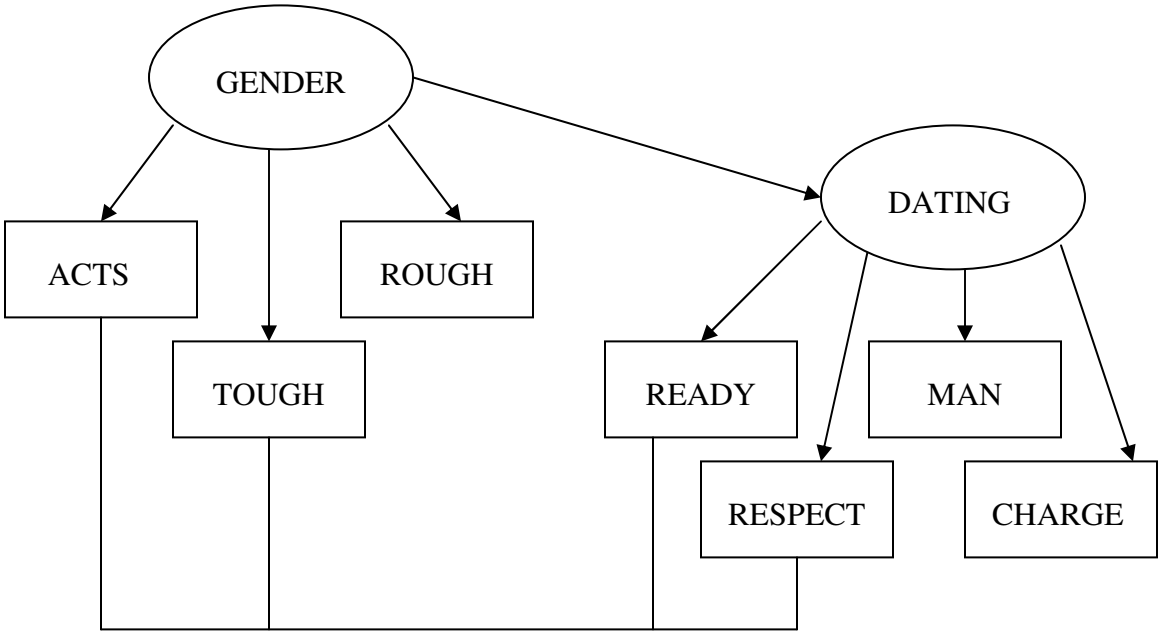
*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3.9 Dating and Relationship Content in Magazines Predicting Gender Attitudes: OLS Regression Results, Unstandardized Coefficients and Standard Errors

	White Girls	Black Girls	White Boys	Black Boys
Dating and Relationship Content	-0.63 (0.62)	1.31 (1.14)	-0.02 (1.57)	1.86 (0.99) ¶
Baseline Gender Attitudes	0.50 (0.08) ***	0.47 (0.10) ***	0.34 (0.09) ***	0.30 (0.06) ***
Demographic Controls				
Age	0.04 (0.05)	-0.01 (0.06)	0.04 (0.07)	-0.01 (0.05)
Receives free lunch	0.21 (0.11) ¶	0.01 (0.09)	-0.08 (0.14)	-0.07 (0.07)
High parent education	0.04 (0.03)	-0.02 (0.03)	0.02 (0.04)	0.02 (0.03)
Early Puberty	-0.01 (0.04)	-0.08 (0.04) ¶	0.09 (0.05)	0.01 (0.04)
Media Measures				
Learned about dating from media	-0.06 (0.03) *	0.00 (0.04)	0.04 (0.03)	-0.02 (0.03)
Higher media identification	-0.01 (0.05)	0.02 (0.07)	-0.08 (0.08)	-0.02 (0.05)
Interest in Sex in the Media	0.06 (0.04)	-0.02 (0.04)	0.00 (0.05)	-0.01 (0.03)
Parents				
Discussed Dating with Parent(s)	0.07 (0.06)	-0.06 (0.10)	-0.05 (0.10)	-0.11 (0.08)
Parent(s) disapproves of teen sex	-0.06 (0.11)	-0.13 (0.09)	-0.04 (0.10)	0.04 (0.04)
Parent(s) is “hands on”	-0.02 (0.02)	0.01 (0.03)	-0.01 (0.03)	0.03 (0.02)
Good relationship with parent(s)	0.07 (0.04) ¶	-0.07 (0.05)	0.00 (0.06)	-0.06 (0.04)
Religion				
Discussed dating with clergy	0.06 (0.11)	-0.22 (0.18)	-0.46 (0.26) ¶	-0.10 (0.14)
Clergy disapprove of teen sex	-0.01 (0.07)	0.13 (0.08) ¶	-0.13 (0.09)	-0.05 (0.05)
Religion is important	-0.06 (0.05)	-0.15 (0.07) *	-0.05 (0.07)	0.05 (0.06)
Attend religious services often	0.00 (0.03)	0.04 (0.03)	-0.01 (0.04)	-0.04 (0.03)
Schooling				
Discussed dating with teachers	0.15 (0.11)	0.01 (0.15)	0.17 (0.21)	0.06 (0.10)
Teacher disapproves of teen sex	-0.01 (0.06)	0.03 (0.07)	0.08 (0.08)	0.04 (0.04)
Gets along well at school	-0.16 (0.07) *	0.18 (0.07) *	-0.07 (0.09)	-0.09 (0.06)
Peers				
Discussed dating with friends	0.03 (0.08)	0.13 (0.10)	-0.21 (0.09) *	0.06 (0.07)
Friends disapprove of teen sex	-0.10 (0.05) *	-0.06 (0.05)	0.04 (0.05)	-0.05 (0.04)
Gets along well with peers	-0.08 (0.05)	-0.03 (0.06)	-0.01 (0.09)	-0.03 (0.05)
Peers have permissive dating attitudes	-0.23 (0.09) *	-0.32 (0.10) **	0.15 (0.10)	-0.25 (0.07) **
N	143	160	95	138
Total r^2	0.47 ***	0.35 ***	0.42 **	0.50 ***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Figure 3.1 Two Factor Model of Adolescent Gender Attitudes with Correlated Errors



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CHAPTER 4

MY GENRE, MY GENDER: ADOLESCENT MAGAZINE READING AND GENDER ATTITUDES

Walk into the magazine section of any large bookstore and you will be confronted with a dizzying array of choices. While many of titles are directed to an adult audience, adolescents are increasingly targeted as a desirable market segment. A large number of companies seek to advertise their products to a group whose discretionary spending continues to grow. A specific magazine format devoted to adolescent girls has existed since the 1940s, but adolescent boys routinely choose from a wider array of special interest magazines. On any given day, six in ten adolescents will pick up a magazine to read (Roberts et al. 2004).

Much current theory and research contends that magazines provide a site for gendered learning among adolescents. For this reason, magazines designed for consumption by teen girls are roundly criticized by scholars who contend that the messages sent by such publications promote traditional images of femininity and compulsory heterosexuality. Less is known about how, or whether, adolescent boys use magazine content to inform gender attitudes. Further, the experiences of African American girls with magazines have begun to be included in research and used as a counterpoint to studies that have largely focused on a white (and arguably female) audience, African American boys' use and understanding of magazine content remains uninvestigated.

The relationship between magazine readership and gendered learning has been studied using a variety of methodologies. Content analysis is a valuable tool in uncovering

the messages embedded in magazine texts and images, but few studies link content to attitudes. Focus groups and experimental designs provide us with this link, but may expose adolescents to content which they may not have chosen independently. This study seeks to add to existing scholarship by using the self-reported, and individualized, magazine genre selections made by adolescents to predict their attitudes regarding appropriate gendered behavior for males and females. In addition, this research is a first step in an exploration that includes a more varied array of magazine genres, as well as both black and white, boys and girls' use of such genres. It is hypothesized that differences in selection and gendered learning will be evident across these groups. Communication theory will inform Heckman selection analyses using longitudinal data drawn from the Teen Media project.

Magazines as a Site for Gendered Learning

A number of mass communication theories suggest how and why adolescents may learn about gender from their media environment (Brown 2002). Agenda setting or framing theory takes the view that the media help to define topics that are relevant to a society or group. Teen magazines function, in a sense, to define what it means to be an adolescent. Magazines may guide teens to topics that the editors and writers feel are, or should be, important for teens, such as puberty or dating. Magazines also give adolescents a chance to bounce their own experiences off of portrayals of others, linking them to a wider community. However, magazines have also been criticized for advancing very stereotypical and idealized versions of masculinity and femininity, thus limiting the possibilities open to adolescents and perhaps shaping their attitudes toward appropriate gender roles. Therefore, magazine content may frame the ways in which adolescents talk about and enact gender.

Adolescents who lack experience may turn to the media as a source of information on how to act in a particular situation. Media, therefore, are thought to convey *sexual scripts* (Simon and Gagnon 1984). Magazines, especially those aimed at teen girls, frequently include advice columns that provide adolescents with scripts, directing them to engage in certain behaviors while avoiding others. Also important here is the notion that such stories and scripts are often conveyed through "experts" who seemingly have the best interest of the reader at heart and function as authority figures. However, such advice has been found to uphold traditional and heterosexist views of relationships and gendered behavior (Currie 2001; Jackson 2005a; Jackson 2005b), thereby rewarding certain types of behaviors while negatively evaluating others.

Cultivation theory (Gerbner et al. 1994) was originally proposed to explain the effects of television viewing on attitudes and behaviors, but some of its main premises are easily applied to magazines. This theory posits that the frequent use of magazines may lead diverse readers to share expectations about the world that are embedded in content. The connection between frequent content exposure and attitudes is well documented across a number of domains, including gender attitudes (Kim and Ward 2004). However, since many studies are cross-sectional in nature, results should be interpreted with caution as it can be difficult to discern whether content influences behavior or whether individuals select content based on pre-existing attitudes.

Finally, a more recent theoretical contribution is the Media Practice Model (Steele and Brown 1995). This model improves on earlier work by characterizing adolescents' media use as interactive and iterative. Particularly important for the present study is the notion that a teen's identity may lead him or her to make individualized selections in what

can be seen as a media saturated culture. Interaction with a particular choice may then subsequently lead to changes in attitude or reaffirmation of existing attitudes. Such attitudes are then (re)incorporated into an adolescent's identity, at which point the process begins again. This theoretical model was designed for use with qualitative data, but its focus on selection as a key component of media use is taken up in this research. Given the sex and race specific nature of the marketing of many adolescent magazines, a teen's sex, race, and existent gender attitudes may predict both selection as well as later gender attitudes.

Clearly there is reason to believe that magazine reading may, in a number of ways, contribute to adolescent learning about gender. However, it should be noted that recent literature has not endorsed the view that adolescents blindly accept the messages delivered by magazines. Although they may not be entirely able to revise views of gender presented in magazines, teens are sometimes able to critique magazine content based on personal experience. It is also possible that adolescents select magazine content that affirms attitudes that they already hold. The following section summarizes what is already known about magazine messages and the ways in which adolescents read and learn from magazines.

Adolescents' Magazine Use

The Extent of Adolescent Magazine Use

Magazines aimed at adolescents have been in existence since the 1940s when *Seventeen* was introduced. Since then, magazines targeted at youth have proliferated. With teen spending on the increase, many adult magazines titles have created adolescent spin-offs in order to cash in on this booming market. While many of the new titles were aimed at adolescent girls, including Black and Latina girls, a number of options became available for

teen boys as well. *Men's Health, Maxim,* and *Sports Illustrated* are just a few of the magazines that attempted to move into the teen boy market (Fine 2004; Kaiser Family Foundation 2004). The glut of choices in the market led many of these new teen choices to fold, especially as adolescents move online for their magazine reading[47] (Ives 2006; Labre and Walsh-Childers 2003), but despite this, adolescents today are able to choose from a wide variety of magazine content.

Magazine reading is widespread among adolescents. A recent study of American teens found that, on average, 11 to 14 year olds spend 15 minutes a day reading magazines, with 54 percent having read a magazine for at least 5 minutes the day before being surveyed, and 25 percent having read for 30 minutes or more. The amount of time spent with magazines decreases somewhat in later adolescence. Fifteen to 18 year olds reported spending 13 minutes a day reading magazines. Forty-seven percent had spent at least five minutes the day before reading, and 21 percent had spent upwards of 30 minutes (Roberts, Foehr, and Rideout 2005). Similar percentages have been measured among British teenagers (Livingstone 2002). Roberts et al. (2004) report that 6 in 10 adolescents will read a magazine on any given day, with boys (63%) slightly more likely to do so than girls (55%).

Magazine Messages: Girls Gone Mild?

Since the late 1970s, a number of content analyses have focused on how messages of femininity are communicated to girls through the teen girl magazine genre. McRobbie's influential study (1978), a feminist content analysis of the British teen girl magazine, *Jackie*, argued that the features of the magazine contribute to a "culture of femininity" that

[47] Online content is becoming increasingly popular, with 60% of teens reporting that they visit magazine websites in conjunction with reading the print version (Kaiser Family Foundation 2004). It should be noted, however, that the studies reviewed below and the measures included in this paper refer to print magazines, not magazine websites.

emphasizes romance and personal beautification as the primary goals for young women. The revelatory nature of this analysis spurred research into magazine content as a site of gendered learning for female adolescents. Summing up the central findings of such studies, Durham (1999a) states that, "Mass media play a part in [the] cultural confinement and repression of girls. It is virtually incontestable that mass culture abounds with sexist and otherwise problematic representations of adolescent girls" (pg. 211). Since 24 percent of adolescent girls report reading fashion magazines "very often" (Signorielli 1997), these texts deserve close scrutiny.

Teen girl magazines are sometimes described as "manuals" for how to perform a feminine gender in contemporary society (Garner, Sterk, and Adams 1998). However, many authors are critical of the way in which magazines choose to guide girls' practices and pursuits, using the content of these magazines to make their point. One study of popular American teen magazines found that appearance (37%), fashion (32%), make-up (18%), and hairstyles (16%) were among the most popular topics covered in such magazines, and that many of the women depicted in both articles (34%) and advertisements (26%) were either "thin or very thin". The same study also found that 35 percent of articles talked about dating while only 12 percent talked about school or careers (Signorielli 1997).

Magazines speak to adolescent girls using a number of themes and formats (including advice pages, articles, quizzes, and advertisements). Informed by a feminist perspective, research which focuses on feminine socialization and heterosexual relationship maintenance (Durham 1999a; Ostermann and Keller-Cohen 1998), contradictory constructions of sexual desire (Jackson 2005b), patriarchy, capitalism, and consumerism (van Roosmalen 2000) as well as the connections among these themes is prevalent. In addition, magazines have been

found to provide limited depictions of career options for women (Massoni 2004) and to portray girls as needing other people to help them solve problems (Peirce 1993). The messages sent to girls are seen as propagating traditional gender roles and the consumption of products aimed at "improving" the self (Labre and Walsh-Childers 2003). In more recent decades, girls are encouraged and expected to be sexual beings, so long as they take responsibility for their sexual relationships and avoid sexual risk-taking (Chambers, Tincknell, and Van Loon 2004; Jackson 2005a; McRobbie 1996). The emotional and sexual management of relationships is a task assigned to girls, and to facilitate such management, boys' opinions and desires are given considerable attention (Duke and Kreshel 1998).

More recently, a number of researchers have begun to focus on how magazines are read, utilized, and interpreted by adolescent girls. Such studies respond to the critique that girls had been denied agency by scholars who assumed that they would be "duped" by the magazines' producers and blindly accept their intended messages (Currie 1997; Frazer 1987). In contrast to this view, adolescent girls have been found to use magazines for a variety of reasons and to use their lived experiences to distinguish fact from fiction on their own terms. Currie (1997) finds that girls are attracted and receptive to those images that appear "realistic" to them, but that perceived realism varies based on personal experience. In addition, some girls use their peer group, class, or racial/ethnic backgrounds as a location from which to dismiss or subvert mainstream magazine content (Duke 2002). However, both Currie and Duke also note that while girls may understand and acknowledge that magazine images and texts are often unreal representations of life, they may still use them as a basis for comparison and be unable or unwilling to reject that which goes against some forms of ingrained gender ideology. Girls, then, may be engaged in a negotiated reading, rather than

an oppositional one (Durham 1999a; Hall 1979). Criticism of magazine messages may also be mediated by the context in which it takes place.

Girls often read magazines together in groups, both in and out of school (Durham 1999b; Kehily 1999). Since peer groups have been described as policing gender performances, especially during early adolescence (Chambers, Tincknell, and Van Loon 2004), the conformity required within such groups may suppress the critical reading that girls, on their own, are capable of producing (Durham 1999b). Duke and Kreshel (1998) suggest that magazine messages create conflict for girls who, according to their study, lack the resources to reconcile two competing sets of norms: the view that female peers should be "gotten along with" and same-sex relationships nurtured versus the view that other girls are a source of competition in the quest for beauty and boys. It is interesting to note that, in one study, girls who were home schooled, and therefore less active in the adolescent girl peer culture, were less interested in dating and more focused on academic work (Kaplan and Cole 2003).

While the above research provides a fairly nuanced look at the ways in which girls use magazines and the messages to which they are likely exposed, similar studies that include boys are few and far between.

The Honeycomb Hideout: Boys and Magazines

Research into how adolescent boys utilize magazines is limited. The few sources available posit that boys may use magazines to seek out information on topics of interest to them. Therefore, unlike the teen girl genre that dominates the magazine consumption of adolescent girls, boys' reading is spread across a wider variety of niche genres, including sports, gaming, music, automobile, and male focus magazines, like *Stuff* or *Maxim* (Kaiser

Family Foundation 2004; Tincknell et al. 2003; Willemsen 1998). However, since many of these niche topics can be viewed as stereotypically masculine pursuits, it is likely that boys may also learn about how to enact gendered behavior through reading them.

A study of British teens' use of magazines within the context of peer groups in schools used focus group data to investigate patterns of magazine use among both girls and boys. Boys were less likely than girls to indicate that the discussion of magazines played a role in their interactions with peers, preferring to use them as a solitary activity. When one boy recited a list of various magazines that appealed to a male audience, his friends laughed at him for being an "expert" in such matters. Wanting a magazine aimed at teen boys was deemed a "sissy" idea in the group, indicating that "the reading of teen magazines comes dangerously close to falling beyond the bounds of publicly acceptable behavior for young males" (Kehily 1999; p. 71). However, boys in the study admitted to occasionally reading the "problem pages" (advice columns), less for the actual advice than for the fun of trying to determine whether the problems were "real" or submitted as "a laugh" (Kehily 1999, p. 73-74). Such reading was not taken seriously, at least not within the peer context. Boys in the study seem to use the discussion of the girls' magazines to define what they *are not* (a "sissy", gullible, interested in solving embarrassing personal problems) rather than what they *are*.

A content analysis of a general (i.e. not specific to a single topic) boys' magazine introduced in the Netherlands provides a more direct comparison to a typical girl's magazine. Willemsen (1998) identified the themes and language used in *Webber*, the boy's title, compared to *Yes*, a publication for Dutch girls, and found that the most frequent themes in *Webber* were celebrities and hobbies, with fashion and "romance" rounding out the top slots.

Yes featured themes similar to those found in American girls magazines, although "romance" placed seventh in terms of overall content, lower than in the comparable boys' magazine. However, gendered themes remain evident as the dating content aimed at girls was summed up as "how can I catch him and keep him" while that for boys was described as "how can I dump her afterwards". Words defined by the author as "cool" or "tough" were found more frequently in *Webber*, while *Yes* used more words and punctuation associated with emotion. These results are consistent with Willemsen's hypothesis that both magazines would be gender stereotypical, but with regard to the intended audience.

Recently, the content of men's magazines has begun to be analyzed. Evaluations of the messages contained in *Men's Health* (Alexander 2003) and a variety of "laddish" magazines aimed at a general, rather than topic specific, male audience (Tincknell et al. 2003) reveal a number of themes that appear to define an emerging, postmodern variety of masculinity. Alexander's (2003) analysis demonstrates that masculinity, as is may be understood within the pages of *Men's Health*, has shifted. Masculine men are not characterized as the aggressive, über-hetero tycoons of earlier generations. Rather, the *Men's Health* version of masculinity seems to emphasize the "stylish, hard body", a man who is a discriminating consumer, even regarding fashion. A man who knows how to select the "right" products and obtain "hard" muscles, deemed the correct physique according to the images provided, through rigorous self-discipline. The general magazines reviewed by Tincknell et al. (2003) suggest to their reader that masculinity consists primarily of two orientations: "laddishness" and "coolness". Being a "lad" means embracing what *Loaded* magazine refers to as "birds, booze, and football" (p. 50). That is, men are expected to be unwaveringly heterosexual and engaged in stereotypically male pursuits. Masculine men are

also “cool”. This stance consists of “detachment, narcissism, irony, and hedonism” (p. 55). As it takes shape on the pages of the magazine, men are encouraged to be open and ready to have sex at any time, to be aware of the sexual benefits of female companionship while simultaneously avoiding any emotional entanglements that such companionship might entail. This sentiment echoes the thematic romantic advice offered to boys in Willemsen’s study. Tincknell et al. (2003) suggest that “the lack of a magazine genre explicitly addressed to teenage boys, in which sex as an issue of personal and moral responsibility is foregrounded, is symptomatic of the wider cultural assumption that the management of sexual behavior remains the responsibility of women” (p. 48).

It may be that a culturally approved version of masculinity is, in some sense, what adolescent boys are attempting to master when they read magazines. Adler, Kless, and Adler’s (1992) study of elementary school boys’ (and girls’) popularity as a function of their success in appropriating and displaying the “correct” gender socialization suggests that boys achieve higher status if they are tough, cool, good at sports, able to be sociable with other boys, and proficient at cross-gender relationships. Since many of the magazines that boys choose directly address one or more of these subjects, it is evident that, like girls, boys may utilize magazines as a sort of gender “how to” manual. However, given the recent evidence that suggests adolescent girls are, at times, capable of critiquing magazine content, it would imprudent to assume that boys are not similarly inclined.

Wrong Cut, Wrong Color: African American Teens and Magazines

The adolescent magazine boom of the 1990s produced a number of new journals aimed at black teens and young adults, although many of these magazines either folded quickly or carried on with a small readership (Kaiser Family Foundation 2004). However,

there are relatively few studies that document the content of magazines targeted at black adolescents or how teens of color respond the selection of magazines available to them. A review of the literature uncovered no studies of black boys' magazine habits specifically.

Fortunately, some recent focus group research with teens provides a few clues as to how African American girls interpret the content of mainstream magazines. Kaplan and Cole (2003) included multiple racial and ethnic groups within a single study to facilitate comparison. African American girls in the study were critical of the images of black women and girls that appeared in the mainstream teen girl magazines. The models were seen as having been portrayed as "more masculine" than the white models and were interpreted as being placed in the magazines as "token" figures. In addition, make-up and hair tips, the bread and butter of such magazines, were seen as inapplicable to the needs of black girls, who seemed aware that their hair and facial features were undervalued relative to the Caucasian ideals presented. These views are similar to those voiced by the African American teen girls in Duke's (2002) study, who were able to identify bias in every aspect of the teen magazines they were asked to read, and whose reading of mainstream magazines was selective. About the participants, Duke states that, "…they demonstrated their agency through 'partial consumption,' that is, they took from teen magazines the material they judged to be truly 'generic', or that meshed with their views as African Americans" (p. 227).

Duke (2002) further argues that racial background is used as a site from which to evaluate whether or not the images in a magazine are "realistic" and therefore relevant to the lives of black adolescent girls. The critiques raised by the participating girls extended beyond faulty make-up and hair advice to include images that did not include a range of racial and ethnic groups, stories that portrayed "minor setbacks as tragedies" (p. 221) and

interactions with boys as intimidating. In terms of gendered learning, many of the participants, especially older girls, did not utilize magazine content to inform their definitions of femininity. Again, the style of femininity peddled by the magazines ran contrary to the cultural norms that the girls brought to bear in their reading, as was therefore rejected as also "unrealistic". The research above suggests that African American girls may be better able to marshal resources to critique and circumvent the messages regarding gender and femininity in magazines that are so often seen as detrimental to the development of adolescent girls.

Half-Finished Crossword Puzzle: Linking Magazine Reading to Gender Role Attitudes

The research described above is a valuable contribution to understanding magazine reading within the context of adolescent lives and adolescent exposure to gendered content and the structure of power within heterosexual relationships. However, they are also not without limitations. Prior research has relied heavily on small convenience samples making generalization to larger populations difficult. Few studies have attempted to link the selection of various available magazine genres to adolescent gender attitudes using quantitative data outside of an experimental format. Such research would provide another piece of the puzzle in determining whether magazine readership has a verifiable connection with professed gender attitudes, themselves a potential gender performance. If adolescent boys and girls are reading and absorbing the stereotypic gender content of these magazines uncritically, then we may expect that such readership would correspond to less egalitarian attitudes regarding the relative equality of men and women, and opinions that reflect traditional familial structures in which women perform roles distinct from those of men and male sexual dominance is the accepted norm. Whether this is true is unknown.

The research presented above hypothesizes that African American girls may be less susceptible than white girls to mainstream magazine content, but practically nothing is known about the use of magazines by African American boys and very little about white American boys. In addition, most of the research to date has focused on only one or two genres of magazines. This may be understandable so long as adolescent girls' are the group whose readings habits are in question, but a review of the literature suggests that boys' reading is diversified across a number of genres, many of which are not necessarily geared to an adolescent audience. Essentially nothing is known regarding whether such special interest magazines serve as a site for gendered learning. In response to the need to establish a wider assessment of early adolescent magazine readership, as well the need to establish whether exposure to various genres informs gender attitudes, the following research questions are asked:

Research Question 1: What genres of magazines do early adolescents read?

Research Question 2: Are there differences across race and sex groups in magazine genre readership?

Research Question 3: Conditional upon selection of a particular genre, does gendered magazine content predict gender attitudes?

This research, therefore, seeks to contribute to knowledge of adolescent gendered learning through magazine readership by expanding both the sex and race of groups included for analysis, as well as the variety of magazine genres covered. Using longitudinal data drawn from the Teen Media study, Heckman selection models are utilized to account for both the initial selection of a particular magazine genre based on respondent characteristics, as well as

whether magazine reading within a particular genre during early adolescence informs later gender attitudes.

Data and Methods

Data

The longitudinal data for these analyses are drawn from both waves of the Teen Media project, a study designed to investigate the media selections and habits of early and middle adolescents and the relationship of such use to sexual behaviors and attitudes. The sampling frame consists of three school districts (set in rural, suburban, and urban locations) in the Southeastern United States. Fourteen of sixteen eligible schools chose to participate. Significant differences were not detected between participating and non-participating schools in terms of the race and sex composition of the student populations.

The initial survey (which produced a 64.8% response rate) gathered data regarding the media use and interests of the adolescent participants as well as demographic data. For the next phase, an Audio-CASI[48] administered health survey, 1200 adolescents were selected from among respondents to the media survey in a stratified probability sample that included equal numbers of boys and girls and black and white teens (thus creating four primary groups). One thousand seventy-four of the initial 1200 students participated (an 89.5 percent response rate). Each demographic subgroup comprised 24 to 26 percent of the sample[49].

Two years after the initial media survey, a combined health and media survey was fielded. Eligible participants included the 1,074 teens who had completed the first health

[48] Audio Computer Assisted Self Interview. This style of survey administration ensures confidentiality of responses. Students could ask for clarification by clicking on highlighted words within the survey questions.

[49] A thorough discussion of the data collection protocol for the media and initial health survey can be found in L'Engle, Pardun, and Brown (2004).

survey. From this group, 1,017 also completed the second survey (a 94.7 percent retention rate). No significant differences in race, gender, age, or sexual behavior were detected between the group who completed the second survey and those who did not[50] (Brown et al., 2006). The 1,017 respondents to both health surveys are included in these analyses. Table 1 describes the sample at each time point using descriptive statistics.

Modeling Strategy

Heckman selection models (Heckman 1979) will be used to model the data. This particular type of modeling simultaneously estimates two equations. The first, called the selection equation, takes into account predictors of whether or not a respondent has made a particular choice and will therefore include hypothesized predictors of magazine genre selection, such as demographic characteristics (race, gender, and age) and pre-existing gender attitudes, as suggested by the Media Practice Model (Steele and Brown 1995).

The second equation, called the outcome equation, then takes into account the estimated error from the selection portion of the model and incorporates this information into the next step which predicts gender attitudes based on both genre selection, as well as a number of other independent variables. The reason for doing this is that the censoring effect of selection and the dependent variable are not thought to be independent. For instance, those who are not exposed to a certain type of magazine will not be influenced by that magazine's content, but both exposure to a certain type of genre and gender attitudes may be influenced by some characteristics of the respondent. If this is the case, then the error terms generated in each equation will be correlated. Taking this correlation into account prevents overestimation of the effect of the independent variables. In particular, it helps to guard

[50] Of those who did not did not complete the second health survey, 44 could not be contacted, 6 were adolescent refusals, and 7 were parent refusals.

against incorrectly attributing an effect to content exposure when, in reality, it is due to the selection of magazine genre.

For these analyses, the demographic predictors listed above and baseline gender attitudes will be included in both the selection and outcome equations as they are thought to relate to both magazine genre selection as well as subsequent gender attitudes. Additional demographic controls hypothesized to predict gender attitudes, such as parent education, pubertal development, and socio-economic status are also included in the outcome equation (Cunningham 2001; Dornbusch 1989; Durham 1999b; Hardesty, Wenk, and Morgan 1995; Hill and Lynch 1983; Strasburger 1995).

It is recommended that at least one variable be included in the selection equation which does not also appear in the outcome equation (StataCorp 2007). To satisfy this requirement, the selection equation will also include a measure of whether someone in a teen's family subscribes to at least one magazine. The availability of magazines in the home may relate to genre selection, but probably does not directly predict subsequent gender attitudes and is therefore the best available measure in the dataset to address this modeling requirement.

Other magazine-related items, such exposure to gendered content within magazines, attitudes toward magazine content, and frequency of magazine use will be included in the second equation as these likely relate to the social context in which magazines are used through the measurement of whether teens find magazine content important, credible, and compelling. As the literature review indicates, the social context of magazine use in large part determines whether teens accept or contest the images and text to which they are exposed. These measures are described in detail in the following section. Separate Heckman

selection models will be run for each genre investigated. To accommodate the Heckman strategy, cases are treated as censored if the respondent does not report having read any magazines classified within a particular genre.

Measures

The Adolescent Gender Attitudes Measure

The dependent variable in these analyses is a measure of gender attitudes among adolescents during the second wave of survey data collection. A model of such attitudes was developed using confirmatory factor analyses in a structural equations modeling format (see Chapter 2 for a complete description). It was hypothesized that gender attitudes related to appropriate male and female behaviors within a dating context would comprise an important component of general gender attitudes, and a two factor model confirms this hypothesis. The fit statistics associated with this solution are excellent, and the form of the model holds across all four of the race and sex-defined demographic subgroups. Indicators of the latent variables are listed in Table 2 and a path diagram of the model is depicted in Figure 1.

Baseline Gender Attitudes

In accordance with the predictions made within the Media Practice Model, baseline gender attitudes are hypothesized to influence the initial selection of particular genres of magazines since adolescents may choose to read or look at material that reinforces attitudes that they already possess and are also thought to predict later gender attitudes since such attitudes are relatively stable over time. Therefore, baseline gender attitudes will be entered both in the selection equation as well as the outcome equation in the Heckman models. These attitudes are assessed using a 10-item scale (Cronbach's $\alpha = 0.73$). Varimax-rotated exploratory factor analysis confirms that all items load onto one underlying construct. The

indicators of gender attitudes available at baseline are not identical to those available in the follow-up survey. Therefore, the best possible scale that could be assembled using Time 1 measures is utilized in the modeling[51].

Magazine Genres and Genre Readership

In the initial media survey, respondents were asked to select from a diverse list of 43 magazines those that they usually read[52]. If at least 10 percent of one of the four demographic groups selected a particular magazine, then that magazine was included in the content analysis component of the study. Thirty-two magazines met this criterion and the most recent issue of each was analyzed for sexual content, including content related to dating and relationships.

The 32 magazines that qualified for inclusion in the content analysis phase of the data collection are categorized according to their genres. Of these, 29 magazines were able to be classified into 9 primary categories which are listed in Table 3 along with the titles associated with each genre. The genre categories have face validity but were also verified through Varimax-rotated exploratory factor analysis. The factor loadings for each magazine are also listed in Table 3 as well. The three excluded magazines are *Boy's Life*, *WWF*, and *Reader's Digest*. *Boy's Life* loaded most strongly with *XXL* and *Playboy*, likely because it is read primarily by boys. However, *Boy's Life* is a magazine published by the Boy Scouts of America, and its content is clearly not in keeping with the other two magazines in the Male Focus genre. *WWF* is a magazine devoted to professional wrestling and loaded weakly

[51] Not all measures of gender attitudes utilized at Time 1were subsequently used at Time 2. Therefore, the best possible scale is utilized, even though the measures are not an exact match to those that comprise the dependent variable at Time 2.

[52] Appropriate titles for inclusion were determined largely through suggestions generated in focus groups with teens.

across a number of categories, including gaming, male focus, and sports. Since this magazine did not clearly fit into any genre, it is excluded from the analyses. Reader's Digest loaded most strongly with *TV Guide* but was not grouped with this magazine due to the different thematic emphases of the two magazines[53]. A final classification decision was made regarding the separation of the Current Events and Entertainment genres. Although *People* magazine was associated most strongly with the Current Events magazines in the factor analyses, its content is dissimilar to that of *Time* or *Newsweek*, as is its level of dating and relationship content. However, *People* magazine is rather similar to *TV Guide* in that both cover entertainment news and the lives of celebrities. Therefore, knowledge of actual content, rather than factor analysis, was utilized to split these magazines into two distinct genres.

Once the genres were established, two types of genre exposure measures were created. One measure is a count variable that totals the number of magazines within a genre a particular teen reports reading regularly. For instance, regarding exposure to the Teen Focus genre, scores could range from 0 to 6. The second measure is dichotomous. Each adolescent was assigned a score of either "1" or "0" for each genre, based on whether he or she reported reading at least one title that was categorized for inclusion into that genre.

Exposure to Dating Content within Genres

Once the magazine genres were finalized, a measure of exposure to dating content within each category was created. In the content analysis phase of the Teen Media Project, all sexual content was coded and one aspect of this content is exposure to media portrayals of

[53] It was also determined that fewer than 10 percent of teens within any demographic (race/sex) group read Reader's Digest when only the current sample was utilized (the current sample includes teens who responded to both waves of the Health Survey in addition to the Media Survey).

heterosexual relationships[54]. This content is thought to potentially inform gender attitudes among adolescents by presenting what Simon and Gagnon (1984) refer to as *cultural scenarios*, or general "scripts" that function at an abstract level within a culture to inform individually constructed lines of action. Such scripts may function as sets of norms. If one reads about how a boy or girl might be expected to act on a date or within a romantic relationship, this information could potentially inform gender attitudes, as romantic relationships are generally depicted as taking place between two individuals of the opposite sex. Adolescents, who are just beginning a developmental phase in which dating relationships become an important aspect of life (Bouchey and Furman 2003), may turn to such scripts as a guide for their opinions regarding appropriate behaviors for boys and girls.

Unfortunately, this data only contains a measure of the presence or absence of dating and relationship-related content associated with each magazine. The content is not coded in such a way that would reveal whether more "traditional" gender attitudes that uphold the sexual double standard are endorsed, or whether the material is more "egalitarian" in nature, meaning that behavior is expected to be similar for males and females. Traditional views of gender in this context suggest that males and females should have differing roles, while more contemporary egalitarian views of relationships suggest that girls have just as much right as boys to initiate and guide romantic relationships. The sexual double standard typically portrays males as "active", sexually assertive, and being in charge of the interactions within a relationship. Females are expected to fend off the sexual advances of men while simultaneously passively acquiescing to male domination of the relationship. Women may also be expected to focus on beauty and communicative competence within this "script".

[54] See Appendix 4A for the specific instructions given to coders regarding the exact nature of this type of content.

Generally, as demonstrated through the literature review above, dating and relationship content in magazines aimed at teen girls as well as magazines aimed at males generally are thought to uphold more traditional gender norms in keeping with a sexual double standard. Therefore, exposure to dating content in these magazines is hypothesized to have a negative relationship with egalitarian gender attitudes. Less is known regarding the other genres, and so no directional hypotheses are specified, and results are treated as exploratory. In addition, of the nine genres created for this study, three contain no dating or relationship content whatsoever (Gaming, Current Events, and Automobile) and therefore will be excluded from analyses requiring this information.

In order to create the measure of exposure to dating and relationship content within a particular genre, several steps were taken. First, the content analysis described above produced, for each teen individually, a dating and relationship content exposure score associated with each magazine that they read. Once magazines had been assigned to genres, these scores were summed across the magazines that a teen reported reading within a particular genre. In order to determine the *proportion* of overall magazine content (within a genre) that was related to dating and relationships, this score was then divided by the *total amount of exposure* to magazines within that genre (i.e. the total amount of material that was coded within a given magazine, summed across all magazines within a genre). It is this proportional measure of dating content exposure that is utilized as the independent variable in these analyses, and it is unique to each teen in the sample based on his or her magazine selections[55].

[55] See Pardun, L'Engle, and Brown (2005) for a detailed description of the content analyses that underlie this measure.

Other Magazine Items

In addition to asking about magazine readership, the media survey contained a number of other attitudinal items related to opinions about the content of magazines and the social use of magazines among the respondents. Teens were instructed to indicate responses from "1", strongly agree, to "5" strongly disagree to the following five statements:

> *I frequently talk to my friends about what I read or see in magazines.*
> *I look forward to seeing new issues of my favorite magazines.*
> *I see teenagers in magazines who are a lot like me and my friends.*
> *Magazines show the real life concerns of teenagers like me pretty well.*
> *I would like to be more like the teenagers I read about and see in magazines.*

A scale of magazine identification was created using the above 5 measures, which were summed and then divided by five so as to retain the original metric (Cronbach's $\alpha = 0.73$).

In addition, teens were asked how frequently they read or look at magazines, with responses ranging from "never" to "every day". Adolescents were also asked how hard it would be to give up reading or looking at magazines. They were able to indicate responses that ranged from "I could live without it" to "I would hate to give this up." Interest in sexual material was assessed through one item that asked "When you see something about dating, sex, and relationships in magazines, how interested are you in reading about it?" All measures of interaction with magazines are coded such that higher values indicate more attachment to magazine content or readership, and all are drawn from the first wave of survey data.

Demographic Characteristics

Finally, a number of demographic characteristics are considered. Respondents are coded as being either boys or girls, and either black or white. In addition, a teen's age (Dornbusch 1989; Strasburger 1995), socio-economic background (Durham 1999b), parents'

education level (Cunningham 2001; Hardesty, Wenk, and Morgan 1995), and pubertal development are also of interest (Hill and Lynch 1983). Race, gender and age are thought to contribute to whether a teen chooses to read a particular genre of magazine. These variables, in addition to the others listed above, are also hypothesized to predict gender attitudes. All of the demographic controls are derived from the first wave of data collection and so longitudinally predict gender attitudes.

Results

Magazine Genre Selection

The analyses included here are designed to answer the research questions posed above: (1) What genres of magazines do early adolescents read, (2) are there differences across race and sex groups in magazine genre readership, and (3) conditional upon selection of a particular genre, does gendered magazine content predict gender attitudes? The first two of these will be answered in tandem. Magazine genre readership and a ranking of genre popularity within that subgroup are presented in Table 4.4. The descriptive statistics in this table illustrate the differences in magazine readership across the demographic groups. As this table indicates, teens vary in their magazine readership according to their demographic characteristics. These differences are found to be highly statistically significant according to the Pearson's χ^2 test, with the exception of reading within the news and current events genre.

Magazines with an African-American focus are the preferred genre for both black boys and girls, while fewer than 10 percent of white teens reported reading *any* titles in that genre. Otherwise, much of the genre selection appears to be sex specific. Teen focus magazines are widely read among teen girls, but are less popular among boys, although,

surprisingly, 23 percent of black boys in this sample report regularly reading teen magazines, which are typically thought to be marketed to girls. Some of the titles included in this category, such as *Teen People*, which is slightly more gender neutral, may explain this pattern. In general, girls in early adolescence are somewhat unlikely to be attending to the more "adult" fashion magazines, such as *Vogue* and *Cosmopolitan*[56], and teen boys barely read these titles at all; they rank as the least popular genre among boys in the sample. Many girls also report reading "entertainment" oriented magazines, such as *TV Guide* and *People*. These are also somewhat popular among teen boys, with more black boys reporting reading such magazines than white girls.

The literature reviewed above suggested that boys would be more likely to read niche genres about specific topics, and that trend is largely confirmed here. Boys are much more likely than girls to be readings topically oriented genres, such as sports, gaming, and automobile magazines. With the exception of sports magazines, which are moderately popular, the remaining niche genres are almost unread among teen girls of either race. Interestingly, male focus magazines were not particularly popular among any demographic group other than black boys. Again, this could be related to the titles classified as having a male focus. *Playboy* may be difficult for teens of this age to obtain, and *XXL* is marketed to a black audience, although it associated more strongly with the male magazine genre than with the African-American oriented genre in the factor analysis.

Heckman Selection Analyses

It is clear from the findings outlined above that gender and race are factors in magazine genre selection. The next round of analyses investigates whether exposure to

[56] This trend changes in middle adolescence, as teen girls especially turn to adult fashion magazines in addition to their teen counterparts. See Appendix 4B for a ranking of magazine genres by race/sex group among adolescents at Wave 2 of data collection.

magazine content may be conditional on these characteristics, among others. Not all genres contained dating and relationship content and these genres are therefore excluded from the following analyses (Gaming, Automobile, and Current Events magazines had no such content). Tables 4.5 contains the results for Model 1, in which dating and relationship content exposure within a given genre predicts subsequent gender attitudes, once characteristics related to genre selection are taken into consideration. Each column represents one of the six included genres. Results derived from the selection equation are discussed first.

Readers of teen focused magazines were much less likely to be male, and marginally more likely to be black and older. More egalitarian baseline gender attitudes positively predict having read an adult fashion magazine, while being male decreased the likelihood of having read one. Sports magazine readers were much more likely to be male, were more likely to report more traditional baseline gender attitudes, and were marginally more likely to be older. Not surprisingly, being black strongly and positively predicts whether a teen reported reading within the African-American oriented genre. Readers in this genre were more likely to have more traditional baseline gender attitudes, to be older, and to be female. For both the male focus and entertainment genres, older black teens were more likely to have reported readership. However, teen boys were more likely to have read male oriented magazines, while teen girls were more likely to have read within the entertainment genre.

Teens were also asked whether someone in their home subscribed to at least one magazine to fulfill the requirement that there be at least one variable in the selection equation that does not also appear in the outcome equation. However, this measure does not capture which types of magazines this subscription includes and therefore interpretation of the

significant coefficients generated by the measure are difficult to interpret, but all indicate a negative relationship, meaning that having a subscription to at least one magazine decreases a respondent's likelihood of having read sports, African-American focus, and male focus magazine genres.

The outcome equation results speak to whether magazine content predicts gender attitudes across the included genres. It is somewhat surprising that dating and relationship content in adult fashion magazines is the only one of the content coefficients to reach statistical significance (and even this effect is marginal)[57]. Also striking is the complete lack of significant coefficients among the measures hypothesized to measure the affiliation of the respondent to magazine readership and magazine content generally. None of these measures are found to predict gender attitudes among adolescents. Baseline gender attitudes, not surprisingly, are highly predictive of later gender attitudes, regardless of which cases are censored[58]. Being male is a significant and negative predictor of more egalitarian gender attitudes in the models readers of sports, African-American focused, and entertainment magazines. Black respondents who read adult fashion magazines were less likely to report egalitarian gender attitudes (a marginally significant effect), but were more likely to report such attitudes if they had read either African-American oriented magazines, or male focused magazines. Having parents with higher levels of education was predictive of more egalitarian gender attitudes only among readers of adult fashion magazines.

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[57] When exposure measures alone were entered into the outcome equation (in conjunction with the selection equation containing the same array of variables), exposure to entertainment magazine content was negative and significant ($\beta = -3.36$, $p = 0.007$), indicating that exposure to such content predicts less egalitarian gender attitudes. However, this effect disappears when baseline gender attitudes are entered into the outcome equation. No other significant effects were detected in models that contained solely exposure measures and no covariates.

[58] Heckman selection models that excluded baseline gender attitudes as a predictor were also executed but the pattern of results was not found to differ from those included in Table 5.

One final note on the results included in Table 5 involves the coefficients generated for rho, a measure of the correlated errors between the selection and outcome equations. If in the likelihood ratio test of rho being equal to zero, the chi-square test statistic is found to be significant, then a selection effect is present. In half of the models included here, significant selection effects are not detected. However, marginal selection effects are detected among readers of sports and African-American oriented magazines, and a strong and highly significant effect is detected for the regression including readers of male focus magazines. The direction of the significant rho coefficients in these models is positive, indicating that OLS regression results would have overestimated the effect of the outcome equation measures on adolescents' gender attitudes.

Prior research suggests that there may be an interaction effect between content and identification with the source of that content (Ward and Rivadeneyra 1999). Those who identify closely with the messages presented in magazines may be more susceptible to changing their attitudes based on exposure to content. Table 6 replicates the models in Table 5 but also included two interactions terms. The first of these examines the interaction between exposure to dating content and whether the teen reports magazine reading as important. The second effect denotes the interaction of content with whether a teen identifies with magazine messages.

In only one instance are significant interaction effects detected, and this is among the readers of adult fashion magazines[59]. The results indicate that neither intense identification with magazine content (-6.28 * 5 = 31.4)[60], nor having reported that magazine reading is very

[59] Otherwise the pattern of remaining results in the models is so similar to those in Table 5 that further written summary is deemed unnecessary.

[60] Both high levels of identification and high levels of importance are given a value of "5".

important (-6.32 * 5 = 31.6) are sufficient conditions to generate substantially less egalitarian gender attitudes among the readers of these magazines (compare each value to the content coefficient, 29.54). However, for teens who report a combination of strongly identifying with fashion magazines and rating magazines as an important medium, exposure to the content is likely to produce much less egalitarian gender attitudes (29.54 – {31.4 + 31.6} = 29.54 – 63 = -33.46). In the adult fashion regression that did not include interaction terms, those who read such magazines were marginally less likely to report more egalitarian gender attitudes. This effect therefore reflects the mixture of respondents whose gender attitudes may be unaffected by fashion magazine messages with those who are very susceptible to such messages. The implication of this and other findings are discussed next.

Discussion

Much prior research has argued that magazine content is an important source of information about gender "scripts" for adolescents. However, investigations of magazine reading among adolescents have frequently focused on a somewhat limited array of magazine genres and demographic groups, and have seldom linked the content of the magazines that teens choose to read to their actual gender attitudes. This research attempts to overcome these limitations in a number of ways so as to add to our understanding of the relationship of gendered magazine content exposure to gender attitudes across adolescents of different races and sexes.

First, the Teen Media dataset provides information about the individualized magazine selections of early adolescents. These choices were generated by teens and encompass a wider variety of magazine genres than are typically included in one study. This research

asked what genres of magazines adolescents utilized. Based on the choices reported by respondents, nine distinct genres were able to be established, demonstrating that teen readership does not rotate around a small number of topical areas. Given the diversity of choices currently available to teens, future research into messages related to gender in a greater number of genres is advisable.

Second, this research outlines magazine genres selections among black and white, boys and girls. Much of the past research has focused on adolescent girls' magazine reading, and the girls studied have frequently been white. Recently, researchers have begun to study magazine use among girls who are in a racial or ethnic minority groups, although this literature is far from saturated. Most noticeably absent from scholarly research into magazine use are studies that include boys. Such studies are extremely rare, have largely been performed with non-American populations, and have almost wholly excluded racial and ethnic minority boys. While greater diversity is desirable, the Teen Media data allow us to investigate African-American boys, an understudied group of adolescents.

The second research question posed above asks whether differences exist across sex and race groups in terms of magazine genre selection. The market segmentation of magazines suggests that different groups will read different types of magazines and this hypothesis is strongly confirmed by this research. With the exception of magazines that focus on news and current events (*Time, Newsweek*), statistically significant differences are found across the groups included here in every other genre of magazine. Notably, while African-American oriented magazines are the top choice among African-American teens in this sample, no studies of the gender content of such magazines are currently available.

As suggested by the literature reviewed, boys' reading is spread across a greater variety of niche genres, including those concerned with automobiles, video and computer gaming, and sports. While almost a quarter of black boys reported reading a general magazine for men (*Playboy, XXL*), very few of the white boys did so (only 6.5 percent). In general, black boys appear to read more broadly across genres than do their white counterparts while girls of both racial identities report very similar patterns of readership (the exception being the African-American Focus genre).

As might be suspected, adolescent girls are the primary consumers of magazines aimed specifically at the adolescent market, but surprisingly, African American boys read these magazines somewhat frequently as well. A key finding is that few early adolescent girls have transitioned to reading the more adult oriented fashion magazines (*Cosmopolitan, Vogue, Glamour*), as the content of such magazines is found in the Heckman analyses, discussed next, to have a statistically significant effect on gender attitudes.

The final research question asked whether exposure to dating and relationship content in magazines would predict subsequent gender attitudes. Prior studies have often asserted that the gendered messages uncovered through content analysis should produce a shift in gender attitudes, generally toward more traditional attitudes. Little support for this assertion is found in the Heckman selection analyses performed here. Six of the nine genres classified here contain at least some amount of content related to dating and relationships. This content is hypothesized to inform gender attitudes by providing "scripts" or cultural expectations regarding how males and females should act in romantic relationships. The dependent gender attitudes measure utilized here also takes into account that attitudes within the dating domain comprise an important and salient aspect of adolescents' gender attitudes generally.

Such content is not found to significantly predict gender attitudes *except* among teens that choose to read adult fashion magazines, whose gender attitudes initially appear to be marginally more traditional. However, when this result is unpacked, and paired with changes in magazine genre selection over time, the story becomes much more interesting.

Existing literature is highly focused on the "teen girl" magazine and its hypothesized relationship to the endorsement of traditional gender attitudes among adolescent girls. The findings here suggest that there is no measurable change in attitudes related to exposure to this content between early and middle adolescence. However, one potential limitation of the study is that girls may be exposed to content at earlier ages than those included her in the first wave of data collection (teens were ages 12 to 14). If gender attitudes are influenced at earlier ages by teen magazine content, these data would not detect this. In addition, it could be that as girls "graduate" to the more mature content of adult fashion magazines (which arguably contain content that also reinforces more traditional views of gender), the effects shift to this genre.

Furthermore, significant interaction effects of adult magazine content, combined with the importance of and identification with fashion magazines, also suggest that this may be the genre to watch as teens move through the adolescent developmental stage. These effects revealed that exposure to adult fashion magazine content, when consumed by those who identify strongly with such content and who also deem magazine reading to be generally very important, predicted substantially less egalitarian gender attitudes two years later. Since very few teens, almost exclusively girls, reported reading these magazines, it could be that the "mature" content within such magazines is initially found to be quite novel, and therefore possibly more influential. However, as readership becomes more established, the effects

may be lessened as the content becomes familiar (and taken for granted). If this is true, then perhaps we must look to girls at younger ages (10 or 11 years old) to find the hypothesized effects of teen magazine content on the attitudes of "early adopters" within this genre. Other genres that contain gendered messages, such as male-interest and sports magazines, may also be having similar effects on boys of younger ages. Future research may do well to consider pre-adolescent populations, as well as measures of magazine identification and importance, in light of this finding.

In general, demographic predictors (such as racial background, sex, and parent education were much more likely to predict gender attitudes than were other variables thought to relate to the social use of magazines among teens. Frequency of magazine use, the perceived importance of magazines, identification with magazine content and characters, and interest in sexual content in magazines were not found to significantly predict gender attitudes in any of the models. Demographic characteristics were also found to be strongly predictive of initial magazine genre selection, as the existing literature would suggest. Although baseline gender attitudes were found to predict gender attitudes measured at Time 2, baseline gender attitudes were not universally found to predict magazine selection, but did so only among readers of sports, fashion, and African-American oriented genres.

Methodologically, significant rho coefficients were found to be present in only half of the Heckman models. This indicates that not all of the models would have produced biased regression coefficients as the result of selection effects. Looked at another way, if OLS regression had been utilized, overestimation of the effects in the outcome equation would have occurred in half of the models. As the Media Practice Model (Steele and Brown 1995) was utilized as the theoretical basis for this modeling strategy, the Heckman analyses appear

to be an appropriate method for addressing the problem of selection that this particular medium presents.

Empirical gaps exist in the literature devoted to the study of magazine use among adolescents, and this research takes advantage of the unique characteristics of the Teen Media dataset (such as its multiple waves of data, the availability of a range of magazine genres, and the inclusion of boys and black teens) when addressing the research questions posed. Clearly, however, some limitations are present. The generalizability of the findings is somewhat limited by the age (early and middle adolescents) and ethnicity (black and white teens) of the included populations, as well as by region (only schools in the Southeastern United States were included in the sampling frame). Future research design could rectify the problems inherent to a limited sample while still capitalizing on the benefit of connecting actual magazine readership to attitudes. Also, while the measure of content utilized here is an adequate proxy for the presence of gendered messages, a more refined measure that takes into account more specifically the directional nature of such messages would be preferable in future studies. On the whole, the proliferation of magazine choices aimed at teens, as well as the spread of magazine style content to websites each argue for the continued study of the content of this medium across a greater variety of genres and a greater variety of teens.

Table 4.1 Demographic Profile of the Sample

Demographic Characteristics	Percentage of Sample (N) Time 1	Percentage of Sample (N) Time 2
Race		
Black	51.7 (526)	51.7 (526)
White	48.3 (491)	48.3 (491)
Sex		
Boys	51.7 (526)	51.7 (526)
Girls	48.3 (491)	48.3 (491)
Age		
12	18.2 (182)	
13	46.9 (469)	
14	34.9 (349)	23.9 (241)
15		45.6 (460)
16		30.5 (308)
SES		
Free Lunch	31.6 (319)	25.6 (249)
No Free Lunch	68.4 (692)	74.4 (723)
Parent Education		
High school or less	22.3 (203)	17.9 (252)
College/some college	47.3 (431)	51.9 (440)
Graduate school	30.5 (278)	30.2 (256)
Perceived Puberty Onset (relative to peers)		
Earlier	23.6 (235)	26.9 (271)
Same Time	51.2 (509)	49.2 (496)
Later	25.2 (250)	23.9 (241)

Table 4.2 Teen Media Gender Attitude Items

Teen Media Item	Source	Theoretical Concept	Original Item
ACTS: It bothers me when a guy acts like a girl.	Pleck, Sonenstein, & Ku (1994)	Male Ideology: Anti-Femininity	It bothers me when a guy acts like a girl.
TOUGH: A young man should be physically tough even if he's not big.	Pleck, Sonenstein, & Ku (1994)	Male Ideology: Toughness	A young man should be physically tough, even if he's not big.
ROUGH: It is all right for a girl to want to play rough sports like ice hockey.	Galambos et al. (1985)	Sex-Role Attitudes, Women	It is alright for a girl to want to play rough sports like football.
READY: A guy should always be ready for sex.	Levant & Fischer (1998)	Male Ideology: Attitudes toward Sex	A man should always be ready for sex.
RESPECT: A guy who has sex with many girls deserves respect.	Pleck, Sonenstein, & Ku (1994) **and/or** Mosher (1998)	Male Ideology: Status **and/or** Hypermasculinity: Callous Attitudes toward Women	It is essential for a guy to get respect from others. Any man who is a man needs to have sex regularly.
MAN: Most women need a man in their lives.	Murnen & Byrne (1991)	Hyperfemininity	Most women need a man in their lives.
CHARGE: In a dating relationship, the guy should be in charge.	Galambos et al. (1985) **and/or** Murnen & Byrne (1991)	Sex-Role Attitudes, Women **and/or** Hyperfemininity	On a date, the boy should be expected to pay for all expenses. I expect the men I date to take care of my expenses.

Table 4.3 Magazine Titles, Dating Content, and Factor Loadings within Genres

Genres	Title	% Dating Content	Factor Loading
Teen Focus	J-14	0.08	0.62
	Seventeen	0.04	0.72
	Cosmo Girl	0.04	0.57
	YM	0.04	0.59
	Teen	0.01	0.74
	Teen People	0.01	0.76
African American Focus	Jet	0.04	0.69
	Ebony	0.03	0.81
	Essence	0.03	0.72
	Vibe	0.02	0.76
	Word Up	0.00	0.62
Gaming	Nintendo Power	0.00	0.72
	Computer Gaming World	0.00	0.68
	Electronic Games Monthly	0.00	0.78
	Game Pro	0.00	0.72
Adult Fashion	Cosmopolitan	0.07	0.67
	Glamour	0.05	0.66
	Vogue	0.02	0.56
Sports	Sports Illustrated for Women	0.01	0.72
	Sports Illustrated	0.00	0.62
	The Sporting News	0.00	0.60
Automobile	Hot Rod	0.00	0.78
	Motor Trend	0.00	0.82
Male Focus	Playboy	0.02	0.69
	XXL	0.00	0.54
Current Events	Newsweek	0.00	0.74
	Time	0.00	0.75
Entertainment	TV Guide	0.06	N/A
	People	0.03	N/A

Table 4.4 Magazine Genre Reading by Demographic Group, Time 1

	White Girls		Black Girls		White Boys		Black Boys		χ^2 test
	%	Rank	%	Rank	%	Rank	%	Rank	
Adult Fashion	13.6	3	10.5	5	0.9	9	4.0	9	35.4***
Teen Focus/ Teen Fashion	**83.8**	**1**	77.0	2	8.0	6	23.0	6	414.5***
African-American Focus	6.8	5	**89.5**	**1**	2.0	8	**71.4**	**1**	582.7***
News/Current Issues	6.8	5	8.2	6	13.8	3	9.5	7	7.3¶
Sports	15.3	4	18.7	4	**44.4**	**1**	51.6	2	110.7***
Gaming	2.1	7	5.4	8	33.3	2	51.2	3	229.1***
Automobile	1.7	8	1.9	9	12.0	4	18.7	7	64.6***
Male Focus	0.8	9	7.3	7	6.5	7	23.5	5	83.6***
Entertainment	23.8	2	35.8	3	9.8	5	27.4	4	45.1***

$p < 0.001$***, $p<0.01$**, $p < 0.05$*, $p < 0.10$¶

Table 4.5 Heckman Selection Model of Magazine Genres Predicting Adolescent Gender Attitudes at Time 2; Unstandardized Coefficients (Standard Errors)

			Model 1			
Outcome Equation Measures	**Teen**		**Fashion**		**Sports**	
Teen focus dating content	-1.64 (1.46)		~		~	
Adult fashion dating content	~		-4.66 (2.39)	¶	~	
Sports dating content	~		~		-1.81 (3.27)	
More frequent magazine reading	0.00 (0.00)		0.06 (0.06)		0.00 (0.00)	
Magazines are important	0.02 (0.02)		-0.03 (0.05)		0.02 (0.02)	
Higher identification with magazines	0.00 (0.02)		0.09 (0.06)		-0.03 (0.03)	
More interest in sexual content in magazines	0.00 (0.02)		0.04 (0.04)		0.01 (0.02)	
Baseline gender attitudes	0.47 (0.04)	***	0.64 (0.16)	***	0.33 (0.05)	***
Male	-0.32 (0.24)		-0.09 (0.32)		-0.18 (0.07)	*
Black	-0.02 (0.03)		-0.23 (0.12)	¶	-0.02 (0.05)	
Free lunch	0.03 (0.03)		0.11 (0.11)		-0.03 (0.03)	
Year older	0.02 (0.03)		0.04 (0.06)		0.05 (0.03)	
Early puberty relative to	0.02 (0.01)		0.06 (0.05)		0.03 (0.02)	
Higher parent education	0.00 (0.01)		0.09 (0.03)	*	0.00 (0.02)	
Constant	-1.90 (0.49)	***	-4.27 (1.48)	**	-2.25 (0.52)	***
Selection Equation						
Home magazine subscription	-0.13 (0.08)		0.04 (0.10)		-0.11 (0.06)	¶
Baseline gender attitudes	0.01 (0.10)		0.28 (0.14)	*	-0.30 (0.09)	**
Male	-1.86 (0.11)	***	-0.67 (0.16)	***	0.65 (0.10)	***
Black	0.18 (0.10)	¶	0.11 (0.14)		0.13 (0.09)	
Year older	0.12 (0.07)	¶	-0.08 (0.09)		0.11 (0.06)	¶
Constant	-0.85 (1.06)		-1.32 (1.41)		-1.30 (0.97)	
rho	0.24		0.80		0.78	
p (rho = 0)	0.66		0.76		0.08	¶
N	**430**		**66**		**281**	

p<0.001***, p< 0.01**, p<0.058, p<0.10¶

Table 4.5 Continued. Heckman Selection Model of Magazine Genres Predicting Adolescent Gender Attitudes at Time 2; Unstandardized Coefficients (Standard Errors)

	Model 1					
Outcome Equation Measures	**Af.- Amer.**		**Male**		**Entertain.**	
African-American focus dating content	2.82 (3.44)		~		~	
Male focus dating content	~		0.12 (5.46)		~	
Entertainment dating content	~		~		-1.62 (2.42)	
More frequent magazine reading	0.00 (0.00)		0.00 (0.00)		0.00 (0.00)	
Magazines are important	0.02 (0.02)		0.05 (0.04)		0.01 (0.02)	
Higher identification with magazines	0.01 (0.03)		-0.04 (0.06)		0.00 (0.04)	
More interest in sexual content in magazines	-0.02 (0.02)		-0.02 (0.03)		0.03 (0.02)	
Baseline gender attitudes	0.39 (0.05)	***	0.45 (0.12)	***	0.43 (0.06)	***
Male	-0.41 (0.06)	***	0.24 (0.16)		-0.33 (0.08)	***
Black	0.40 (0.15)	**	0.51 (0.19)	**	0.21 (0.08)	
Free lunch	-0.05 (0.03)		-0.05 (0.09)		-0.04 (0.03)	
Year older	0.04 (0.03)		0.12 (0.08)		0.02 (0.04)	
Early puberty relative to peers	-0.01 (0.02)		0.06 (0.04)		0.05 (0.03)	
Higher parent education	-0.02 (0.01)		0.04 (0.03)		0.02 (0.02)	
Constant	-2.40 (0.52)	***	-5.59 (1.48)	***	-2.53 (0.76)	**
Selection Equation						
Home magazine subscription	-0.19 (0.08)	*	-0.18 (0.06)	**	-0.06 (0.06)	
Baseline gender attitudes	-0.30 (0.11)	**	0.03 (0.12)		0.12 (0.09)	
Male	-0.82 (0.13)	***	0.69 (0.15)	***	-0.28 (0.11)	**
Black	2.58 (0.13)	***	0.90 (0.15)	***	0.51 (0.10)	***
Year older	0.18 (0.08)	*	0.17 (0.09)	*	0.15 (0.07)	*
Constant	-2.47 (1.22)	*	-4.60 (1.34)	**	-2.53 (0.76)	**
rho	0.67		0.98		0.78	
p (rho = 0)	0.07	¶	0.00	***	0.27	
N	**385**		**82**		**209**	

p<0.001***, p< 0.01**, p<0.058, p<0.10¶

Table 4.6 Heckman Selection Model of Magazine Genres Predicting Adolescent Gender Attitudes at Time 2 with Interaction Terms; Unstandardized Coefficients (Standard Errors)

			Model 2			
Outcome Equation Measures	**Teen**		**Fashion**		**Sports**	
Teen focus dating content	3.25 (5.63)		~		~	
Adult fashion dating content	~		29.54 (9.66)	**	~	
Sports dating content	~		~		-6.16 (13.82)	
More frequent magazine reading	0.00 (0.00)		0.08 (0.05)		0.00 (0.00)	
Magazines are important	0.01 (0.04)		0.25 (0.10)	**	0.02 (0.02)	
Higher identification with magazines	0.05 (0.06)		0.32 (0.11)	**	-0.03 (0.03)	
More interest in sexual content in magazines	0.00 (0.02)		0.03 (0.03)		0.01 (0.02)	
Importance x content	0.10 (1.34)		-6.32 (2.12)	**	0.53 (2.63)	
Identification x content	-1.58 (1.71)		-6.28 (2.44)	*	0.94 (3.49)	
Baseline gender attitudes	0.47 (0.04)	***	0.62 (0.13)	***	0.33 (0.05)	***
Male	-0.33 90.24)		-0.11 (0.24)		-0.18 (0.07)	*
Black	-0.01 (0.04)		-0.24 (0.11)	*	0.02 (0.05)	
Free lunch	-0.03 (0.03)		0.13 (0.10)		-0.02 (0.03)	
Year Older	0.02 (0.03)		-0.04 (0.06)		0.05 (0.03)	
Early puberty relative to	0.02 (0.02)		0.08 (0.04)	¶	0.02 (0.02)	
Higher parent education	0.00 (0.01)		0.08 (0.03)	*	0.00 (0.02)	
Constant	-2.04 (0.52)	***	-4.10 (1.09)	***	-2.25 (0.52)	***
Selection Equation						
Home magazine subscription	-0.13 (0.08)		0.06 (0.10)		-0.11 (0.06)	¶
Baseline gender attitudes	0.01 (0.10)		0.28 (0.14)	*	-0.30 (0.09)	**
Male	-1.86 (0.11)	***	-0.67 (0.15)	***	0.65 (0.10)	***
Black	0.18 (0.10)	¶	0.10 (0.14)		0.13 (0.09)	
Year Older	0.12 (0.07)	¶	-0.08 (0.09)		0.11 (0.06)	¶
Constant	-0.85 (1.06)		-1.40 (1.40)		-1.30 (0.97)	
rho	0.26		0.40		0.78	
p (rho = 0)	0.64		0.78		0.08	¶
N	**430**		**66**		**281**	

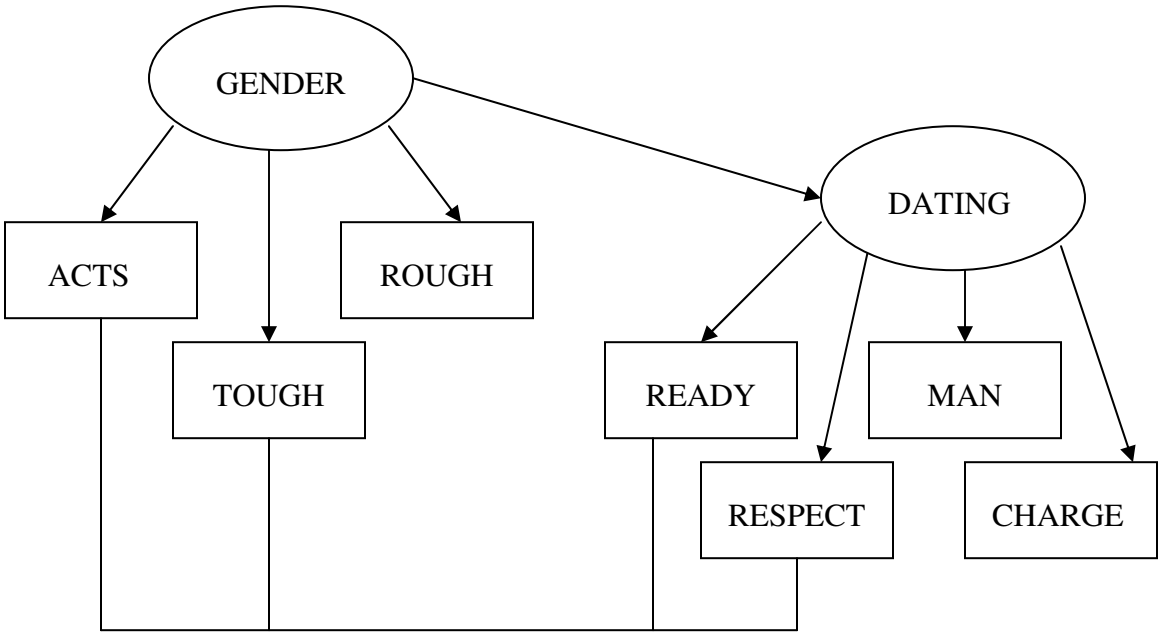
p<0.001***, p< 0.01**, p<0.058, p<0.10¶

Table 4.6 Continued. Heckman Selection Model of Magazine Genres Predicting Adolescent Gender Attitudes at Time 2 with Interaction Terms; Unstandardized Coefficients (Standard Errors)

	Model 2					
Outcome Equation Measures	**Af.- Amer.**		**Male**		**Entertain.**	
African-American focus dating content	-7.80 (14.26)		~		~	
Male focus dating content	~		8.49 (19.24)		~	
Entertainment dating content	~		~		-11.95 (10.54)	
More frequent magazine reading	0.00 (0.00)		0.00 (0.00)	¶	0.00 (0.00)	
Magazines are important	0.00 (0.07)		-0.01 (0.05)		0.07 (0.09)	
Higher identification with magazines	-0.06 (0.12)		0.03 (0.09)		-0.18 (0.14)	
More interest in sexual content in magazines	-0.02 (0.02)		-0.02 (0.03)		0.03 (0.02)	
Importance x content	0.67 (2.85)		5.70 (3.87)		-1.27 (1.87)	
Identification x content	2.92 (4.62)		-6.59 (5.80)		4.03 (3.07)	
Baseline gender attitudes	0.39 (0.05)	***	0.42 (0.11)	***	0.42 (0.06)	***
Male	-0.41 (0.06)	***	0.22 (0.15)		-0.32 (0.08)	***
Black	0.41 (0.15)	**	0.50 (0.18)	**	0.20 (0.09)	*
Free lunch	-0.04 (0.03)		-0.05 (0.08)		-0.04 (0.03)	
Year Older	0.05 (0.03)		0.12 (0.08)		0.02 (0.04)	
Early puberty relative to	0.00 (0.02)		0.05 (0.04)		0.05 (0.03)	
Higher parent education	-0.02 (0.01)		0.03 (0.02)		0.01 (0.02)	
Constant	-2.17 (0.61)	***	-5.40 (1.43)	***	-2.09 (0.88)	*
Selection Equation						
Home magazine subscription	-0.19 (0.08)	*	-0.18 (0.07)	**	-0.06 (0.06)	
Baseline gender attitudes	0.30 (0.11)	**	0.03 (0.12)		0.11 (0.09)	
Male	-0.82 (0.13)	***	0.68 (0.15)	***	-0.28 (0.11)	**
Black	2.58 (0.13)	***	0.90 (0.15)	***	0.51 (0.10)	***
Year Older	0.17 (0.08)	*	0.17 (0.09)	*	0.15 (0.07)	*
Constant	-2.45 (1.22)	*	-4.65 (1.34)	**	-3.32 (1.02)	**
rho	0.68		0.98		0.76	
p (rho = 0)	0.06	¶	0.00	***	0.30	
N	**385**		**82**		**209**	

p<0.001***, p< 0.01**, p<0.058, p<0.10¶

Figure 4.1 Two Factor Model of Adolescent Gender Attitudes with Correlated Errors



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CHAPTER 5

CONCLUSIONS

Let's return for a moment to the bookstore and the people passing through it on a typical day. How has this research spoken to the interactions observed there, and how might the findings presented in the previous pages help us to imagine the social lives of those individuals past this slice of casual observation? The narrative recounted at the beginning of this work includes the aspects of social life investigated in the three empirical papers included here; gender attitudes, the ways in which these attitudes are structured during the adolescent stage of life, and potential sources of influence on these attitudes, most importantly, mass media content contextualized within an ecological framework that includes competing influences, such as parents. Also, the teens in the bookstore were free to turn their attention to any of the myriad choices presented within this media-saturated setting. Rather than relying on experimental data that pre-selects and imposes exposure to certain types of content, this research has utilized data that speak to the choices made by teens about their own media habits.

The first of the three papers presented here developed a measurement model of adolescent gender attitudes in order to enhance our understanding of their composition and structure. The teens' exposure to magazines in the bookstore exemplifies how media content may contribute to their general expectations regarding what boys and girls should do or be (boys should like sports, girls should be pretty and decorative). However, the model developed here also indicates that other important, and less general, dimensions of adolescent

beliefs about gender should not be overlooked. One aspect that has been infrequently included in the examination of gendered identities in adolescence are teens' attitudes regarding appropriate behavior for boys and girls engaged in dating and romantic relationships. Within the measurement model described in the first paper, a latent construct comprised of dating-related gender attitude measures loaded strongly and significantly onto a higher order construct related to gender attitudes more generally defined. This model form was not only found to provide an excellent fit to the data, but was also shown to work well across the demographic groups in the sample (black and white, boys and girls).

An interesting finding that stems from the development of the model is that, in dating relationships especially, teens' attitudes may be affiliated more closely with their conceptions of masculinity. To return to the scripting frame of analysis utilized throughout the papers, abstract cultural information regarding masculinity may be utilized more readily by teens who are seeking to define their gender attitudes within this domain. More specifically, the type of masculinity at issue is one though to be closely associated with the sexual double standard, a cultural trope that has historically characterized men as active initiators of romantic and sexual activity and women as passive recipients of male attention and reactive resistors of male sexual advance. Without additional data, interpretation of this unexpected finding must remain speculative, but its existence raises a number of measurement and substantive issues. Pleck's (1981) hypothesis about the exclusivity of beliefs regarding masculinity and femininity helps to explain why attitudes respective to each would not load onto one conceptual variable. Pleck contends that these beliefs are independently held by individuals, such that an individual could simultaneously be quite egalitarian regarding his or her attitudes toward female behavior and quite traditional in his or her view of how men

should act (or vice versa). This may account for the exclusion of items more close affiliated with defining femininity from a latent variable, but does not explain why masculinity should be a more definitive gender construct among adolescents.

In the wake the women's rights debates of the past few decades (in the United States), it has been asserted that greater changes have taken place regarding attitudes toward women than toward men. In general, such attitudes have granted women greater latitude in the range of acceptable behaviors, including a loosening of expectations relating to initiating romantic encounters. Given these changes, it would seem that more variability would exist across individual beliefs regarding femininity, giving them greater weight in defining gender attitudes generally. However, this is not the case among adolescents in this sample. Perhaps this finding speaks to a new revolution in gender beliefs, one in which the style of masculinity described within the sexual double standard is more contentious than the gender issues that arose through discussions of women's rights. Few of the adolescents in the sample seemed inclined to dispute statements like, "women should be able to make the first move in a relationship," possibly indicating that teens have come to accept female empowerment in romantic relationships. More shocking to the sensibilities of young people might be the notion that sexually promiscuous males are to be held in esteem, though, clearly, further research is required to validate or disprove such assertions.

The second paper in this research utilized the model of adolescent gender attitudes described above as a dependent variable. The primary research question asked whether exposure to media content during early adolescence would predict gender attitudes two years later (during middle adolescence) when such exposure was situated in an ecological model that included other potential sources of information related to gender, such as peers, parents,

teachers, and religious leaders. Placing media within this ecological framework provides a strong test of its net influence. To return briefly to the bookstore, we see that the media are subject to the commentary or critique of others. In the example, parents may reinforce the gendered messages sent by media, as in the case of the father who approvingly discusses sports with his son. Parents may also contest images that could shape gender attitudes. The mother with two teen girls in tow rejected the message sent by the magazine cover that women's participation in cycling is stylized rather than active. The media may send messages, but their actual impact is better understood in context.

Another issue arising from the analyses in the second paper relates to the measurement of content relative to the "type" of gender attitudes being measured by the dependent variable. As was mentioned above, the dependent variable utilized here is comprised not only of general gender attitudes, but also of dating and romantic relationship items that tap into adolescent views regarding the sexual double standard. The independent variable of interest was hypothesized to measure "relational" content, a type of content focused on the initiation and maintenance of relationships (Ward 1995). Such content, since it demonstrates how men and women each play a part in romantic relationships, likely contains more benign messages regarding gender than other types of content. Martino et al. (2006) differentiate "degrading" content, as that most likely to support views of gender (and sexuality) that are in accordance with the sexual double standard. However, "degrading" content is not what was being measured by the independent variable here. It was therefore argued that exposure to the more benign "relational" content that comprised the primary independent variable may promote egalitarian gender attitudes. What remains unclear, however, and deserving of future research, is whether egalitarian attitudes among adolescents

encourage a more "feminine" approach to relationships among boys, or whether girls are now encouraged to approach sexuality and dating in a more "traditionally masculine" way. The latter is "egalitarian" in the sense that both males and females are expected to exhibit similar behaviors, however, whether this sort of female "empowerment" is a good thing is debatable.

The argument above was born out in the findings. Exposure to "relational" media content during early adolescence does generally predict more egalitarian gender attitudes among teens during middle adolescence. This finding is robust to the inclusion of a long list of variables thought to measure the influence of competing ecological influences. These findings speak to a continued need to consider media as a source of adolescent gender attitudes, and to the need to refine our understanding of the ways in which various types of content work to promote differing types of gender attitudes.

In addition to the general conclusions drawn above, the analyses in the second paper were performed across various types of media (television, music, movies, and magazines) as well as across the available demographic subgroups included in the dataset (black and white, boys and girls). This allowed for an exploration of which media might provide the most potent gender messages as well as which groups might be most heavily influenced by such messages. In general, significant effects were detected most frequently for exposure to music content. While television and magazines have been most frequently examined for gender content, future research may benefit from an increasing focus on music lyrics. Teens spend a great deal of time listening to music and these results suggest that the messages in popular songs are likely used by teens as gender scripts. Also, it is possible that differences in music genre selection may have played a role in the differing direction of effects across groups

(black boys and girls' attitudes became more egalitarian with greater exposure to music content, while white boys' became more traditional).

The results also suggest that boys, and black boys in particular, may be more susceptible to media content's influence on gender attitudes than girls (at this age). This finding has implications for future research. Many studies of the effects of media on gender attitudes to date have focused on girls since media content is generally characterized in the literature as detrimental to their developing gender identities. However, the greater propensity for media messages to alter boys' gender attitudes is also in keeping with the contention above that perhaps, at this particular stage in American history, masculinity is more contentious than femininity. Ward (2003) suggests that gendered media messages regarding femininity are more consistent than those regarding masculinity, which may also explain, in part, the lack of significant results among girls (no effects were detected among white girls, while black girls were influenced solely by music content). Another explanation of this surprising finding is a potential "fishbowl effect" among girls, who are bombarded with gendered media messages from such a young age that they may not even recognize that such messages are contestable (much like fish do not realize that they are in water). This explanation is in keeping with recent work that locates the ability to identify and dispute gendered messages among those girls whose "outsider" status in some ways gives them greater perspective (examples include ethnic and racial minority groups and home-schooled girls).

The third, and final, paper was restricted to a single medium: magazines. Since magazines are more clearly categorized into topical genres than are other media, they provide an excellent opportunity to investigate whether teens' choice of content played a role in

subsequent changes in their gender attitudes. These choices were thought to relate to a teen's ascribed characteristics, such as race or sex, since magazine marketing is highly segmented along these lines. Indeed, among the nine genres of magazines identified, highly significant differences in readership along demographic lines were present in all but the "current events" genre (which included magazines such as *Time* and *Newsweek*). Dating and relationship–related content was present in the messages of six of the genres (none was present in automobile, gaming, or current events magazines). The second round of analyses utilized this content as a longitudinal predictor of gender attitudes (again, the model developed in the first paper as the dependent variable). Heckman selection analysis was utilized. This two-step procedure first accounted for individual characteristics hypothesized to influence genre choice (such as sex, race, and pre-existing gender attitudes), and then predicted a change in gender attitudes conditional upon exposure to content. Subsequent regressions modeled an interaction effect between magazine content exposure and two other concepts: the importance of reading magazines and identification with magazine content.

The results revealed that, with the exception of exposure to adult fashion magazines, gendered content did not produce a statistically significant change in teens' gender attitudes. However, the pattern of results related to fashion magazines is quite interesting. First, these magazines are almost exclusively consumed by girls, but only a rather modest percentage of girls had read these magazines during early adolescence. Among those who have, more traditional gender attitudes are evident. This finding is not in keeping with the characterization of the content, so far, as "relational". Like the discrepant findings in the direction of music effects noted above with white boys, it is possible that effects may vary at the level of genre even when results at the level of medium are typically in the expected

direction. When the interaction terms were examined, it became evident that girls (for the most part) that deemed magazine reading important in conjunction with identifying strongly with adult magazine content were much more likely to report traditional gender attitudes. This confirms what much of the content analyses of magazines aimed at women have asserted; that such magazines portray women in ways that conform to the sexual double standard.

The results also speak to the "fishbowl" effect of media content on girls brought up in the discussion of results in the second paper. Girls appear to transition from teen magazines to adult fashion magazines between early and middle adolescence. This suggests that the time during which teen magazine content may actually be producing a measurable change in gender attitudes is late childhood when such content would be novel in the same way that the more "mature" fashion magazine content would be to 12 and 13 year old girls. Otherwise the messages regarding gender norms are likely too prevalent and (generally) accepted to make much of an impression.

What, as a result of the findings above, can now be said regarding the relationship between media content and adolescent gender attitudes? The mother and father in the bookstore may be surprised to learn that the talks about dating that they have had with their teens may not have been as influential as the lyrics of the songs that their children crank up in the car on the way back from soccer practice. The media are one of many sources of information regarding gender norms related to dating and romance and they *do* have the power to change adolescent attitudes, although specificity is in order when discussing effects as they have been found to vary along a number of dimensions. Sometimes, the medium *is* the message, as not all media are equally likely to influence attitudes. Measurement issues

must also be considered, such as the characterization of gendered content, as well as the structure of the predicted gender attitudes. Furthermore, effects are also likely to differ across groups. Here, teens of different racial backgrounds and boys and girls were not equally susceptible to media messages. The assumption that media messages always, or uniformly, influence teen attitudes is called into question in light of these findings. However, some potentially fruitful avenues of inquiry have also been identified. Further research into various attitudinal domains that comprise gender attitudes generally among teens is needed, as are studies that look for effects at the genre level. Finally, the pre-teen years may be the most fruitful to examine when attempting to isolate the time at which media content may be most salient regarding gender attitudes. This is especially true for studies of girls. So long as the media continue to convey messages about gender, there will undoubtedly be interest in explicating the processes by which such messages exert influence.

Appendix 2A. Latent Variable Approach to Model Improvement

In addition to the model improvement strategy which employed correlated errors, a second strategy was developed. This second approach incorporates an addition latent variable on which items from the same source scale are allowed to load. In practice, the results of these two approaches should be quite similar. Conceptually, the latent variable approach provides a more theoretical rationale as it proposes that the items loading onto the third latent variable share meaning (SCALE1). In this case, they are all hypothesized to measure masculine ideology as a result of their original development for that purpose. In the correlated error approach, it is hypothesized that, as a result of having been developed for a shared purpose, the errors associated with the indicator variables may be systematically related, thereby causing an increase in the correlation between these measures (Saris and Aalberts 2003).

Much like the correlated error model, an additional latent variable on which items related to feminine ideology (MAN and CHARGE) were hypothesized to load was originally included in the second approach. In this case, the model that included this fourth latent variable was unable to achieve convergence. It is likely that this model was not identified.

The additional latent variable model does provide a more elegant theoretical approach to the problem of taking into account source scale influence and, as indicated here in Table X, actually produced a slightly higher BIC when all cases were included in the modeling. Unfortunately, the form of the model was not found to hold across all demographic groups (see Table 13). Specifically, the model will not converge when restricted to only black boys (even when the number of iterations is increased dramatically). In addition, further inspection of the factor loadings within the remaining groups shows that the validity and

reliability of some items is compromised with this model specification (see, for example, item RESPECT in the model restricted to black girls). Under these circumstances, it is not advisable to continue to pursue this strategy for model fit improvement since the results will not allow for further analyses to be conducted across all groups[61]. Rather, the correlated error model described in the paper represents a viable alternative that works for all groups[62].

[61] One could consider dropping black boys from the analyses, but as they are an understudied, and therefore, valuable population to include, this choice is rejected.

[62] Future research of this kind could employ either strategy as these results may be particular to these data.

Table 2A-1 Model 2 with Additional Latent Variable for Model Improvement

Model 2 with Additional Latent Variable				
LV	Indicators	Factor Loading	Estimate/ S.E.	R^2
Gender	TOUGH	1.00	0.00	0.49
	ACTS	0.98	7.63	0.37
	ROUGH	0.82	9.10	0.32
Dating	READY	1.00	0.00	0.53
	RESPECT	0.79	3.46	0.74
	CHARGE	0.77	10.38	0.41
	MAN	0.66	10.00	0.33
Scale1	ACTS	-0.23	-3.26	
	TOUGH	-0.41	-3.87	
	READY	0.33	4.40	
	RESPECT	1.11	2.43	
	Gender by Dating	0.96	7.98	
	Dating			0.72
	Latent Variables	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.78		5.85
	Dating		0.28	3.71
	Scale 1	1.00		0.00
	Fit Statistics			
	χ2	23.10	CFI	0.99
	p	0.003	TLI	0.99
	BIC	**-32.22**	RMSEA	0.04
	N	1007	SRMR	0.02
	df	8		

Note: Scale1 is uncorrelated with Gender and Dating.

Table 2A-2 Model 2 with Additional Latent Variable for Model Improvement across Race and Sex Groups

White Girls					Black Girls				
LV	**Indicators**	Factor Loading	Estimate/ S.E.	R^2	**LV**	**Indicators**	Factor Loading	Estimate/ S.E.	R^2
Gender	TOUGH	1.00	0.00	0.37	Gender	TOUGH	1.00	0.00	0.39
	ACTS	1.05	3.47	0.46		ACTS	0.59	1.11	0.44
	ROUGH	1.01	3.86	0.36		ROUGH	0.66	2.44	0.21
Dating	READY	1.00	0.00	0.53	Dating	READY	1.00	0.00	0.33
	RESPECT	0.50	1.11	0.61		RESPECT	0.23	0.87	0.02
	CHARGE	0.73	2.90	0.25		CHARGE	1.43	2.41	0.42
	MAN	0.91	2.91	0.34		MAN	1.17	2.36	0.33
Scale1	ACTS	-0.50	-2.36		Scale1	ACTS	0.75	0.47	
	TOUGH	-0.22	-1.69			TOUGH	0.10	0.63	
	READY	0.70	2.03			READY	-0.36	-0.58	
	RESPECT	1.17	1.75			RESPECT	-0.08	-0.38	
	Gender by Dating	0.82	2.95			Gender by Dating	0.58	2.24	
	Dating			0.60		Dating			0.58
	Latent Variables	Variance	Residual Variance	Estimate/ S.E.		**Latent Variables**	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.55		3.25		Gender	0.62		1.77
	Dating		0.25	1.50		Dating		0.15	1.33
	Scale 1	1.00		0.00		Scale 1	1.00		0.00
	Fit Statistics					**Fit Statistics**			
	χ2	7.34	CFI	1.00		χ2	9.95	CFI	0.98
	p	0.500	TLI	1.01		p	0.269	TLI	0.97
	BIC	**-36.59**	RMSEA	0.00		**BIC**	**-34.47**	RMSEA	0.03
	N	242	SRMR	0.04		N	258	SRMR	0.05
	df	8				df	8		

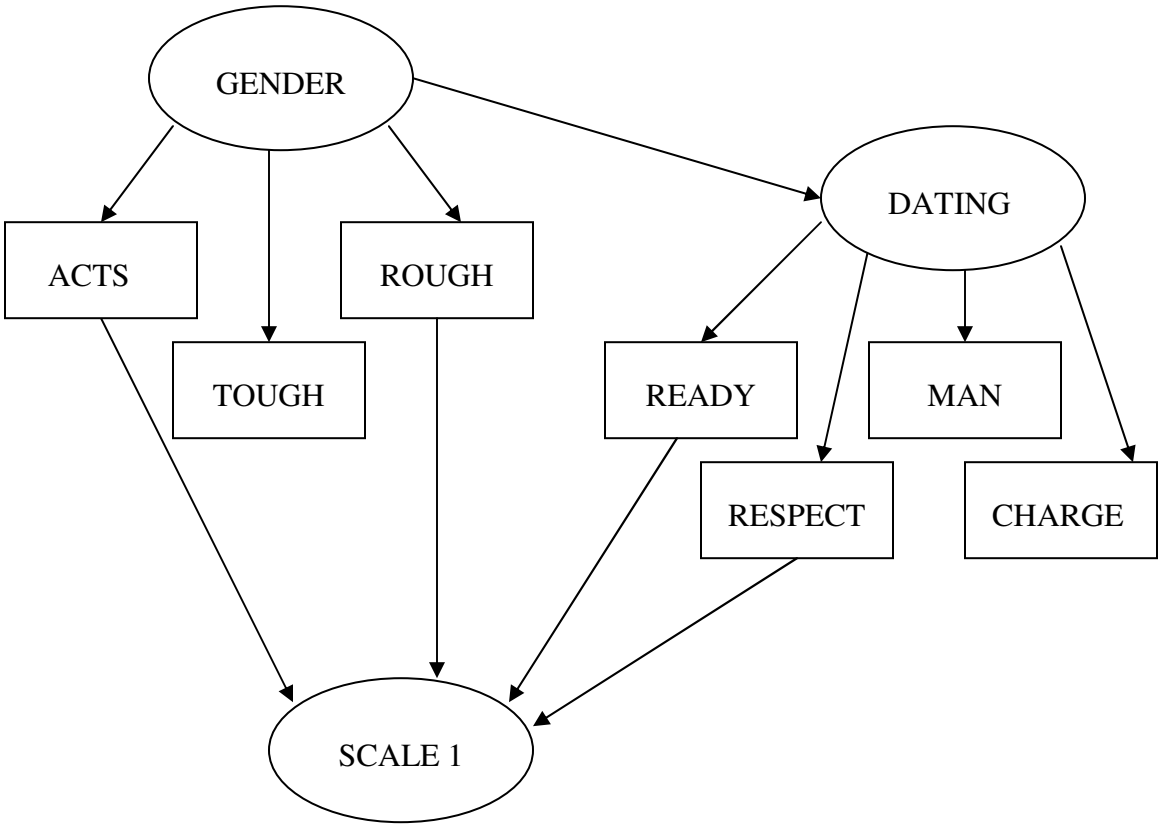
Note: Scale1 is uncorrelated with Gender and Dating.

Table 2A-3 Model 2 with Additional Latent Variable for Model Improvement across Race and Sex Groups, continued

White Boys					Black Boys				
LV	**Indicators**	Factor Loading	Estimate/ S.E.	R^2	**LV**	**Indicators**	Factor Loading	Estimate/ S.E.	R^2
Gender	TOUGH	1.00	0.00	0.53	Gender	TOUGH			
	ACTS	0.92	3.37	0.52		ACTS			
	ROUGH	0.73	4.27	0.34		ROUGH			
Dating	READY	1.00	0.00	0.33	Dating	READY			
	RESPECT	2.41	0.68	0.88		RESPECT		**WILL NOT**	
	CHARGE	1.26	3.20	0.30		CHARGE		**CONVERGE**	
	MAN	1.12	3.30	0.25		MAN			
Scale1	ACTS	-0.50	-2.78		Scale1	ACTS			
	TOUGH	-0.37	-2.17			TOUGH			
	READY	0.47	3.17			READY			
	RESPECT	2.44	0.67			RESPECT			
	Gender by Dating	0.50	2.65			Gender by Dating			
	Dating			0.91		Dating			
	Latent Variables	Variance	Residual Variance	Estimate/ S.E.		**Latent Variables**	Variance	Residual Variance	Estimate/ S.E.
	Gender	0.96		2.56		Gender			
	Dating		0.02	0.43		Dating			
	Scale 1	1.00		0.00		Scale 1			
	Fit Statistics					**Fit Statistics**			
	χ2	15.18	CFI	0.97		χ2		CFI	
	p	0.056	TLI	0.96		p		TLI	
	BIC	**-28.84**	RMSEA	0.06		**BIC**		RMSEA	
	N	245	SRMR	0.04		N	262	SRMR	
	df	8				df	8		

Note: Scale1 is uncorrelated with Gender and Dating.

Figure 2A-1 Two Factor Model of Adolescent Gender Attitudes with Additional Latent Variable



Appendix 2B. Model 2 across Race and Sex Groups without Correlated Errors

As was noted earlier, the correlated error approach generally produces an improvement in fit across the race and sex groups included in these analyses. The most improvement is realized among white boys, for whom Model 2 is not a particularly good fit at all without the correlated errors. Note particularly that the BIC switches from a positive to a negative sign. White girls also experience a substantial improvement across all of the fit measures when the errors are modeled. Among black teens, the inclusion of the errors results in improvement across all measures except the BIC. According to this fit statistic, the model for black girls improves only slightly and the fit among black boys actually decreases (but remains negative). However, *all other fit indices* demonstrate an improvement. Therefore, upon consideration, the model which includes correlated errors is deemed a better fit to the data across groups than that which does not.

Table 2B-1 Model 2 without Correlated Errors across Race and Sex Groups

White Girls					Black Girls				
LV	**Indicators**	Factor Loading	Standard Error	R^2	**LV**	**Indicators**	Factor Loading	Standard Error	R^2
Gender	TOUGH	1.000	0.000	0.359	Gender	TOUGH	1.000	0.000	0.476
	ACTS	0.992	0.166	0.353		ACTS	0.499	0.139	0.119
	ROUGH	1.045	0.177	0.391		ROUGH	0.641	0.143	0.196
Dating	READY	1.000	0.000	0.483	Dating	READY	1.000	0.000	0.259
	RESPECT	1.013	0.169	0.495		RESPECT	0.417	0.191	0.045
	CHARGE	0.673	0.116	0.219		CHARGE	1.086	0.205	0.305
	MAN	0.792	0.120	0.303		MAN	1.119	0.205	0.324
	Dating			0.289		Dating			0.445
	Gender by Dating	0.623	0.124			Gender by Dating	0.492	0.143	
	Latent Variables	Variance	Residual Variance			**Latent Variables**	Variance	Residual Variance	
	Gender	0.359				Gender	0.476		
	Dating		0.344			Dating		0.144	
	Fit Statistics					**Fit Statistics**			
	χ2	44.440	CFI	0.866		χ2	29.122	CFI	0.892
	p	0.000	TLI	0.84		p	0.002	TLI	0.844
	BIC	**-10.449**	RMSEA	0.119		**BIC**	**-26.408**	RMSEA	0.08
	N	242	SRMR	0.081		N	258	SRMR	0.069
	df	10				df	10		

Table 2B-1 Continued. Model 2 without Correlated Errors across Race and Sex Groups

White Boys					Black Boys				
LV	**Indicators**	Factor Loading	Standard Error	R^2	**LV**	**Indicators**	Factor Loading	Standard Error	R^2
Gender	TOUGH	1.000	0.000	0.462	Gender	TOUGH	1.000	0.000	0.494
	ACTS	0.952	0.130	0.419		ACTS	0.610	0.122	0.184
	ROUGH	0.902	0.104	0.376		ROUGH	0.467	0.106	0.108
Dating	READY	1.000	0.000	0.309	Dating	READY	1.000	0.000	0.521
	RESPECT	0.917	0.139	0.260		RESPECT	0.930	0.088	0.450
	CHARGE	1.065	0.150	0.350		CHARGE	0.845	0.077	0.371
	MAN	0.949	0.137	0.279		MAN	0.798	0.077	0.332
	Dating			0.419		Dating			0.479
	Gender by Dating	0.529	0.087			Gender by Dating	0.710	0.136	
	Latent Variables	Variance	Residual Variance			**Latent Variables**	Variance	Residual Variance	Corr.
	Gender	0.462				Gender	0.494		
	Dating		0.180			Dating		0.271	
	Fit Statistics					**Fit Statistics**			
	χ2	80.856	CFI	0.777		χ2	21.556	CFI	0.969
	p	0.000	TLI	0.755		p	0.028	TLI	0.969
	BIC	**25.843**	RMSEA	0.170		**BIC**	**-34.127**	RMSEA	0.061
	N	245	SRMR	0.095		N	262	SRMR	0.043
	df	10				df	10		

Appendix 2C. Jöreskog Model Threshold Estimates

Table 1C-1 Threshold Estimates across Race/Sex Groups

	White Girls	White Boys	Black Girls	Black Boys
READY	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.66	2.04	2.00	1.68
	2.78	3.32	3.59	2.45
ACTS	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.41	1.64	1.67	1.73
	2.34	2.23	3.05	2.31
ROUGH	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	2.75	3.93	4.05	3.35
TOUGH	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.84	1.69	1.73	1.48
	3.13	2.50	2.80	2.17
CHARGE	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.72	2.37	2.02	2.72
	3.10	3.24	4.07	4.61
RESPECT	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	2.15	2.96	2.17	2.37
MAN	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.56	1.67	1.34	1.60
	2.68	2.35	2.12	2.40

Table 2C-2 Threshold Estimates across Race and Sex Groups

	White Teens	Black Teens	Girls	Boys
READY	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.82	1.67	1.63	1.83
	2.83	2.60	2.74	2.84
ACTS	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.55	1.58	1.42	1.67
	2.34	2.51	2.43	2.26
ROUGH	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	2.71	4.29	2.43	3.80
TOUGH	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.99	1.60	1.78	1.59
	3.26	2.50	2.96	2.37
CHARGE	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	2.49	2.29	1.65	2.80
	3.77	3.81	3.05	4.30
RESPECT	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	2.07	2.24	1.83	2.63
MAN	0.00	0.00	0.00	0.00
	1.00	1.00	1.00	1.00
	1.94	1.48	1.48	1.69
	3.03	2.28	2.47	2.49

Appendix 3A. Top Ten Media Vehicles with High Dating Content

Movie Titles	% Dating Content
Rush Hour 2	0.28
American Pie	0.13
Save the Last Dance	0.12
Down to Earth	0.10
America's Sweethearts	0.08
Rat Race	0.08
There's Something about Mary	0.07
Notting Hill	0.07
The Wedding Planner	0.07
The Nutty Professor	0.07

Television Shows	% Dating Content
Seventh Heaven	0.12
Ricki Lake	0.10
Disney's Doug	0.10
King of the Hill	0.09
My Wife and Kids	0.09
Everybody Loves Raymond	0.09
Girlfriends	0.08
3rd Rock from the Sun	0.08
ER	0.07
Martin	0.07

Magazine Titles	% Dating Content
J-14	0.08
Cosmopolitan	0.07
TV Guide	0.06
Glamour	0.05
Cosmo Girl	0.04
Seventeen	0.04
YM	0.04
Jet	0.04
Essence	0.03
People	0.03

Music Artists	% Dating Content
Leann Rimes	0.68
Jessica Simpson	0.58
Backstreet Boys	0.54
Dream	0.53
O-Town	0.51
Jennifer Lopez	0.49
Dixie Chicks	0.47
Brian McKnight	0.44
K-Ci and JoJo	0.43
Eden's Crush	0.43

Appendix 3B. Most Popular Media Vehicles across Race and Sex Groups; Movies, Television, Magazines, and Music

Black Boys: Movies	% Dating Content	Characterization
Men in Black	0.01	action, comedy
The Nutty Professor	0.07	comedy
Big Mama's House	0.02	comedy
Home Alone	0.00	comedy
The Lion King	0.01	animated feature
Toy Story	0.01	animated feature
Water Boy	0.01	comedy
Remember the Titans	0.00	sports drama
Forest Gump	0.02	drama
Titanic	0.02	drama

White Boys: Movies	% Dating Content	Characterization
The Lion King	0.01	animated feature
Men in Black	0.01	action, comedy
Toy Story	0.01	animated feature
Jurassic Park I	0.00	action
Home Alone	0.00	comedy
Star Wars	0.00	action, drama
Water Boy	0.01	comedy
Independence Day	0.02	action
Jurassic Park II	0.00	action
Star Wars: The Phantom Menace	0.00	action, drama

Black Girls: Movies	% Dating Content	Characterization
The Nutty Professor	0.07	comedy
Home Alone	0.00	comedy
Big Mama's House	0.02	comedy
The Lion King	0.01	animated feature
Toy Story	0.01	animated feature
Bring it On	0.04	comedy
Men in Black	0.01	action, comedy
I Know What You Did Last Summer	0.01	horror
Water Boy	0.01	comedy
Titanic	0.02	drama

White Girls: Movies	% Dating Content	Characterization
Toy Story	0.01	animated feature
Home Alone	0.00	comedy
Titanic	0.02	drama
The Lion King	0.01	animated feature
Miss Congeniality	0.00	comedy
Bring it On	0.04	comedy
Men in Black	0.01	action, comedy
Forest Gump	0.02	drama
Water Boy	0.01	comedy
Meet the Parents	0.04	comedy

Black Boys: Television Shows	% Dating Content	Characterization
Martin	0.07	sit-com
Parkers	0.04	sit-com
106 and Park	0.02	music video show
The Wayans Brothers	0.02	sit-com
Moesha	0.07	sit-com
The Hughleys	0.00	sit-com
The Parent 'Hood	0.07	sit-com
WWF Smackdown	0.03	professional wrestling
Cribs	0.00	reality show
The Steve Harvey Show	0.04	sit-com

White Boys: Television Shows	% Dating Content	Characterization
Jackass	0.00	reality show
Saturday Night Live	0.01	comedy/music show
Friends	0.03	sit-com
Celebrity Deathmatch	0.00	claymation comedy
South Park	0.00	animated comedy
Survivor	0.00	reality game show
Weakest Link	0.01	game show
Cribs	0.00	reality show
DragonBall Z	0.00	fantasy violence animation
Fear Factor	0.00	reality game show

Black Girls: Television Shows	% Dating Content	Characterization
Parkers	0.04	sit-com
Moesha	0.07	sit-com
The Hughleys	0.00	sit-com
106 and Park	0.02	music video show
Martin	0.07	sit-com
One on One	0.03	sit com
Girlfriends	0.08	sit-com
The Parent 'Hood	0.07	sit-com
Living Single	0.02	sit-com
The Steve Harvey Show	0.04	sit-com

White Girls: Television Shows	% Dating Content	Characterization
Friends	0.03	sit-com
Sabrina the Teenage Witch	0.01	sit-com
Seventh Heaven	0.12	drama, religious
Clueless	0.00	sit-com
Survivor	0.00	reality game show
Gilmore Girls	0.04	female-focused drama
Charmed	0.01	female-focused drama
Total Request Live	0.01	music video show
Weakest Link	0.01	game show
Cribs	0.00	reality show

Black Boys: Magazines	% Dating Content	Characterization
Sports Illustrated	0.00	sports
WWF	0.00	sports
Vibe	0.02	African American focus, music
Ebony	0.03	African American focus, general
Game Pro	0.00	computers/gaming
Jet	0.04	African American focus, general
Nintendo Power	0.00	computers/gaming
TV Guide	0.06	entertainment
Electronic Games Monthly	0.00	computers/gaming
Teen	0.01	teen girl focus

White Boys: Magazines	% Dating Content	Characterization
Sports Illustrated	0.00	sports
Boy's Life	0.00	Boy Scouts publication
Game Pro	0.00	computers/gaming
Nintendo Power	0.00	computers/gaming
Electronic Games Monthly	0.00	computers/gaming
WWF	0.00	sports
Hot Rod	0.00	automobile
Computer Gaming World	0.00	computers/gaming
Motor Trend	0.00	automobile
Time	0.00	news/current events

Black Girls: Magazines	% Dating Content	Characterization
Ebony	0.03	African American focus, general
Teen	0.01	teen girl focus
Vibe	0.02	African American focus, music
Teen People	0.01	teen, entertainment
Jet	0.04	African American focus, general
Seventeen	0.04	teen girl focus
Essence	0.03	African American focus, for women
Word Up	0.00	African American focus, entertainment
TV Guide	0.06	entertainment
Cosmo Girl	0.04	teen girl focus

White Girls: Magazines	% Dating Content	Characterization
Seventeen	0.04	teen girl focus
Teen People	0.01	teen, entertainment
Teen	0.01	teen girl focus
Cosmo Girl	0.04	teen girl focus
YM	0.04	teen girl focus
J-14	0.08	teen girl focus
People	0.03	entertainment
Glamour	0.05	adult fashion
Sports Illustrated	0.00	sports
Cosmopolitan	0.07	adult fashion

Black Boys: Music Artists	% Dating Content	Characterization
Jay-Z	0.11	hip hop/rap
Ja Rule	0.16	hip hop/rap
DMX	0.01	hip hop/rap
Snoop Dog	0.02	hip hop/rap
Nelly	0.04	hip hop/rap
Ludacris	0.02	hip hop/rap
R Kelly	0.11	R & B
Outkast	0.04	hip hop/rap
Dr. Dre	0.00	hip hop/rap
Eve	0.15	hip hop/rap

White Boys: Music Artists	% Dating Content	Characterization
Lil Bow Wow	0.09	hip hop/rap
Blink 182	0.11	punk/pop rock
Nelly	0.04	hip hop/rap
Limp Bizkit	0.07	metal
Creed	0.00	rock/pop
Jay-Z	0.11	hip hop/rap
DMX	0.01	hip hop/rap
Ja Rule	0.16	hip hop/rap
Dr. Dre	0.00	hip hop/rap
Snoop Dog	0.02	hip hop/rap

Black Girls: Music Artists	% Dating Content	Characterization
Ja Rule	0.16	hip hop/rap
Nelly	0.04	hip hop/rap
Jay-Z	0.11	hip hop/rap
Eve	0.15	hip hop/rap
Destiny's Child	0.31	pop, R&B
R Kelly	0.16	R & B
Missy Elliott	0.12	hip hop/rap
Mary J. Blige	0.39	R & B, soul
Ludacris	0.02	hip hop/rap
DMX	0.01	hip hop/rap

White Girls: Music Artists	% Dating Content	Characterization
Destiny's Child	0.31	pop, R&B
Jennifer Lopez	0.49	pop, hip-hop
Nelly	0.04	hip hop/rap
N'Sync	0.35	pop, boy band
Janet Jackson	0.30	pop, R&B
O-Town	0.51	pop, boy band
Ja Rule	0.16	rap
Dream	0.53	pop, girl band
Christina Aguilera	0.24	pop
Blink 182	0.11	punk/pop rock

Appendix 3C. Initiation of Sexual Activity by Sex in High Dating Content Vehicles

Movie Titles	% Male	%Female	%Both	%Unclear
Rush Hour 2	0.37	0.52	0.09	0.00
American Pie	0.55	0.34	0.11	0.00
Save the Last Dance	0.27	0.43	0.29	0.01
Down to Earth	0.48	0.33	0.18	0.01
America's Sweethearts	0.53	0.36	0.11	0.00
Rat Race	0.52	0.38	0.08	0.02
There's Something about Mary	0.50	0.39	0.10	0.01
Notting Hill	0.46	0.36	0.17	0.02
The Wedding Planner	0.41	0.35	0.22	0.00
The Nutty Professor	0.51	0.36	0.12	0.01
Average	**0.46**	**0.38**	**0.15**	**0.01**

Television Shows	% Male	%Female	%Both	%Unclear
Seventh Heaven	0.02	0.08	0.07	0.83
Ricki Lake	0.34	0.34	0.24	0.08
Disney's Doug	0.32	0.20	0.48	0.00
King of the Hill	0.32	0.29	0.35	0.00
My Wife and Kids	0.40	0.23	0.01	0.36
Everybody Loves Raymond	0.32	0.48	0.20	0.00
Girlfriends	0.24	0.62	0.11	0.02
3rd Rock from the Sun	0.45	0.33	0.03	0.18
ER	0.28	0.16	0.52	0.02
Martin	0.25	0.63	0.13	0.00
Average	**0.29**	**0.34**	**0.21**	**0.15**

Magazine Titles	% Male	%Female	%Both	%Unclear
J-14	0.17	0.51	0.07	0.24
Cosmopolitan	0.28	0.21	0.04	0.46
TV Guide	0.19	0.12	0.30	0.39
Glamour	0.11	0.39	0.19	0.31
Cosmo Girl	0.12	0.48	0.08	0.32
Seventeen	0.16	0.59	0.14	0.11
YM	0.22	0.62	0.07	0.10
Jet	0.30	0.23	0.47	0.00
Essence	0.28	0.31	0.31	0.09
People	0.19	0.17	0.44	0.19
Average	**0.20**	**0.36**	**0.21**	**0.22**

Music Artists	% Male	%Female	%Both	%Unclear
Leann Rimes	0.33	0.37	0.17	0.13
Jessica Simpson	0.31	0.54	0.12	0.02
Backstreet Boys	0.97	0.03	0.00	0.00
Dream	0.39	0.18	0.00	0.43
O-Town	0.61	0.35	0.04	0.01
Jennifer Lopez	0.07	0.93	0.00	0.00
Dixie Chicks	0.35	0.65	0.00	0.00
Brian McKnight	0.93	0.00	0.03	0.04
K-Ci and JoJo	0.61	0.28	0.05	0.07
Eden's Crush	0.00	0.25	0.00	0.75
Average	**0.46**	**0.36**	**0.04**	**0.15**

Appendix 3D. Restricted Models Using All Available Cases

Table 3D-1 Dating and Relationship Content Predicting Gender Attitudes; OLS Regression, Standardized Coefficients (Standard Errors)

	Movies	**Television**	**Magazines**	**Music**
Black Boys	-0.32 (1.19)	3.08 (0.90)**	2.01 (0.85)*	0.45 (0.12)***
White Boys	-2.71 (1.24)*	-0.44 (0.98)	-0.39 (1.33)	-0.05 (0.12)
Black Girls	0.78 (1.32)	-0.08 (1.03)	1.63 (0.75)¶	0.19 (0.17)
White Girls	0.06 (0.98)	-1.17 (0.53)*	0.14 (0.55)	-0.05 (0.09)

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$
Note: N ranges from 189 to 260.

Table 3D-2 Dating and Relationship Content Predicting Gender Attitudes, Controlling for Baseline Gender Attitudes; OLS Regression, Standardized Coefficients (Standard Errors)

	Movies	**Television**	**Magazines**	**Music**
Black Boys	-0.18 (1.04)	1.86 (0.79)*	1.62 (0.75)*	0.30 (0.11)**
White Boys	-1.20 (1.13)	-0.49 (0.92)	-0.91 (1.16)	-0.08 (0.10)
Black Girls	0.87 (1.27)	-0.16 (0.97)	0.39 (0.85)	0.11 (0.16)
White Girls	0.51 (0.87)	-0.81 (0.51)	-0.02 (0.48)	-0.09 (0.08)

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$
Note: N ranges from 183 to 246.

Appendix 3E. Full Regression Results

Table 3E-1 Movie Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Movie dating content	-0.02	-0.01	0.01	0.11	0.08
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Baseline gender attitudes		0.52	-	-	0.36***
r^2 change		***0.27****	**-**	**-**	***0.29****
Age			-0.07	-0.10	-0.03
Receives free lunch			-0.12¶	-0.13	-0.11
Higher parent education			-0.05	-0.01	0.01
Earlier pubertal development			0.12¶	-0.01	-0.03
r^2 change			***0.03¶***	***0.03***	***0.01***
Learned about dating from media				-0.11	-0.09
Higher media identification				-0.08	-0.06
Greater interest in sex in the media				0.02	-0.02
r^2 change				***0.06****	***0.04¶***
Discussed dating with parent(s)				-0.18*	-0.02
Parent(s) disapproves of teen sex				0.09	-0.15¶
Parent(s) is "hands on"				0.16¶	0.09
Good relationship with parent(s)				-0.14¶	0.11
r^2 change				***0.09****	***0.04¶***
Discussed dating with clergy				-0.07	-0.05
Clergy disapprove of teen sex				-0.09	-0.10
Religion is important				0.04	0.07
Attends religious services regularly				-0.16¶	-0.16¶
r^2 change				***0.04***	***0.04¶***
Discussed dating with teacher				0.07	0.03
Teacher disapproves of teen sex				0.15	0.09
Gets along well at school				-0.18*	-0.18*
r^2 change				***0.04***	***0.02***
Discussed dating with friends				0.11	0.10
Friends disapprove of teen sex				-0.13	-0.11
Gets along with peers				-0.11	-0.08
Friends have permissive dating attitudes				-0.48***	-0.34**
r^2 change				***0.14*****	***0.06****
N	254	240	243	145	141
total r^2	***0.00***	***0.27***	***0.03***	***0.40***	***0.50***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-2 Movie Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Movie dating content	0.04	0.04	0.03	0.05	0.03
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Baseline gender attitudes		0.35***	-	-	0.37***
r^2 change		***0.12****	**-**	**-**	***0.18****
Age			-0.02	0.01	0.00
Receives free lunch			-0.07	-0.09	-0.02
Higher parent education			-0.11¶	-0.07	-0.07
Earlier pubertal development			-0.01	-0.11	-0.14¶
r^2 change			***0.01***	***0.02***	***0.01***
Learned about dating from media				0.10	0.00
Higher media identification				0.00	-0.04
Greater interest in sex in the media				-0.07	-0.07
r^2 change				***0.02***	***0.01***
Discussed dating with parent(s)				-0.07	-0.08
Parent(s) disapproves of teen sex				-0.14	-0.14¶
Parent(s) is "hands on"				-0.04	0.00
Good relationship with parent(s)				-0.10	-0.10
r^2 change				***0.01***	***0.01***
Discussed dating with clergy				-0.15¶	-0.10
Clergy disapprove of teen sex				0.19*	0.16¶
Religion is important				-0.13	-0.16¶
Attends religious services regularly				0.11	0.11
r^2 change				***0.05***	***0.03***
Discussed dating with teacher				0.04	0.03
Teacher disapproves of teen sex				-0.02	0.03
Gets along well at school				0.19*	0.20*
r^2 change				***0.04¶***	***0.04****
Discussed dating with friends				0.07	0.10
Friends disapprove of teen sex				-0.09	-0.13
Gets along with peers				-0.03	-0.06
Friends have permissive dating attitudes				-0.40***	-0.31**
r^2 change				***0.09*****	***0.06****
N	250	240	232	167	162
total r^2	***0.00***	***0.12***	***0.02***	***0.23***	***0.34***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-3 Movie Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Movie dating content	0.00	0.03	0.04	-0.02	0.02
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Baseline gender attitudes		0.51***	-	-	0.55***
r^2 change		***0.26****	**-**	**-**	***0.27****
Age			0.05	0.13	0.05
Receives free lunch			-0.04	0.11	0.23**
Higher parent education			0.21**	0.23**	0.18*
Earlier pubertal development			0.01	0.07	-0.06
r^2 change			***0.05****	***0.07****	***0.06****
Learned about dating from media				-0.11	-0.15¶
Higher media identification				0.16¶	-0.08
Greater interest in sex in the media				0.05	0.10
r^2 change				***0.04***	***0.02***
Discussed dating with parent(s)				0.05	0.09
Parent(s) disapproves of teen sex				-0.08	-0.06
Parent(s) is "hands on"				-0.03	-0.08
Good relationship with parent(s)				0.15	0.19*
r^2 change				***0.01***	***0.02***
Discussed dating with clergy				0.02	0.04
Clergy disapprove of teen sex				0.01	0.01
Religion is important				-0.07	-0.09
Attends religious services regularly				-0.05	0.01
r^2 change				***0.01***	***0.01***
Discussed dating with teacher				0.12	0.07
Teacher disapproves of teen sex				0.07	-0.02
Gets along well at school				-0.27**	-0.18*
r^2 change				***0.04***	***0.03¶***
Discussed dating with friends				0.07	0.07
Friends disapprove of teen sex				-0.19¶	-0.17¶
Gets along with peers				-0.11	-0.15¶
Friends have permissive dating attitudes				-0.46***	-0.18
r^2 change				***0.09****	***0.03***
N	235	225	230	156	152
total r^2	***0.00***	***0.26***	***0.05***	***0.25***	***0.45***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-4 Movie Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Movie dating content	-0.14*	-0.06	-0.10	0.25*	0.18¶
r^2 change	***0.02****	***0.02****	***0.01***	***0.00***	***0.00***
Baseline gender attitudes		0.48***	-	-	0.47***
r^2 change		***0.22*****	**-**	**-**	***0.27*****
Age			0.02	0.08	0.10
Receives free lunch			0.02	-0.04	-0.05
Higher parent education			0.14¶	0.09	0.02
Earlier pubertal development			0.05	0.13	0.10
r^2 change			***0.02***	***0.05***	***0.03***
Learned about dating from media				0.04	0.06
Higher media identification				-0.16	-0.13
Greater interest in sex in the media				0.02	-0.02
r^2 change				***0.07****	***0.03***
Discussed dating with parent(s)				-0.06	-0.03
Parent(s) disapproves of teen sex				0.09	0.03
Parent(s) is "hands on"				0.06	0.04
Good relationship with parent(s)				-0.11	-0.11
r^2 change				***0.04***	***0.02***
Discussed dating with clergy				0.00	-0.02
Clergy disapprove of teen sex				-0.12	-0.09
Religion is important				-0.04	-0.08
Attends religious services regularly				-0.13	-0.12
r^2 change				***0.02***	***0.02***
Discussed dating with teacher				0.02	0.02
Teacher disapproves of teen sex				0.12	0.09
Gets along well at school				-0.20¶	-0.16
r^2 change				***0.02***	***0.01***
Discussed dating with friends				-0.23*	-0.22*
Friends disapprove of teen sex				0.25*	0.09
Gets along with peers				0.04	-0.03
Friends have permissive dating attitudes				0.02	0.07
r^2 change				***0.06¶***	***0.04***
N	242	232	230	119	117
total r^2	***0.02***	***0.24***	***0.03***	***0.27***	***0.42***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-5 Television Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Television dating content	0.19**	0.13*	0.21**	0.29***	0.23**
r^2 change	***0.04****	***0.05****	***0.04****	***0.08*****	***0.11*****
Baseline gender attitudes		0.50***	-	-	0.33***
r^2 change		***0.24*****	-	-	***0.23*****
Age			-0.07	-0.06	0.00
Receives free lunch			-0.13*	-0.11	-0.10
Higher parent education			0.01	0.06	0.06
Earlier pubertal development			0.11¶	0.00	-0.03
r^2 change			***0.04****	***0.03***	***0.01***
Learned about dating from media				-0.06	-0.04
Higher media identification				-0.03	-0.03
Greater interest in sex in the media				-0.02	-0.05
r^2 change				***0.06****	***0.04****
Discussed dating with parent(s)				-0.16*	-0.14¶
Parent(s) disapproves of teen sex				0.07	0.08
Parent(s) is "hands on"				0.15¶	0.12
Good relationship with parent(s)				-0.15¶	-0.13¶
r^2 change				***0.08****	***0.04****
Discussed dating with clergy				-0.05	-0.04
Clergy disapprove of teen sex				-0.08	0.11
Religion is important				0.05	0.06
Attends religious services regularly				-0.12	-0.12
r^2 change				***0.03***	***0.04¶***
Discussed dating with teacher				0.10	0.05
Teacher disapproves of teen sex				0.09	0.08
Gets along well at school				-0.12	-0.13¶
r^2 change				***0.02***	***0.02***
Discussed dating with friends				0.05	0.06
Friends disapprove of teen sex				-0.07	-0.08
Gets along with peers				-0.08	-0.06
Friends have permissive dating attitudes				-0.46***	-0.34***
r^2 change				***0.14*****	***0.06*****
N	260	246	249	150	146
total r^2	***0.04***	***0.29***	***0.08***	***0.44***	***0.54***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-6 Television Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Television dating content	0.00	-0.01	0.01	0.01	-0.04
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Baseline gender attitudes		0.36***	-	-	0.39***
r^2 change		***0.13****	-	-	***0.19****
Age			-0.02	-0.01	-0.01
Receives free lunch			-0.05	-0.05	0.02
Higher parent education			-0.09	-0.06	-0.06
Earlier pubertal development			-0.02	-0.14¶	-0.15*
r^2 change			***0.01***	***0.02***	***0.01***
Learned about dating from media				0.12	0.01
Higher media identification				-0.02	0.03
Greater interest in sex in the media				-0.02	-0.01
r^2 change				***0.02***	***0.01***
Discussed dating with parent(s)				-0.05	-0.06
Parent(s) disapproves of teen sex				-0.11	-0.14
Parent(s) is "hands on"				-0.03	0.00
Good relationship with parent(s)				-0.09	-0.07
r^2 change				***0.01***	***0.01***
Discussed dating with clergy				-0.13	-0.08
Clergy disapprove of teen sex				0.16¶	0.14¶
Religion is important				-0.15¶	-0.19*
Attends religious services regularly				0.15¶	0.13
r^2 change				***0.05***	***0.03***
Discussed dating with teacher				0.02	0.02
Teacher disapproves of teen sex				0.03	0.06
Gets along well at school				0.19*	0.20*
r^2 change				***0.05****	***0.04****
Discussed dating with friends				0.07	0.10
Friends disapprove of teen sex				-0.08	-0.11
Gets along with peers				-0.06	-0.08
Friends have permissive dating attitudes				-0.37***	-0.29**
r^2 change				***0.08*****	***0.05****
N	255	245	237	170	165
total r^2	***0.00***	***0.13***	***0.01***	***0.21***	***0.34***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-7 Television Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Television dating content	-0.14*	-0.09	-0.11¶	-0.07	-0.08
r^2 change	***0.02****	***0.03*****	***0.02****	***0.01***	***0.03****
Baseline gender attitudes		0.49***	-	-	0.49***
r^2 change		***0.24*****	-	-	***0.24*****
Age			0.06	0.11	0.03
Receives free lunch			-0.09	0.04	0.15¶
Higher parent education			0.19**	0.21*	0.16*
Earlier pubertal development			-0.01	0.05	-0.07
r^2 change			***0.05****	***0.07***	***0.04¶***
Learned about dating from media				-0.11	-0.12
Higher media identification				-0.11	-0.07
Greater interest in sex in the media				0.19*	0.16¶
r^2 change				***0.05***	***0.03¶***
Discussed dating with parent(s)				0.07	0.11
Parent(s) disapproves of teen sex				-0.06	-0.05
Parent(s) is "hands on"				-0.05	-0.07
Good relationship with parent(s)				0.13	0.18*
r^2 change				***0.01***	***0.02***
Discussed dating with clergy				0.01	0.04
Clergy disapprove of teen sex				0.01	0.02
Religion is important				-0.06	-0.07
Attends religious services regularly				-0.08	-0.04
r^2 change				***0.01***	***0.01***
Discussed dating with teacher				0.13	0.10
Teacher disapproves of teen sex				0.04	-0.04
Gets along well at school				-0.27**	-0.19*
r^2 change				***0.03***	***0.03¶***
Discussed dating with friends				0.03	0.03
Friends disapprove of teen sex				-0.19¶	-0.18¶
Gets along with peers				-0.12	-0.15¶
Friends have permissive dating attitudes				-0.49***	-0.26*
r^2 change				***0.09***	***0.04¶***
N	238	229	232	160	156
total r^2	***0.02***	***0.27***	***0.07***	***0.28***	***0.44***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-8 Television Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Television dating content	-0.03	-0.03	0.06	0.08	-0.03
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Baseline gender attitudes		0.51***	-	-	0.51***
r^2 change		***0.26****	-	-	***0.27****
Age			0.03	0.04	0.07
Receives free lunch			0.00	-0.02	-0.04
Higher parent education			0.17*	0.09	0.00
Earlier pubertal development			0.08	0.13	0.10
r^2 change			***0.03***	***0.05***	***0.02***
Learned about dating from media				0.11	0.11
Higher media identification				-0.15	-0.13
Greater interest in sex in the media				-0.01	-0.02
r^2 change				***0.07****	***0.03***
Discussed dating with parent(s)				-0.09	-0.06
Parent(s) disapproves of teen sex				0.04	-0.02
Parent(s) is "hands on"				0.00	-0.02
Good relationship with parent(s)				-0.07	-0.10
r^2 change				***0.03***	***0.02***
Discussed dating with clergy				-0.03	-0.04
Clergy disapprove of teen sex				-0.11	-0.08
Religion is important				-0.03	-0.07
Attends religious services regularly				-0.13	-0.11
r^2 change				***0.02***	***0.02***
Discussed dating with teacher				0.05	0.04
Teacher disapproves of teen sex				0.10	0.09
Gets along well at school				-0.17	-0.13
r^2 change				***0.02***	***0.01***
Discussed dating with friends				-0.21*	-0.20*
Friends disapprove of teen sex				0.22¶	0.06
Gets along with peers				0.04	-0.04
Friends have permissive dating attitudes				0.01	0.07
r^2 change				***0.05***	***0.04***
N	238	228	236	118	116
total r^2	***0.00***	***0.26***	***0.03***	***0.24***	***0.40***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-9 Music Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Music dating content	0.23***	0.15**	0.25***	0.26***	0.19*
r^2 change	***0.06****	***0.06****	***0.06****	***0.09****	***0.09****
Baseline gender attitudes		0.49***	-	-	0.33***
r^2 change		***0.23****	-	-	***0.22****
Age			-0.09	-0.08	-0.03
Receives free lunch			-0.12¶	-0.09	-0.09
Higher parent education			-0.03	0.02	0.03
Earlier pubertal development			0.11¶	-0.02	-0.04
r^2 change			***0.03¶***	***0.02***	***0.01***
Learned about dating from media				-0.11	-0.09
Higher media identification				-0.07	-0.06
Greater interest in sex in the media				-0.01	-0.04
r^2 change				***0.08****	***0.04****
Discussed dating with parent(s)				-0.14¶	-0.13
Parent(s) disapproves of teen sex				0.12	0.12
Parent(s) is "hands on"				0.14¶	0.11
Good relationship with parent(s)				-0.09	-0.08
r^2 change				***0.07****	***0.04¶***
Discussed dating with clergy				-0.06	-0.04
Clergy disapprove of teen sex				-0.04	-0.08
Religion is important				0.03	0.06
Attends religious services regularly				-0.14	-0.14¶
r^2 change				***0.03***	***0.04¶***
Discussed dating with teacher				0.12	0.07
Teacher disapproves of teen sex				0.08	0.07
Gets along well at school				-0.18*	-0.18*
r^2 change				***0.03***	***0.03***
Discussed dating with friends				0.06	0.07
Friends disapprove of teen sex				-0.12	-0.11
Gets along with peers				-0.10	-0.08
Friends have permissive dating attitudes				-0.41***	-0.31**
r^2 change				***0.11****	***0.05****
N	250	238	241	148	144
total r^2	***0.06***	***0.29***	***0.09***	***0.44***	***0.52***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-10 Music Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Music dating content	0.07	0.04	0.10	0.18*	0.16*
r^2 change	***0.01***	***0.00***	***0.01***	***0.02****	***0.02¶***
Baseline gender attitudes		0.35***	-	-	0.38***
r^2 change		***0.12******	-	-	***0.18******
Age			-0.03	0.03	0.02
Receives free lunch			-0.06	-0.06	0.02
Higher parent education			-0.10	-0.04	-0.03
Earlier pubertal development			-0.02	-0.13	-0.15*
r^2 change			***0.01***	***0.02***	***0.01***
Learned about dating from media				0.10	0.00
Higher media identification				-0.06	0.00
Greater interest in sex in the media				-0.04	-0.05
r^2 change				***0.03***	***0.01***
Discussed dating with parent(s)				-0.05	-0.05
Parent(s) disapproves of teen sex				-0.12	-0.14¶
Parent(s) is "hands on"				0.00	0.04
Good relationship with parent(s)				-0.15¶	-0.15¶
r^2 change				***0.02***	***0.02***
Discussed dating with clergy				-0.10	-0.06
Clergy disapprove of teen sex				0.18¶	0.16¶
Religion is important				-0.14	-0.18*
Attends religious services regularly				0.14	0.12
r^2 change				***0.05¶***	***0.03***
Discussed dating with teacher				0.02	0.02
Teacher disapproves of teen sex				0.01	0.05
Gets along well at school				0.16¶	0.18*
r^2 change				***0.04***	***0.04¶***
Discussed dating with friends				0.06	0.09
Friends disapprove of teen sex				-0.09	-0.12
Gets along with peers				-0.05	-0.07
Friends have permissive dating attitudes				-0.40***	-0.32**
r^2 change				***0.09****	***0.06****
N	251	241	233	170	165
total r^2	***0.01***	***0.12***	***0.02***	***0.25***	***0.37***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-11 Music Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Music dating content	-0.04	-0.07	-0.03	-0.10	-0.10
r^2 change	***0.00***	***0.00***	***0.00***	***0.01***	***0.01***
Baseline gender attitudes		0.50	-	-	0.50
r^2 change		***0.25****	-	-	***0.26****
Age			0.04	0.12	0.05
Receives free lunch			-0.10	0.05	0.16*
Higher parent education			0.20**	0.21*	0.16*
Earlier pubertal development			0.00	0.05	-0.07
r^2 change			***0.06*****	***0.07****	***0.04¶***
Learned about dating from media				-0.11	-0.13
Higher media identification				-0.09	-0.05
Greater interest in sex in the media				0.19*	0.16¶
r^2 change				***0.05¶***	***0.03***
Discussed dating with parent(s)				0.06	0.10
Parent(s) disapproves of teen sex				-0.07	-0.06
Parent(s) is "hands on"				-0.04	-0.06
Good relationship with parent(s)				0.14	0.19*
r^2 change				***0.01***	***0.02***
Discussed dating with clergy				0.00	0.03
Clergy disapprove of teen sex				0.01	0.01
Religion is important				-0.07	-0.09
Attends religious services regularly				-0.06	-0.01
r^2 change				***0.01***	***0.01***
Discussed dating with teacher				0.15¶	0.11
Teacher disapproves of teen sex				0.06	-0.04
Gets along well at school				-0.28**	-0.20*
r^2 change				***0.04***	***0.03¶***
Discussed dating with friends				0.02	0.03
Friends disapprove of teen sex				-0.19¶	-0.17¶
Gets along with peers				-0.11	-0.15¶
Friends have permissive dating attitudes				-0.51***	-0.28*
r^2 change				***0.10*****	***0.04¶***
N	236	226	230	158	154
total r^2	***0.00***	***0.25***	***0.06***	***0.28***	***0.44***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-12 Music Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Music dating content	-0.03	-0.05	-0.03	-0.12	-0.18¶
r^2 change	***0.00***	***0.00***	***0.00***	***0.03¶***	***0.03¶***
Baseline gender attitudes		0.49***	-	-	0.47***
r^2 change		***0.24****	-	-	***0.24****
Age			0.00	0.02	0.08
Receives free lunch			0.02	0.04	0.04
Higher parent education			0.15*	0.16	0.10
Earlier pubertal development			0.07	0.10	0.08
r^2 change			***0.03***	***0.04***	***0.02***
Learned about dating from media				0.14	0.17
Higher media identification				-0.16	-0.12
Greater interest in sex in the media				0.02	0.02
r^2 change				***0.06¶***	***0.03***
Discussed dating with parent(s)				-0.10	-0.09
Parent(s) disapproves of teen sex				0.00	-0.01
Parent(s) is "hands on"				-0.08	-0.05
Good relationship with parent(s)				-0.02	-0.04
r^2 change				***0.02***	***0.01***
Discussed dating with clergy				0.02	-0.04
Clergy disapprove of teen sex				-0.14	-0.14
Religion is important				-0.02	-0.05
Attends religious services regularly				-0.16	-0.11
r^2 change				***0.02***	***0.02***
Discussed dating with teacher				0.00	0.00
Teacher disapproves of teen sex				0.19	0.17
Gets along well at school				-0.08	-0.04
r^2 change				***0.02***	***0.01***
Discussed dating with friends				-0.28*	-0.27**
Friends disapprove of teen sex				0.22¶	0.05
Gets along with peers				0.06	-0.02
Friends have permissive dating attitudes				0.07	0.11
r^2 change				***0.07¶***	***0.06¶***
N	222	214	212	107	105
total r^2	***0.00***	***0.24***	***0.03***	***0.26***	***0.42***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-13 Magazine Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Magazine dating content	0.15*	0.12*	0.18**	0.21**	0.14¶
r^2 change	***0.02****	***0.03****	***0.03****	***0.04****	***0.04****
Baseline gender attitudes		0.51***	-	-	0.36***
r^2 change		***0.26*****	-	-	***0.27*****
Age			-0.09	-0.08	-0.01
Receives free lunch			-0.09	-0.09	-0.07
Higher parent education			0.00	0.03	0.05
Earlier pubertal development			0.12¶	0.03	0.01
r^2 change			***0.03***	***0.04***	***0.01***
Learned about dating from media				-0.10	-0.07
Higher media identification				-0.02	-0.03
Greater interest in sex in the media				0.04	-0.01
r^2 change				***0.06****	***0.03***
Discussed dating with parent(s)				-0.12	-0.12
Parent(s) disapproves of teen sex				0.08	0.08
Parent(s) is "hands on"				0.15¶	0.11
Good relationship with parent(s)				-0.18*	-0.13
r^2 change				***0.09*****	***0.04¶***
Discussed dating with clergy				-0.08	-0.05
Clergy disapprove of teen sex				-0.06	-0.12
Religion is important				0.03	0.06
Attends religious services regularly				-0.10	-0.10
r^2 change				***0.02***	***0.03***
Discussed dating with teacher				0.10	0.05
Teacher disapproves of teen sex				0.12	0.10
Gets along well at school				-0.10	-0.12
r^2 change				***0.02***	***0.02***
Discussed dating with friends				0.06	0.06
Friends disapprove of teen sex				-0.12	-0.12
Gets along with peers				-0.03	-0.04
Friends have permissive dating attitudes				-0.47***	-0.34**
r^2 change				***0.13*****	***0.06****
N	232	220	223	142	138
total r^2	***0.02***	***0.29***	***0.06***	***0.40***	***0.50***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-14 Magazine Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; Black Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Magazine dating content	0.12¶	0.03	0.11	0.15¶	0.09
r^2 change	***0.01¶***	***0.01***	***0.01¶***	***0.01***	***0.01***
Baseline gender attitudes		0.36***	-	-	0.42***
r^2 change		***0.12****	-	-	***0.18****
Age			-0.03	-0.01	-0.02
Receives free lunch			-0.03	-0.05	0.04
Higher parent education			-0.09	-0.06	-0.04
Earlier pubertal development			-0.02	-0.14¶	-0.11
r^2 change			***0.01***	***0.02***	***0.01***
Learned about dating from media				0.09	0.00
Higher media identification				-0.03	0.02
Greater interest in sex in the media				-0.05	-0.08
r^2 change				***0.02***	***0.01***
Discussed dating with parent(s)				-0.05	0.02
Parent(s) disapproves of teen sex				-0.10	-0.10
Parent(s) is "hands on"				0.00	0.06
Good relationship with parent(s)				-0.15	-0.14¶
r^2 change				***0.01***	***0.01***
Discussed dating with clergy				-0.13	-0.10
Clergy disapprove of teen sex				0.16	0.14¶
Religion is important				-0.15¶	-0.18*
Attends religious services regularly				0.11	0.10
r^2 change				***0.05***	***0.04***
Discussed dating with teacher				0.00	0.01
Teacher disapproves of teen sex				0.00	0.04
Gets along well at school				0.18*	0.20*
r^2 change				***0.04¶***	***0.05****
Discussed dating with friends				0.07	0.10
Friends disapprove of teen sex				-0.10	-0.11
Gets along with peers				-0.02	-0.04
Friends have permissive dating attitudes				-0.41***	-0.31**
r^2 change				***0.09****	***0.05****
N	247	237	229	165	160
total r^2	***0.01***	***0.13***	***0.02***	***0.25***	***0.35***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-15 Magazine Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Girls Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Magazine dating content	0.02	0.00	0.02	-0.02	-0.08
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.01***
Baseline gender attitudes		0.52***	-	-	0.57***
r^2 change		***0.27****	-	-	***0.30****
Age			0.06	0.16¶	0.07
Receives free lunch			-0.08	0.03	0.15¶
Higher parent education			0.21**	0.19*	0.13
Earlier pubertal development			0.00	0.09	-0.03
r^2 change			***0.06****	***0.07****	***0.03***
Learned about dating from media				-0.11	-0.17*
Higher media identification				-0.08	-0.02
Greater interest in sex in the media				0.15	0.13
r^2 change				***0.05****	***0.03¶***
Discussed dating with parent(s)				0.04	0.08
Parent(s) disapproves of teen sex				-0.04	-0.05
Parent(s) is “hands on”				-0.07	-0.09
Good relationship with parent(s)				0.09	0.16¶
r^2 change				***0.01***	***0.02***
Discussed dating with clergy				0.03	0.05
Clergy disapprove of teen sex				-0.03	-0.01
Religion is important				-0.08	-0.11
Attends religious services regularly				-0.04	0.00
r^2 change				***0.01***	***0.02***
Discussed dating with teacher				0.14	0.00
Teacher disapproves of teen sex				0.10	-0.01
Gets along well at school				-0.29**	-0.21*
r^2 change				***0.04***	***0.03***
Discussed dating with friends				0.03	0.03
Friends disapprove of teen sex				-0.20¶	-0.21*
Gets along with peers				-0.07	-0.13
Friends have permissive dating attitudes				-0.53***	-0.29*
r^2 change				***0.11*****	***0.04¶***
N	209	204	205	146	143
total r^2	***0.00***	***0.27***	***0.06***	***0.28***	***0.47***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Table 3E-16 Magazine Content Predicts Gender Attitudes, Longitudinal OLS Regressions; Standardized Betas; White Boys Only

	Model 1	Model 2	Model 3	Model 4	Model 5
Magazine dating content	-0.02	-0.05	0.00	0.01	0.00
r^2 change	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***
Baseline gender attitudes		0.49***	-	-	0.42***
r^2 change		***0.24****	-	-	***0.22****
Age			0.05	0.04	0.07
Receives free lunch			-0.01	-0.05	-0.06
Higher parent education			0.16*	0.11	0.06
Earlier pubertal development			0.10	0.20¶	0.17¶
r^2 change			***0.03***	***0.07***	***0.04***
Learned about dating from media				0.14	0.14
Higher media identification				-0.13	-0.13
Greater interest in sex in the media				-0.02	0.00
r^2 change				***0.04***	***0.03***
Discussed dating with parent(s)				-0.07	-0.06
Parent(s) disapproves of teen sex				-0.01	-0.05
Parent(s) is "hands on"				-0.04	-0.03
Good relationship with parent(s)				0.00	0.00
r^2 change				***0.03***	***0.01***
Discussed dating with clergy				-0.25*	-0.19¶
Clergy disapprove of teen sex				-0.22¶	-0.18
Religion is important				-0.03	-0.08
Attends religious services regularly				-0.04	-0.03
r^2 change				***0.06***	***0.05***
Discussed dating with teacher				0.11	0.09
Teacher disapproves of teen sex				0.21	0.16
Gets along well at school				-0.16	-0.10
r^2 change				***0.07***	***0.01***
Discussed dating with friends				-0.26*	-0.24*
Friends disapprove of teen sex				0.25¶	0.11
Gets along with peers				0.07	-0.02
Friends have permissive dating attitudes				0.17	0.20
r^2 change				***0.02***	***0.05***
N	189	183	180	96	95
total r^2	***0.00***	***0.24***	***0.03***	***0.29***	***0.42***

*** $p < 0.000$ ** $p < 0.01$ * $p < 0.05$ ¶ $p < 0.10$

Appendix 4A: Instructions to Content Analysis Coders regarding Dating and Relationship Content

Dating / Relationships / Marriage / Divorce

What It Is: Talk or depiction of informal boy-girl activities such as meeting at a mall, sporting event, or park, as well as more formal dating activities, such as going to the prom, meeting a date's parents. Talk or depiction of two people who are romantically interested in each other or married or divorced. Or when someone talks about wanting to date/marry someone. Also includes advice (expert or from friends) on dating, maintaining a relationship or marriage, or divorce. There must be a direct reference to creating or maintaining the relationship, and there must be potential for the relationship to occur. Includes flirting.

Examples:

- Seeking relationship advice.
- Advice on how to choose or get a boyfriend/girlfriend.
- Depicting people on a date or at the prom together.
- Article that talks about how celebrities balance work and family to maintain their relationship.
- "Madonna is pregnant with her third child and husband Ritchie is thrilled!"
- A cute boy is trying to flirt with a girl that he finds attractive, but he trips over his shoelace and falls down.

What It's Not:

- Young unmarried people who live together or hang out together, but are not romantically interested in each other (e.g., Will and Grace). If not sexual do not code.
- "Tom is divorced from Nicole."

Appendix 4B: Magazine Genre Reading by Demographic Group, Time 2

	White Girls		Black Girls		White Boys		Black Boys		χ^2 test
	%	Rank	%	Rank	%	Rank	%	Rank	
Adult Fashion	55.1	2	55.0	3	1.2	8	12.5	8	278.8***
Teen Focus/ Teen Fashion	**89.7**	**1**	84.4	2	9.5	6	33.1	7	462.7
African-American Focus	7.0	6	**90.5**	**1**	2.9	7	**78.3**	**1**	649.4***
News/Current Issues & Entertainment	36.0	3	33.1	4	33.1	4	25.0	6	7.9*
Sports	21.9	4	22.3	5	**54.0**	**1**	68.6	2	172.7***
Gaming	3.3	7	6.9	7	48.0	2	56.4	3	279.1***
Automobile	8.3	5	7.7	6	37.5	3	48.5	4	172.4***
Male Focus	1.2	8	4.2	8	19.3	5	26.6	5	99.7***

p < 0.001***, p<0.01**, p < 0.05*, p < 0.10¶

Note: At Time 2, magazine titles were not asked separately from genres categories. In this survey, the current events and entertainment genres were merged. Example titles for this genre included *Time*, *Newsweek*, and *People*.