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I am submitting herewith a dissertation written by Rebecca Furr Webb entitled "The Role of Physical Attractiveness in Adolescent Romantic Relationships." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

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THE ROLE OF PHYSICAL ATTRACTIVENESS IN ADOLESCENT ROMANTIC RELATIONSHIPS

A Dissertation

Presented for the

Doctor of Philosophy

Degree

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Rebecca F. Webb

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DEDICATION

I dedicate this dissertation to

my chosen traveling companions:

my husband, Michael Webb,

and my best friend, Nikki Frousakis.

Your love, support, and laughter

have made the journey sweeter.

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ABSTRACT

This dissertation explores the role that physical attractiveness plays in many aspects of adolescent romantic relationships, such as relationship longevity, relationship satisfaction, and power dynamics within the relationship. Three specific questions are examined in this project. First, is partner physical attractiveness associated with relationship satisfaction? Second, do adolescent couples who are well "matched" according to physical attractiveness remain together longer that those who are not? Third, does the couple member who is higher in physical attractiveness have more power in the relationship?

To examine these questions, we used data collected from 99 middle adolescent and 106 late adolescent dating couples. We used survey data, as well as observational coded data of recorded conversations in which the couples discussed an issue of disagreement in their relationship. In order to control for non-independence of partner-members' responses, data was examined with hierarchical linear modeling when appropriate.

Physical attractiveness was unrelated to general relationship satisfaction or to any positive relationship experiences. However, physical attractiveness was positively associated with negative aspects of relationships, such as possessiveness and emotional painfulness. Matching was unrelated to relationship length or status. In couples in which the female was the more attractive member, *both* couple members enacted the power pattern (self persuading followed by partner giving in) more frequently compared with other couples. Findings and implications are discussed within the framework of evolutionary, social, and feminist psychology theories. Limitations and directions for future research are also discussed.

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CHAPTER I

INTRODUCTION

Adolescence is a period in which the individual goes through many changes in biological, emotional and social development. Enormous physical changes occur during adolescence and gender differences in physical appearance become salient at this time. This is in contrast to childhood, in which growth is a rather stable process (Rogol, Roemmich, & Clark, 2002) and the difference between girls' and boys' physical appearance is relatively small. Along with changes in the reproductive organs, there is also development of secondary sexual characteristics, including breast development in females and facial hair and deepening voice for males. At puberty the body dramatically increases the amount of sex hormones that are produced (Nottleman et al., 1987), leading to newfound sexual interest that sometimes leads to romantic relationships.

With physical changes that occur to the individual during puberty, the average adolescent becomes preoccupied with his/her own physical appearance. Many researchers have noted the extent to which adolescents become appearance-obsessed, particularly concerning their bodies (Brown & Witherspoon, 2002). With the added development of their romantic interests, it is little wonder that this is a confusing and turbulent time for many adolescents. It is important to examine the intersection of appearance and romantic relationships, and in particular examine how the former affects both individual functioning and relationship development.

Physical Attractiveness

Before examining physical attractiveness in adolescence, it is important to understand research that has explored physical attractiveness in general. This research began in the 1960's, when researchers discovered the powerful influence that physical attractiveness has in human relationships. The findings of research in this area can be summarized by two general statements as follows: First, people tend to make the attribution that "what is beautiful is good"—that is, individuals of higher physical attractiveness are perceived by others as having more favorable characteristics in general, such as higher intelligence, social skills, and kindness. Second, individuals of higher physical attractiveness tend to have more social power and reap more rewards from other people as a result of their physical appearance.

The general attribution that "what is beautiful is good" has received overwhelming attention from researchers. This research finds that those who are highly physically attractive are perceived as having more favorable attributes in general. For example, individuals high in physical attractiveness are seen as more friendly, socially skilled, and well-adjusted than those of lower physical attractiveness (Eagly et al., 1991; Langlois et al., 2000). Individuals of higher physical attractiveness are also perceived as having better intellectual competence, leadership skills, and mental health (Jackson, Hunter, & Hodge, 1995; Marlowe, Schneider, & Nelson, 1996). Additionally, attractive adults are judged as having more occupational competence than unattractive adults (Langlois et al., 2000).

Studies have indicated that teachers tend to have a bias towards more attractive students, such that they are perceived as higher in academic potential. Clifford and Walster (1973) found that teachers' expectations about students are impacted by physical attractiveness, even before meeting them. Similarly, students give physically attractive teachers better evaluations (Goebel

& Cashen, 1979). More attractive teachers are seen as more friendly, encouraging, organized, and overall more competent teachers. A more recent study with college students (Riniolo, Johnson, Sherman, & Misso, 2006) has confirmed this bias, indicating that professors who are perceived as attractive receive higher student evaluations when compared with those of a nonattractive control group.

Research suggests that even clinicians are susceptible to the bias in favor of physically attractive people. Barocas and Vance (1974) found that counselors in a university counseling setting were more likely to have better initial impressions of and give higher prognosis ratings to those of higher physical attractiveness. The possible implication of this finding for patient treatment and outcomes is alarming.

It is evident that there is a bias in terms of how physically attractive individuals are perceived, but how are they treated? Much research has also examined how people behave towards physically attractive individuals compared to those of less physical attractiveness. Some clear differences have been found.

Individuals high in physical attractiveness are seen as more popular and sociable when compared to their peers. It is not surprising, then, that these individuals are shown to actually be more popular (Feingold, 1992b). In interactions with others, physically attractive people are given more smiles and positive looks than those rated lower in physical attractiveness (Kleck & Rubenstein, 1975). Additionally, a meta-analysis of physical attractiveness research shows that both children and adults who are highly attractive are treated better by others. They receive more attention, have more positive interactions, and are given more help (Langlois et al., 2000).

However, there is some question about this bias and why it occurs—perhaps physically attractive people are blessed with "good genes" that result in physical attractiveness as well as

other favorable personality traits, and it is these personality traits to which others are reacting. Alternatively, the existence of such a bias may influence highly physically attractive people to conform to others' expectations in a form of "self-fulfilling prophecy".

While there are clear biases that people have about physically attractive individuals, research indicates that physical attractiveness is not a global indicator of better *actual* characteristics. Alan Feingold (1992b) conducted a meta-analysis that first confirmed the physical attractiveness bias. Consistent with previous findings, he found that physical attractiveness had strong effects for *attributions* about sexual warmth and social skills; medium effects for attributions about sociability, dominance, and mental health; and small effects for attributions about intelligence. As part of his meta-analysis, he also examined studies that measured physical attractiveness and individuals' actual traits. Feingold found that physically attractive individuals were more popular, less socially anxious, more socially skilled, and even more sexually experienced than those of lower physical attractiveness. However, intelligence and personality variables such as emotional stability were unrelated to physical attractiveness.

It is important to note that the relationship between physical attractiveness and the attributions/behavior of others tends to be linear. That is, while there are clear advantages that are bestowed upon individuals of great beauty, research has indicated as many disadvantages for those of extremely low physical attractiveness (Byrnes, 1987; Dipboye, Arvey, & Terpstra, 1977; Patzer, 1985). Within western culture, however, the bias based on physical attractiveness is in large part consciously ignored or denied. We have the maxims "Don't judge a book by its cover" and "Beauty is skin deep," indicating our cultural desire to be unbiased, but this does not often reflect our actual perceptions or behavior.

Physical Attractiveness in Adolescence

Physical appearance is influential in the development of adolescents, as many studies have shown. As stated previously, individuals become more aware of their appearance as they enter into puberty and often become preoccupied with their looks. David Elkind's (1967) theory of adolescent egocentrism describes this phenomenon. At this stage of development, adolescents feel that they are constantly "on stage" and that everyone around them is as critical of their actions and appearance as they are. This often results in an overabundance of energy and time spent concerned with one's appearance. It is little wonder, then, the powerful role that physical attractiveness plays during adolescent development.

In addition, there is overwhelming evidence that adolescents of higher physical attractiveness benefit through popularity among peers. In a study that included eighth graders, physical attractiveness, above sociability and athletic ability, was shown to predict peer preference (Zakin, 1983). This trend was also shown in a study that examined adolescents' ability to make friends at summer camp—physical attractiveness was a stronger predictor of positive friendships and peer acceptance than was sociability (Hanna, 1998). The association between physical attractiveness and popularity among peers was found to be particularly strong for adolescent females in one study (Becker & Luthar, 2007). However, other studies examining a gender difference for this effect have shown that physical attractiveness predicts peer popularity for both males and females (Boyatzis, Baloff, & Durieux, 1998).

Physical attractiveness in adolescents is associated with dominance. While the construct of dominance is very closely linked with popularity, it is important to distinguish the two. Popularity is primarily seen as having more friendships, whereas dominance or social power is seen as having the power to influence others. In a study conducted with 50 high school females,

those who were rated high in physical attractiveness were also more likely to be rated highly in a variety of dominance dimensions (Weisfeld, Bloch, & Ivers, 1984). High levels of physical attractiveness, which is of particular salience to adolescent females, may give these individuals a form of social capital which enables them to influence others.

There is evidence to suggest that physical attractiveness also impacts adolescents' self-worth. Thornton and Ryckman (1991) found in a study with four different grade levels of adolescents that perceptions of one's own physical attractiveness were positively associated with self-esteem. It is important to note, however, that what may be most important is the adolescent's *perception* of his/her own physical attractiveness. When adolescent's self-ratings of their own attractiveness were compared with outsiders' ratings of their attractiveness, only the self-ratings were predictive of self-esteem (Jovanovic, Lerner, & Lerner, 1989). This association has important implications for outcomes in adolescence, as teenage girls who perceived they were unattractive were four times more likely to use psychoactive substances such as cocaine, marijuana, and amphetamines than girls who perceived themselves to be average-looking or attractive (Page, 1993).

There are other negative implications of adolescents' preoccupations with physical attractiveness, especially for girls. Body image plays a big role in adolescents' obsession with physical attractiveness, which is not surprising given the fact that it is the body that changes so drastically during this period of development. Teenage girls, in particular, feel pressure to maintain a thin physique, and this sometimes develops into eating disorders such as anorexia nervosa or bulimia. Approximately 0.5% of girls from the ages of 15 to 19 suffer from anorexia and another 1-2% suffer from bulimia (Fisher et al., 1995; Rosen, 2003). Eating disorders have become the third most common form of chronic illness among adolescent females (Fisher et al.,

1995; Rosen, 2003). Additionally, it is estimated that somewhere between 4% and 22% of college-age females engage in anorexic or bulimic behavior (Harrison, 1997). Many researchers believe that the media plays a strong role in the development of eating disorders, especially as they present images of tall, thin women as being most attractive (Brown & Witherspoon, 2002). In fact, studies of female undergraduates have indicated that the amount of time spent watching mainstream television programs is negatively associated with body image (Schooler, Ward, Merriweather, & Caruthers, 2004).

Impact of Physical Attractiveness in Romantic Relationships

Physical attractiveness, as one factor of romantic attraction, plays an integral role in romantic relationships. While there are certainly other factors that make up romantic attraction, physical attractiveness is important as it is one of the first things individuals notice about a prospective partner, and its importance continues beyond the first meeting into dating relationships and even marriage. Although both males and females value attractiveness in a romantic partner, there is a consistent gender difference in the extent to which they value this trait. In general, it has been shown that males value physical attractiveness in a partner more than females, who themselves typically value a male's power or financial resources more (Buunk, Dijkstra, Fetchenhauer, & Kenrick, 2002).

When it comes to behavioral measures of romantic partner preference, there is much evidence that indicates the salience of physical attractiveness in this process. In one of the first studies to examine this phenomenon (Walster, Aronson, Abrahams, & Rottman, 1966), undergraduate participants were randomly paired at a "computer dance". The researchers measured the physical attractiveness, self-acceptance, and intelligence of all participants. The

only important factor predicting subjects' liking for his or her date was the date's physical attractiveness.

In the physical attractiveness literature, there are two competing hypotheses about physical attractiveness and partner selection (also commonly referred to as "mate selection"): The first hypothesis is that people want the best they can get—they want the "ideal" partner in terms of physical attractiveness. Additionally, the more attractive one's romantic partner is (regardless of one's own attractiveness), the more satisfied one is in the relationship. There is much evidence in support of this hypothesis and positive outcomes of high partner physical attractiveness (e.g., Brislin & Lewis, 1968, Byrne, Ervin, & Lamberth, 1970; Hendrick & Hendrick, 1992; Riggio & Wolls, 1984; Walster et al., 1966, White, 1980).

The second hypothesis is the widely researched "matching hypothesis". This theory, first proposed by Goffman (1952), claims that people tend to form long-term romantic relationships with partners who are similar to themselves in physical attractiveness. The theory is that people tend to seek out individuals similar to themselves because they are being realistic. In other words, less attractive individuals are not as likely to attract highly attractive partners for themselves, and in order to protect themselves from painful rejection, they seek out partners who are likely to accept their advances. The first empirical study to test this hypothesis was the Walster et al. (1966) study described previously. While this initial study did not give evidence for the matching hypothesis, several studies conducted since that time have (Cavior & Boblett, 1982; Critelli & Waid, 1982; Murstein & Christy, 1976; Peterson & Miller, 1980; White, 1980; Zajonc, Adelmann, Murphy, & Niedenthal, 1987) and this theory continues to be cited in research on intimate relationships.

It has even been hypothesized that the matching hypothesis affects marital adjustment, such that partners who are not well "matched" (i.e. dissimilar) in physical attractiveness will experience more marital difficulties and dissatisfaction. Murstein and Christy (1976) found that, in general, middle aged couples were matched in terms of physical attractiveness. However, contrary to their hypothesis, discrepancies in partners' actual physical attractiveness did not predict marital satisfaction. Interestingly, a husband's *perception* that his wife was more attractive was related to marital satisfaction. A very similar study was conducted with older couples (Peterson & Miller, 1980) and found that these couples were also matched in attractiveness. Marital satisfaction for both partners was positively associated with observer ratings of their spouse's physical attractiveness.

Cavior and Boblett (1972) found that married partners were matched in physical attractiveness, but dating partners were not. This suggests that the matching hypothesis becomes more important for long-term commitment, as opposed to individuals who are "merely dating" and thus less committed. In line with this finding, Buunk and colleagues (2002) conducted a study of mate preferences that included Dutch men and women between the ages of 20 and 60. The study found that individuals became more picky about potential mate characteristics such as physical attractiveness with higher levels of commitment (i.e., dating versus marriage).

In a recent study of newly married couples, McNulty, Neff, and Karney (2008) examined the impact of physical attractiveness on relationship satisfaction and behavior. Researchers examined the effects of both absolute physical attractiveness and relative physical attractiveness (how the partners compared to each other). They found that absolute physical attractiveness of one's spouse was unrelated to relationship satisfaction. In fact, the only significant finding for relationship satisfaction and physical attractiveness was that males who were high in physical

attractiveness were less satisfied. Interestingly, *relative* physical attractiveness predicted behavior in interactions, such that couples in which the female was the more attractive partner behaved more positively and couples in which the male was the more attractive partner behaved more negatively. The matching hypothesis was also tested, and there was no association between couple members' similarity in physical attractiveness and behavior or satisfaction. This study highlights the importance of examining the relative physical attractiveness of each couple member and the need to examine how gender interacts with physical attractiveness in predicting relationship outcomes and behavior.

Impact of Physical Attractiveness in Adolescent Romantic Relationships

Research examining the role of physical attractiveness within dating relationships has been primarily conducted with convenience samples of undergraduate students. Some of this research has described the college sample as "adolescent", while others simply describe them as dating relationships. While review of research on dating relationships gives important insight into the nature of adolescent romantic relationships (which are generally dating relationships), it is also necessary to keep in mind that a broader examination of adolescent romantic relationships (including early and middle, as well as late adolescents) can give insight into possible developmental differences that may occur concerning physical attractiveness within these relationships.

Once adolescents are engaged in dating relationships, physical attractiveness appears to impact relationship satisfaction. Shea and Adams (1985) performed a path analysis in determining the antecedents of romantic love for dating college students. They found that physical attractiveness had an indirect effect on romantic love via increased thoughts about one's

partner. Additionally, Hong (1998) found that a key determinant predicting college students' relationship satisfaction within their dating relationships was physical attractiveness. Physical attractiveness has been shown to impact adolescent romantic relationships and sexual behavior, as well. More physically attractive adolescents date more frequently (Prisbell, 1987), have sex more frequently (Stelzer, Desmond, & Price, 1987; McLaughlin, Chen, Greenberger, & Biermeier, 1997), and are more popular with the opposite sex in general (Feingold, 1992b).

Much research has examined the matching hypothesis within dating relationships. Feingold (1981) hypothesized that matching would be more likely in couples who began dating soon after meeting (rather than dating after a period of being "just friends"). Twenty-six couples who started dating right away were compared with twenty-three couples who were friends before dating. Dating partners in relationships who began dating right away were more similar in physical attractiveness than couples who were friends first, leading the researcher to conclude that other variables (such as personality traits) factored into the latter form of relationships. Also, in an impressive study with 123 college-age couples of varying degrees of commitment, White (1980) found that those couples who were only dating were much less matched on physical attractiveness than were couples who were cohabitating or married.

Feingold's (1981) study supports the theory that in couples where there are discrepancies between partners' physical attractiveness, the less attractive partner must "make up" the difference in some way. One might make up the difference through having resources such as power or money, having desirable personality traits, or even by being deferential to the more attractive partner. In fact, Critelli and Waid (1980) tested and found support for this hypothesis. Couple members who perceived that they were the less attractive member of the dating relationship were more likely to indicate that they were the more submissive member as well.

Of course, how individuals "even the score" may differ by gender, as females are more likely to value males' power as a resource, whereas males may be more likely to value a partner's deference.

Theories from Evolutionary Psychology

Evolutionary psychology attempts to make explanations for human behavior by examining how behavior has become or at one time was evolutionarily adaptive for our species. The importance of physical attractiveness to human attitudes and behavior, particularly romantic and sexual behavior, has been explained through this process, and the theory involving physical attractiveness will be reviewed here.

Evolutionary psychologists believe that humans value physical attractiveness in mates because it advertises good health and fertility. Facial symmetry is one aspect of physical attractiveness that has been examined. Individuals whose faces are more symmetrical are typically seen as more attractive (Perrett et al., 1999). Indicators of poor health (such as invasion of the body by parasites and vulnerability to environmental stress) tend to come across in lack of symmetry (Cartwright, 2001). People with symmetrical faces tend to enjoy better mental and physical health, and are therefore thought to make better mates (Shackelford & Larsen, 1997).

Other indicators of health that manifest themselves in terms of physical attractiveness include body image. Hormones influence waist-to-hip ratios in men and women by affecting the distribution of fat on their bodies. Researchers have found that the ideal waist-to-hip ratio in women is 0.7, and that these individuals tend to be more fertile and have better physical health (Singh, 1994). In males, an attractive "waist-to-hip ratio" is 0.9, also indicating better health (Singh, 1995).

Although men and women both prefer partners who are physically attractive, there is a gender difference in the extent to which men and women prefer this trait in a partner. Men tend to value physical attractiveness in a partner more than women do, a finding that is robust across time and has been indicated across cultures (Buss, 1989). Women, although they also value physical attractiveness, tend to value other traits such as men's status, power, financial resources, or psychological variables indicating a man who will make a caring father (Cartwright, 2001; Townsend & Wasserman, 1998). An international study (Hatfield & Sprecher, 1995) investigated mate preferences among undergraduates in the United States, Russia, and Japan. In all three cultures, males cared more than females about the physical attractiveness of a partner, and females cared more about a partner's status and personality characteristics.

It is thought that women value not *just* physical attractiveness (which can be an indicator of reproductive and genetic health) but also traits or resources that will be beneficial to the children to whom she gives birth. From an evolutionary perspective, the gender difference in mate preferences comes about because of differences in reproduction. Due to humans' long gestation period of nine months, women have a relatively limited number of offspring they can produce in a lifetime compared to men. Men, on the other hand, are only limited in the number of potential offspring they can have by the number of willing sexual partners. Thus, women have a relatively larger investment than men do in the raising of young. They also have much more time and energy invested when they conceive and have offspring. Men tend to mainly desire sexual partners who are physically attractive, indicating fertility, whereas women are somewhat more "choosy" than men. Even more important than physical attractiveness are qualities that indicate the male will make a good mate and father, helping to provide for children. Examples of such traits are social status and intelligence, which may translate into getting

resources to help physically provide for offspring; power and dominance, which translate into helping protect offspring from potential threats; and commitment, which indicates the male's willingness to stay around to provide and protect.

Theories from Social Psychology

One popular theory about interpersonal relationships is social exchange theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). This theory assumes that people seek interactions with others that maximize the rewards gained and minimize costs, in a kind of cost-benefit analysis. Thus, people stay in relationships only when there is sufficient overall "profit" or outcome. The theory posits that if individuals feel that they lose more than they gain in a romantic relationship, or if they have better alternatives, they are likely to leave the relationship. Also, in order to receive benefits, individuals must give rewards in a process of mutual exchange with their partner. This theory suggests that partners who are benefiting in their relationships have a vested interest in keeping their partners happy.

Similarly, equity theory (Adams, 1965; Walster, Walster, & Berscheid, 1978) emphasizes the exchange of resources in relationships. This theory states that people are most satisfied in their relationships when the exchange of contributions made and rewards received are proportionately equal between both partners. If one partner is contributing more and benefiting less, that partner is likely to be dissatisfied with the relationship. Furthermore, it behooves an overbenefited partner to restore balance in the relationship. Otherwise, the underbenefited partner may leave.

Some researchers have explored the role that physical attractiveness plays in relationships through the lens of these two theories. Equity theory posits that less physically attractive

partners who are in relationships with more physically attractive partners will bring rewards other than physical attractiveness to the relationship to "even the score" (Feingold, 1981). Additionally, it is important to keep in mind that highly attractive individuals are likely to have many available alternative partners. Thus, if their expectations in their current relationship are not met, they are likely to seek other partners elsewhere.

Laursen and Jensen-Campbell (1999) discuss these theories as they relate specifically to adolescence. They propose that resource exchange between romantic partners may look different in early adolescence compared to late adolescence. In particular, "young adolescents place priority on status and physical appearance" (67), whereas older adolescents begin to place more emphasis on psychological qualities such as kindness and reciprocity within the relationship.

Other relevant social psychological research involves the examination of power within romantic relationships. Two theories relevant to physical attractiveness and its ability to determine power in relationships are those concerning the relative resources of both partners (Huston, 1983) and the "principle of least interest" theory (Waller & Hill, 1951). In line with equity theory and the exchange of resources, the former theory proposes that the partner who has more resources (e.g., money, education, status, or physical attractiveness) in the relationship will have more power (Scanzoni & Scanzoni, 1981; Steil, 1994). The "principle of least interest" theory posits that the less interested partner (i.e., the less committed partner or the partner who is less "in love"), has greater power. This theory proposes that, when conflict arises, the more interested and dependent partner will defer to the other's wishes in order to avoid termination of the relationship.

Theories from Feminist Psychology

Two theories that are highly influential in feminist psychology are social role theory (Eagly, 1987; Eagly & Crowley, 1986) and script theory (Gagnon & Simon, 1973). Social role theory posits that males and females behave differently in social situations according to expectations that society has about gender-appropriate behavior. For example, women may be less likely to ask for a well-deserved raise at work because such assertiveness might be seen as "unfeminine" or "too demanding", and consequently clash with gender stereotypes. This expectation, theorists have speculated, helps to reinforce the status quo. Many have suggested that this is one of the reasons why women continue to make less money than men (Martin, 2007). Similarly, script theory emphasizes that males and females often have different scripts for the same situation, and this influences them to behave in gender stereotyped ways (Mosher & Tomkins, 1988).

Both social role theory and script theory discuss the powerful role that social expectations and cultural norms play in human behavior, particularly along gendered lines. When discussing the emphasis that is placed on females' physical attractiveness, feminist theorists note that the expectations regarding female beauty are associated with cultural and political changes over time: "In general, as mainstream women have gained more freedom regarding identity and self-expression, constraints on beauty and sexuality have increased" (Travis, Meginnis, & Bardari, 2000, 242). Furthermore, physical attractiveness also functions as a form of power. Since physical attractiveness is valued more as a characteristic in women than it is in men, there is an unfair dynamic created in occupational settings where success should have nothing to do with one's appearance. While physical attractiveness would give advantage to women who are

viewed as beautiful, it similarly can serve to disadvantage women who might not be judged as attractive, but who are otherwise skilled and hard working.

Feminist theorists target cultural expectations and norms as an explanation for the overwhelming emphasis that is placed on physical attractiveness, and particularly the attractiveness of females. Certainly the media plays a role in perpetuating beauty ideals that influence females' perceptions of themselves. Recent technologies and new forms of media continue to place more pressure on women to "look their best" and often present images of women that are not realistic to obtain. Pictures of highly attractive models are airbrushed and computer-edited to achieve a perfection that is far beyond the reach of the average individual (Kilbourne, 1994; Lakoff & Scherr, 1984).

Although females experience pressure to be physically attractive, it is important to note that males also experience this pressure, especially in recent years. Most studies indicate that males account for roughly ten to twenty-five percent of those with eating disorders (Fairburn & Beglin, 1990). In addition, researchers and clinicians have noted with concern the growing number of males who are impacted by cultural expectations to be attractive (Carlat, Camango, & Herzog, 1997; O'Dea & Abraham, 2002). Males are increasingly becoming fraught with the same anxieties over body image as women, as evidenced by a recent rise in eating disorders in males, as well as steroid use to become more muscular and thus attractive. There has even been a disproportionate increase in the number of men who are seeking to alter their appearance through cosmetic surgery (Patzer, 2006). While the emphasis is still greater for females to be beautiful, males have not been completely shielded from the impact that the media and culture place on physical attractiveness. Thus, it is expected that both adolescent females' *and* males' physical attractiveness will impact relationship outcomes.

Integrating Evolutionary, Feminist, and Social Psychology Theories

All of these theories have merit on their own and add important explanations for the role that physical attractiveness plays in romantic relationships. However, each of these different theories only plays a part in explaining behavior. Evolutionary theory typically places emphasis on "nature" or biology in influencing human behavior. In contrast, feminist psychology places emphasis on "nurture," or the strong role that society plays in shaping our behavior. Social psychology, on the other hand, more often seeks to explain and describe the process of our behavior rather than highlighting the cause.

Human behavior is exceedingly complex and can rarely be explained solely by "nature" or "nurture" alone. It is likely that both "nature" and "nurture" help to explain the importance of physical attractiveness in romantic relationships. One study in particular highlights this idea very well: Buss, Shackelford, Kirkpatrick, and Larsen (2001) examined generational changes in men and women's mate preferences over a period of fifty years. Beginning in 1939, male and female undergraduates were asked to rate 18 different characteristics, such as good looks, financial prospects, sociability, education, and intelligence, for their value in a potential marriage partner. Data was collected in 1939, 1956, 1967, 1977, 1984, and 1996. At each time point, what remained constant was a significant gender difference for the value of physical attractiveness in a mate. Males consistently placed a higher value on good looks than females. This finding, which has not only been demonstrated over time but across cultures, gives evidence for "nature's" influence on our mate preferences. However, interestingly, the value that *both* males and females placed on physical attractiveness of a marriage partner climbed steadily over time (Buss et al., 2001). Buss and his colleagues attributed this historical change to the extent to

which our culture has been flooded with new technologies that bring us more and more images of highly attractive people. Whereas in the 1930s, the primary mode of public communication was the radio, we now are inundated with visual media such as television and the internet. This highlights that "nurture" or culture plays a powerful role in our mate selection and relationships as well.

What this illustrates is that biology is the foundation that explains general patterns in our behavior across culture and over time. However, the environment has its role as well, and can either inhibit or exaggerate our natural impulses. Feminist psychology argues that our modern media diet which consists of many images of beautiful people influences us in a few ways. First, there is evidence to suggest that for some, seeing highly attractive individuals on TV, on the internet, and in magazines results in a higher desire for unrealistically attractive partners (Hargreaves & Tiggemann, 2003; Harrison & Cantor, 1997). Second, seeing these images also leads us to be more self-critical of our own appearance when we feel we do not "measure up" to such unrealistic standards (see Groesz, Levine, & Murnen, 2002 for review). Social psychology has its own value in helping us to understand the process of our own behavior, such as mate selection. In particular, it gives important information about how we weigh the costs and benefits of what our partners bring to the table. In an appearance-obsessed society, physical attractiveness may get weighted more heavily in this cost-benefit analysis.

Research Questions

The goal of the current study is to examine the role that physical attractiveness plays in adolescent romantic couples. We know very little about the impact that physical attractiveness has in these relationships, particularly with younger adolescents. Almost exclusively, relevant

research has only included college students, and most studies have not included information from both partners in a relationship. Specifically, this study seeks to explore how physical attractiveness in adolescent dating *couples* impacts self-reported aspects of the relationships, such as relationship satisfaction, and also on more objective measures, such as relationship longevity. In addition, this study will examine how physical attractiveness impacts process factors in the relationship, such as communication and power dynamics. To this end, three specific questions will be explored in this study.

1.) *Is partner physical attractiveness associated with relationship satisfaction? Are there gender differences or developmental differences?* It is hypothesized that adolescents whose dating partner is greater or equal in physical attractiveness to themselves will have higher relationship satisfaction. First, it has been shown that the more physically attractive one's partner is, the higher relationship satisfaction one will have (Peterson & Miller, 1980). This effect is expected for both males and females, but there may be a gender difference in that the effect may be stronger for males. It has been shown that males, in particular, benefit when their partner is highly physically attractive (Unger, 1979), and this may result in higher satisfaction with the relationship. Second, according to the matching hypothesis, couple members who are matched on physical attractiveness also will have higher relationship satisfaction (Zajonc et al., 1987). Also, when examining associations between physical attractiveness and relationship satisfaction, there may be a stronger effect for younger couples, as younger adolescents tend to be more obsessed with appearances.

2.) *Do adolescent couples who are well "matched" according to physical attractiveness remain together longer than those who are not?* Some researchers (Cavior & Boblett, 1972) have suggested that it is less important for less committed (i.e., dating) couples to be matched than it is for more committed couples (e.g., married). Thus, it could be that it is relatively unimportant for adolescent couples to be matched on physical attractiveness. It could also be that this becomes more important in older couples as these couples are typically more committed in general (Montgomery, 2005). Developmental differences will be explored, and commitment will be explored as a possible mediator.

3.) *Does the couple member who is higher in physical attractiveness have more power in the relationship?* This hypothesis is based on resource theory (Huston, 1983) and the "principle of least interest" (Waller & Hill, 1951), reviewed earlier. While this question has been explored with late adolescent couples (i.e. college students) and answered in the affirmative, both measures of physical attractiveness and power in the relationship were self-report measures. In the current study, the measures for physical attractiveness and power dynamics are rated by outside observers. There may be important new information that can be gained by using this more objective approach.

CHAPTER II

METHOD

Participants

This study was a part of the Study of Tennessee Adolescent Romantic Relationships (STARR) project. Participants were recruited from a previous study of 2201 adolescents from seventeen high schools in east Tennessee that represented rural, suburban, and urban communities. Two age groups were recruited for participation: middle adolescent couples, with both partners between the ages of 14 and 17, and late adolescent couples, with both partners between the ages of 17 and 21. Adolescents meeting the age criteria and who were dating someone for four weeks or more were invited to participate in a longer study concerning their relationship, with the mean length of relationship at 31.3 weeks (approximately eight months). The final sample for the STARR project included 102 middle adolescent couples and 107 late adolescent couples. A few couples were excluded from the analyses because of missing data, and the sample for this study included 205 dating couples, 99 middle adolescent couples (14-17) and 106 late adolescent couples (17-21). The majority of the sample is Caucasian (90.6%), with the remainder of the sample identifying as African American (6.2%), Asian (1.2%), Hispanic (.7%), Native American (.5%), and Other (.7%). Almost half of the sample reported they lived in a suburban neighborhood (46.7%), followed by those who lived in rural areas (31.6%) and urban areas (20.8%). Parental education level (the highest level of education completed by either parent) was used to gauge socioeconomic status. More than half (55%) of the sample reported that neither parent had a college degree, while slightly less than half (45%) of the sample reported having a parent with a college degree or higher. More specifically, the break-down for

highest education level completed by either parent was: some high school (4.3%), high school graduate (24.6%), technical school or some college (26.1%), college (29.9%), or graduate school (14.9%).

Procedure

Couples who agreed to participate came to the University of Tennessee for approximately three hours of data collection (Time 1). Couple members filled out questionnaires in separate rooms and were assured confidentiality. In addition to self-report data, interaction data was collected from the couples. Participants were each reimbursed $30 for their time ($60 per couple) and were provided with food and beverages during the session. In addition, participants were asked to provide the name and contact information of a same sex friend. This friend was then contacted and offered $10 for filling out a 15 minute questionnaire about their friend who participated in the project. Data was collected from the close friend of both partners for 162 of the couples (77.5% of couples).

Individual couple members were contacted approximately 1 year following their laboratory participation (M = 1.23 years), to complete a follow-up survey (Time 2). Participants were mailed an informed consent form for themselves and a parent for the participants under 18, a packet of questionnaires, and a self-addressed stamped envelope. Participants were also given the option to complete follow-up questionnaires through a secure email server. Individuals were paid $15 for completing the follow-up survey, and a total of 359 individual couple members participated (85.9% of original sample). Participants were contacted again a little less than 2 years after Time 2 (m = 1.88 years). In this third wave of data collection (Time 3), participants were called on the telephone and a brief questionnaire was administered in order to obtain

information about relationship status. A total of 364 individual couple members (87.1% of original sample) participated at Time 3.

Measures

Demographics

A demographics questionnaire was administered to obtain information about participants' age, race, gender, residence, relationship length (measured in weeks), and parents' education level.

Relationship Length

When participants came into the laboratory at Time 1, they were asked how long they had been dating their current partner, in number of weeks. Participants were provided with a conversion chart from years and months to weeks in order to make this task easier. Because couple members' reports of how long they had been dating were sometimes discrepant, partners' reports were averaged.

Relationship Status

Relationship status was assessed at Time 2 and Time 3 by asking each participant if they were still dating their original STARR partner. In cases in which partners disagreed about relationship status, couples were classified as not dating.

Relationship Satisfaction

Participants' overall satisfaction with their current romantic relationship was measured using Levesque's (1993) 5-item Relationship Satisfaction Scale. It was developed as a modification to Spanier's (1976) Dyadic Adjustment Scale. The measure is on a 6-point Likert-type scale from 1 (strongly disagree) to 6 (strongly agree). Sample items include statements such

as “In general, I am satisfied with my relationship” and “Our relationship has met my best expectations”. The scores of the five items were summed in order to calculate a total relationship satisfaction score, which could range from as low as 5 to as high as 30. The internal reliability for this scale was good ($\alpha = 0.84$).

Other aspects of participants’ relationship satisfaction were measured using various subscales from Levesque’s Relationship Experiences Scale (Levesque, 1993). These subscales measure a variety of relationship experiences, including togetherness, possessiveness, communication, passion, emotional support, painfulness, and commitment. Each relationship experience is divided into two domains—the extent to which participants feel they give the experience to their partner (giving emotional support, for example) and how much they feel they are getting this from their partner (such as receiving emotional support). Each “giving” and “getting” subscale has three items. The only exception is “getting commitment,” which has four items. Like the overall relationship satisfaction subscale, the three items were summed in order to calculate a total score for each relationship experience. The internal reliabilities for these subscales were acceptable (togetherness: $\alpha = .79$; possessiveness: $\alpha = .70$; communication: $\alpha = .72$; passion: $\alpha = .87$; emotional support: $\alpha = .77$; painfulness: $\alpha = .81$; commitment: $\alpha = .81$).

Power Dynamics

Participants’ power dynamics were measured through the coded interactions. The couples participated in an interaction session consisting of three recorded conversations (Capaldi & Crosby, 1997). First, the couple members were asked to plan a party for five minutes as a warm-up task to allow the couple to become more comfortable with the situation. In the second and third conversations (each of which lasted 8 minutes and 40 seconds), couples discussed issues of disagreement previously selected independently by each partner from the Adolescent

Couples' Issues Checklist. The Adolescent Couples' Issues Checklist (Welsh, Grello, Dickson, & Harper, 2001) includes 21 common issues of disagreement between adolescent couple members as well as an option to write issues not on the list. The measure was modified for this project from the Partners' Issues Checklist (Capaldi & Wilson,1992) to improve clarity and to include regionally relevant issues. The second and third conversations were counterbalanced for whether the couple discussed the male or female issue first.

Three trained graduate students viewed and coded the middle 6 minutes and 40 seconds of the two conflictual issues conversations twice (a total of 13 minutes, 20 seconds rated for each viewing). In the first viewing, coders rated one of the couple members on seven different dimensions, and in the second viewing they rated the other member on the same dimensions for each 20-second segment. These dimensions were as follows: connection, conflict, sarcasm, persuading, giving in, uncomfortable and frustrated. Coders used as many behavioral cues as possible, such as sighs, eye rolling, tone of voice, and body language.

All couples' interactions were micro-analytically coded on the seven dimensions, two of which tap into power dynamics of the couple. The "persuading" code is thought to be a measure of dominance and control in the relationship, such that if one couple member is consistently persuading the other successfully, they are seen as having power in the relationship. It is important to note, however, that the attempts at persuasion are only successful as long as the other member "gives in". Examples of "giving in" include minimizing one's own point of view, changing one's behavior or point of view for the other partner, or allowing the partner to interrupt and control the conversation (see the Appendix C for the coding manual).

The ratings for the "persuading" and "giving in" codes were determined by the content and process of the conversation. One partner trying to convince the other that his/her point of

view is correct (determined by content) would be coded as persuading. Other indications, such as interrupting one's partner to make a point, were also coded as persuading behavior. Such tactics have been examined in marital interactions and interrupting has been viewed as a dominating gesture (West & Zimmerman, 1977). The coders spent 12 months (3 hours per week) training and obtaining adequate levels of inter-rater reliability. Intra-class correlation coefficients for the aggregated mean ratings of males' behavior were .77 for persuading and .72 for giving in. For females, intra-class correlation coefficients for the aggregated mean rating of behavior were .86 for persuading and .70 for giving in.

Sequential analysis was conducted to determine if physical attractiveness is related to power dynamics in the interactions of the couple. First, ratings of persuading and giving in for each segment of conversation were recoded as dichotomous data. Next, conditional probabilities were computed regarding the power of each member during the interaction. Individuals' power was computed as the occurrence of the individual persuading followed by the partner giving in, either in concurrent or subsequent segments. These conditional probabilities were transformed into z-scores using the formula presented by Allison and Liker (1982).

Physical Attractiveness

Participants' physical attractiveness was rated by eight undergraduate coders (four females and four males). Undergraduates (as opposed to graduate coders) were specifically selected because they were closer in age to the participants and thus better judges of physical attractiveness for this age group. The average age of the coders was twenty-one and they were all psychology research assistants. Coders viewed 10 seconds of an interaction and rated each couple member's overall physical attractiveness on a Likert-scale from 1 to 7, with 7 being "extremely physically attractive" and 1 being "extremely physically unattractive". Because

physical attractiveness can be seen as a gestalt phenomenon, this approach allowed coders to take into account the whole individual in rating attractiveness, including facial and body attractiveness, vocal attractiveness, and even general grooming (Patzer, 2006). Participant physical attractiveness scores were calculated as the average of the eight coders' ratings. This method has been used in many studies examining physical attractiveness (e.g., Feingold, 1992b; Zimmer-Gembeck, Siebenbruner, & Collins, 2004). Inter-rater reliability was excellent; the intra-class correlation coefficient was .90. This reflects what other researchers have demonstrated about the measurement of physical attractiveness—that there is high agreement among judges rating this construct, even across cultures (Feingold, 1992a; Langlois, et al., 2000; Patzer, 2006).

Partner physical attractiveness was simply the average participants' partners' physical attractiveness score as rated by the same coders. *Relative physical attractiveness* was assessed by using a discrepancy score (participant physical attractiveness minus partner physical attractiveness). Thus, positive scores indicate that the participant is the more attractive member of the couple and negative scores indicate that the participant is the less attractive member of the couple.

Finally, couples' *matching* scores were calculated by taking the absolute value of the discrepancy scores. Thus, a score of zero would indicate that both couple members are rated exactly the same in physical attractiveness and higher numbers indicate less matching. Note that this is a couple-level variable and is the same for both couple members.

CHAPTER III

RESULTS

Analytic Strategy

Traditional statistical analysis of data from individual participants necessarily assumes that participants are independent of one another. In data collected from couples, the responses from each partner are *not* independent of one another. For example, it is expected that relationship satisfaction for each partner will be in part influenced by characteristics of the individual *and* by characteristics of the couple. This lack of independence violates the assumption of techniques such as multiple regression and as a result there are artificially inflated error terms (Raudenbush & Bryk, 2002). Multi-level modeling is a technique designed to address this problem.

Hierarchical Linear Modeling (HLM) is a multi-level modeling approach that was used to explore Question 1 (predicting relationship satisfaction) and Question 3 (predicting power) for this project. Both of these questions had individual level outcome variables, in which variable values can be different (but related) for each couple member. As discussed previously, the nature of the data for these questions violates the assumption of independence and therefore HLM is an appropriate technique for these analyses. For these questions, HLM was used to parse variance in relationship characteristics into an individual component and a couple component. HLM analyses provide two types of information. First, it provides an estimate of the component of variance in the outcome measure that can be attributed to individual level differences and to couple level differences. Second, it provides information about the extent to which each variance component can be predicted by factors at that level. All individual and couple factors were centered around the grand mean. All predictor variables were standardized

using z-scores in order to reduce multicollinearity among these factors. Additionally, relationship length was used as a control variable for analyses.

A series of three nested HLM analyses were conducted to examine the association between predictors (physical attractiveness, gender, age, etc.) and outcome variables (relationship satisfaction and power). First, a base model (Model 1) was used to calculate the proportion of variance in both relationship satisfaction and power attributable to differences between couples and to individuals within couples. This model included only the outcome variable. Therefore, the variance attributed to individual and couple components derived from the base model was not dependent on the specific individual and couple predictor variables included in the study. Because random error cannot be a shared couple characteristic, it was allocated to the individual component. In Model 2, differences in the relationship satisfaction and power of each partner within the couple were predicted from physical attractiveness variables, gender, and age. Finally, in Model 3, interaction terms were entered into the equation: gender by physical attractiveness and age by physical attractiveness. No statistically significant interactions were found between age and physical attractiveness, and these variables were removed from the final models. Gender was a significant moderator of the associations between relative physical attractiveness and power. Results are reported in Table A-4. HLM parameter estimates are interpreted similarly to regression coefficients (*B*'s), with between and within couple's factors predicting each relationship characteristic at that level.

For Question 2 (predicting relationship length and status), which involves a couple level predictor variable (the extent to which couples "match" on physical attractiveness) and a couple level outcome variable (relationship length and status), more traditional statistical analyses were conducted. In this case, the couple itself is the unit of analysis, and each couple is independent

of every other couple. Thus, the assumption of independence is not violated in this case. Linear regression was conducted to test the association between couples' matching and relationship length at Time 1, and logistic regression was used to predict relationship status at Time 2 and 3 from couples' matching.

Descriptive Statistics

Participant physical attractiveness and partner physical attractiveness were highly correlated ($r = .584$, $p < .001$, $n = 205$). In other words, couple members in this sample were highly similar or "matched" to each other in terms of physical attractiveness. The mean rating for females' physical attractiveness was 4.16 and the mean rating for males' physical attractiveness was 3.77, although this was not a statistically significant difference. In line with this finding, the female was the more attractive member in 62% of couples ($n = 127$). The male was more attractive in 31% of the couples ($n = 64$) and 7% of the couples were exactly equal in attractiveness ($n = 14$). Note that the differences in physical attractiveness between couple members were usually small, with couple members in 77% of couples ($n = 158$) being within one point (on a 7-point Likert scale) of each other.

When looking at overall relationship satisfaction, couple members were largely satisfied with their relationships. The mean score of overall relationship satisfaction was 26.24 (ranging from 10 to 30). Even though most couples reported high overall relationship satisfaction, many couple members also admitted that there were negative aspects of their relationships as well. The participants' mean rating for their own possessiveness was 9.57 (ranging from 2 to 18) and the mean rating of partner's possessiveness was 12.87 (ranging from 3 to 18). The mean score for experiencing emotional painfulness in the relationship was 8.95 (ranging from 1 to 18) and

the mean rating of one's partner experiencing emotional painfulness was 10.14 (ranging from 3 to 18). The subscale for commitment indicated quite a range for this component. The mean for feeling committed to one's partner was 15.63 (ranging from 4 to 18).

Power was measured in the interactions by the extent to which the participants were persuading followed by their partner giving in. The mean number of times that females displayed this power pattern in the interactions was 10 (ranging from 0 to 30). The mean number of times that males displayed the power pattern in the interactions was 9.62 (ranging from 0 to 29). Couple members' power scores were highly correlated ($r = .572$, $p < .001$, $n = 205$). Thus, if one member displayed a high frequency of the power pattern in the interaction, it is likely that their partner did so as well.

Question 1: Predicting Relationship Satisfaction

Base model estimates revealed that 43% of the variance in couple members' overall relationship satisfaction was attributable to differences between couples and 57% of the variance was attributable to individual differences within the couple plus error. Physical attractiveness was not associated with overall relationship satisfaction. However, physical attractiveness was significantly associated with two relationship satisfaction subscales—possessiveness and painfulness.

Base model estimates revealed that 21% of the variance in couple members' ratings of their *own* possessiveness in the relationship was attributable to differences between couples and 79% of the variance was attributable to individual differences plus error. Participants whose partners were rated high in physical attractiveness (that is, absolute partner PA) were more likely to be possessive of their partners, $t(407) = 3.06$, $p < .01$. Also, participants who were less

attractive than their partners (relative PA) were also more likely to be possessive of their partners, $t(407) = -2.35$, $p < .05$.

Base model estimates revealed that 15% of the variance in couple members' ratings of their *partner's* possessiveness was attributable to differences between couples and 85% of the variance was attributable to individual differences plus error. Participants who were rated higher in physical attractiveness (absolute participant PA) were more likely to view their partner as being highly possessive, $t(406) = 2.07$, $p < .05$. Partner physical attractiveness and relative physical attractiveness were not significantly related to partner possessiveness.

Base model estimates revealed that 42% of the variance in couple members' *own* experience of emotional painfulness in the relationship was attributable to differences between couples and 58% of the variance was attributable to individual differences plus error. Physically attractive participants (absolute participant PA) were more likely to feel emotionally hurt by their partner, $t(407) = 2.24$, $p < .05$. Also, participants with highly attractive partners (absolute partner PA) were more likely to feel emotionally hurt as well, $t(407) = 2.32$, $p < .05$.

Base model estimates revealed that 40% of the variance in couple members' rating of their *partner* experiencing emotional painfulness in the relationship was attributable to differences between couples and 60% of the variance was attributable to individual differences plus error. Participants with highly attractive partners (absolute partner PA) were more likely to feel that they caused their partner emotional pain, $t(406) = 3.68$, $p < .001$. Similarly, participants who were the less attractive member of the couple (relative PA) also had higher ratings for partner's emotional painfulness, $t(406) = -3.09$, $p < .01$. Neither gender nor age predicted any of the relationship satisfaction variables ($p > .05$). There were no significant interactions.

Question 2: Predicting Relationship Length and Status

Couples' matching on physical attractiveness was not significantly associated with relationship length at Time 1. Couples' matching was also not significantly associated with relationship status (together or broken up) at Times 2 or 3.

Question 3: Predicting Power

Base model estimates revealed that 57% of the variance in couple members' power was attributable to differences between couples and 43% of the variance was attributable to individual differences within the couple plus error. There were no significant main effects for age, gender, participant physical attractiveness, partner physical attractiveness, or relative physical attractiveness. However, there was one significant interaction between gender and relative physical attractiveness, $t(405) = 2.72$, $p < .001$. Females who were the more attractive couple member displayed more power in the interactions, compared with females who were the less attractive couple member. Interestingly, the effect was the opposite for males, such that males who were the *less* attractive couple member displayed *more* power in the interactions, compared with males who were the more attractive couple member (see Figure B-1 for direction of slopes).

CHAPTER IV

DISCUSSION

In contrast to many other studies that show that high physical attractiveness leads to good outcomes such as higher relationship satisfaction**,** this was not found in the current study. Instead, perhaps the most startling finding from this study was that physical attractiveness led to *negative* relationship experiences. This demonstrates the need to more carefully examine the assumption that beauty automatically leads to benefits for attractive people and their partners. Also, this highlights the importance of examining physical attractiveness more closely in adolescence, particularly using samples which include early and middle adolescents. There may be a unique process that takes place for adolescent couples, in which physical attractiveness is more detrimental than it is beneficial.

Relative physical attractiveness, moderated by gender, also influenced the nature of couples' communication patterns. Many studies simply examine the absolute level of participants' physical attractiveness, thus missing out on important information to be gleaned from comparing the partners on this trait, as well. Also, many researchers continue to examine *individual* participants and their mate preferences for physical attractiveness. While this research has added much to the literature on physical attractiveness, studying couples and their behavior is an ideal way to examine how attractiveness impacts actual relationships.

Predicting Relationship Satisfaction

Overall relationship satisfaction was unrelated to participant physical attractiveness, partner physical attractiveness, or relative physical attractiveness. Indeed, none of the positive relationship experience components of relationship satisfaction, such as commitment, passion,

supportiveness, or togetherness, were related to physical attractiveness. Physical attractiveness only significantly predicted the negative relationship experiences—possessiveness (or jealousy) and painfulness. This gives us important insight into the role of physical attractiveness in adolescence. It may be that in adolescence, physical attractiveness is a double-edged sword. It is likely to be beneficial for initially attracting partners, but those partners may be more likely to become possessive or jealous in the relationship. Perhaps this possessiveness promotes negative behaviors on the part of jealous partners, which can lead to emotional painfulness in the relationship, as well.

Of note is that this sample is comprised of middle and late adolescents, unlike most studies which solely focus on late adolescents (college students). It is likely that many of the participants in this study are relatively new to negotiating the complex landscape of romantic relationships. Thus, possessiveness may be more likely to surface in a way that it does not later on in adult relationships. Weisfeld and Woodward (2003) explain such adolescent jealousy from an evolutionary psychology perspective. They explain that at this stage in development, when fertility is at its peak, jealousy serves the purpose of mate-guarding. Adolescent jealousy is likely accompanied by behaviors such as watching one's partner for signs of infidelity, attempting to control the partner's behavior, and acting aggressively towards others who try to lure one's partner away. Of course, these kinds of behavior are also likely to cause emotional painfulness for both partners in the relationship.

Blending social exchange theory in the context of development may illuminate why there is more jealousy and pain associated with physical attractiveness in these adolescent relationships. First, although no developmental differences were found in this study, it is still important to note the developmental stage of the participants. Possessiveness may play a bigger

role at this age than later on, especially when these relationships are generally not life-long affairs. It is likely that adolescents high in physical attractiveness (and those who are more attractive than their partners) more frequently weigh the benefits and costs of being in their current relationships and have many attractive alternatives to choose from. In turn, partners who are less attractive probably pick up on this and become more possessive as a result.

In the current study, individual factors accounted for more variance in overall relationship satisfaction, although there was a good portion (43%) that was accounted for by differences between couples. Becoming jealous was almost completely related to individual factors, with 79% of the variance being attributable to individual differences plus error**.** This is somewhat surprising given recent findings that personality traits were unrelated to romantic jealousy (Wade & Walsh, 2008)**,** although clearly having a highly attractive partner or having a relatively attractive partner (compared to oneself) is more likely to bring any jealous tendencies out.

Predicting Power

There was only one finding related to the power pattern (participant persuading followed by the partner conceding) in the interactions: gender moderated the effect of relative physical attractiveness on power. Females who were the *more* attractive couple member displayed more instances of persuading followed by their partner giving in, and males who were the *less* attractive couple member also displayed this same power pattern more frequently. This seems confusing and counterintuitive at first, but this finding most likely indicates that there were certain couples in which *both* members engaged in this power pattern during the conversations. In other words, couples in which the female was the more attractive partner (and thus the male

was the less attractive partner) enacted the power pattern more frequently. In a back-and-forth dance of power plays, both members of this kind of couple alternately persuaded and gave in to the other.

When examining power in the interactions, it was expected that there would be individual differences within couples, such that one couple member would consistently persuade followed by their partner giving in. It was expected that this power pattern would be displayed with higher frequency in the couple member with higher physical attractiveness and with lower frequency in the couple member with lower physical attractiveness. However, this study found that power was a largely dyadic pattern displayed more often by certain kinds of couples. Those couples in which the female was the more attractive partner engaged in a more power-oriented conversation than those in which the male was the more attractive partner.

Other researchers (McNulty & Karney, 2002; McNulty, Neff, & Karney, 2008) have found that the behavior of one partner in an interaction often predicts the behavior of the other. In support of the theory that this is a dyadic pattern, the power scores of couple members were significantly correlated. Additionally, variance in power was mostly attributable to differences between couples (57%), which lends increased evidence for the idea that the power pattern was more about characteristics of the couple than of the individual.

Interestingly, our study had findings that differed somewhat from McNulty and colleagues' (2008) findings. In their study with newlyweds, couples in which the female was the more attractive member exhibited more positive behavior and couples in which the male was the more attractive member exhibited more negative behavior. In the present study, it is not clear that this power pattern is either positive or negative. However, higher levels of the power pattern were associated with lower overall relationship satisfaction ($r = -.192$, $p < .001$). This may

indicate that unhappy couples were more likely to engage in this kind of power pattern, or that the power pattern itself lowered relationship satisfaction.

One possible reason for the difference between this study's findings and those of the newlywed study is the type of couples studied. Newlyweds have agreed (theoretically at least) to commit to each other for life, whereas there is no such agreement for adolescent couples. For adolescent dating couples, breaking up eventually is seen as the norm rather than the exception. For those couples in which the female is more attractive, but there is not yet secured commitment through marriage, this dynamic may lead to power struggles, jealousy, and dissatisfaction in the relationship.

In spite of some differences between the present study and the McNulty et al. (2008) study, there was at least one very important similarity: *relative* physical attractiveness was a more powerful predictor of behavior than absolute physical attractiveness. This is an especially striking finding given that this sample was highly "matched." This indicates that even when couple members are fairly close to one another in physical attractiveness, any little difference may impact the nature of the relationship.

Another possible explanation for this finding is that the power pattern is indicative of the resources that couple members have in their relationships. It has been consistently shown that males desire partners with high physical attractiveness and that females have strong preferences for powerful, dominant males. Thus, females who are highly attractive have this trait as a resource in their relationships, which may translate into getting more power. Similarly, males' dominance and status is a resource—which both *is* power and probably translates into having more power in the relationship. Perhaps this finding indicates that dominant, powerful adolescent males are able to attract more physically attractive female partners. Thus, in the

interactions, these dominant males were displaying the dominance that they naturally have. The female partners of these dominant males could "fight back" because they had their own resource that gave them leverage in the relationship—physical attractiveness.

Feminist theory has much to say about stereotypical gender roles and the "scripts" that individuals enact based on societal expectations. The traditional view of females is that they are "nice,"—meaning less powerful and less assertive. On the other hand, many people associate masculinity and males with power and status. Perhaps having a valued trait such as physical attractiveness means that both attractive males and females can throw off these traditional gender roles in their relationships. Females who are more attractive than their partners have more leverage to assert themselves in their relationships. Because they do not have this kind of leverage, females who are less attractive than their partners might compensate by conforming to the expected gender role. Less attractive males are more likely to fit into the stereotypical role of being assertive in order to attract females. It is unclear why males with higher physical attractiveness would demonstrate lower power in the interactions. However, it may be that their partners (females with lower physical attractiveness) are willing to put up with lower dominance because of the "trade off" of being with someone more attractive than themselves. Cunningham and Russell (2004) showed that some women were willing to trade willingness to commit (which women typically value) for high physical attractiveness in their partners.

Predicting Relationship Length and Status

In this study, similarity to one's partner in physical attractiveness was unrelated to relationship length or staying together over time. Adolescence is a turbulent time for romantic relationships—most relationships from this period do not transform into more permanent

relationships such as marriage. There are many changes in adolescents' lives that may lead to break-up, such as moving away, going to college, or realizing that one wants to experiment with dating different partners before "sealing the deal" with a marriage partner. Thus, matching on physical attractiveness at this stage of development may be relatively unimportant for predicting relationship longevity, compared with later relationships. It could also be that *perceptions* of physical attractiveness are more important than objective physical attractiveness.

Notably, couples in this sample were highly matched. Seventy-five percent of the couples were within one point of each other on the physical attractiveness scale. This challenges the idea that only adult committed or married couples are matched in terms of physical attractiveness.

Limitations and Future Directions

While this study adds significantly to the research examining physical attractiveness in adolescent romantic relationships, there are a few limitations that must be mentioned. First, the nature of the sample is such that generalizability is limited in a few ways. Participants were predominantly Caucasian adolescents who lived in the region in and around Knoxville, Tennessee, which is a southeastern city in the Bible belt. As such, results from this study may not generalize to adolescents of different racial or ethnic backgrounds, or to adolescents in other geographical locations. Future research should attempt to include racial and geographic diversity.

Additionally, it is important to note that this sample consisted of adolescents who were in heterosexual romantic relationships. Thus, generalizability to same-sex adolescent romantic relationships may be limited. However, there is reason to believe that physical appearance is

influential in these relationships, as well. In a study which mirrored Walster and colleagues' (1966) initial exploration of physical attractiveness in dating and attraction, 100 gay males were paired among different levels of varying traits, such as physical attractiveness and social assertiveness. As with other studies using male-female pairings, the largest determinant of how much gay males liked their partner was the partner's physical attractiveness (Sergios & Cody, 1985). In spite of these similarities, future research should examine how physical attractiveness influences same-sex romantic relationships, especially exploring how this variable might be different for gay male and lesbian couples.

Also, it is important to note that this study did not make a priori hypotheses about predicted associations between negative relationship experiences (possessiveness and emotional painfulness) and physical attractiveness. Thus, the findings regarding possessiveness and painfulness must be interpreted cautiously and replication is needed to support these findings.

A few important questions came out of this study that are worthy of being explored. For example, more could be done to examine how possessiveness or jealousy interacts with physical attractiveness. Do adolescents who have highly attractive partners automatically become more jealous, or are their partners (because they have more alternatives) behaving in such a way that elicits this jealousy? Is jealousy more specific to the developmental stage of adolescence, or individual personality traits that remain relatively stable over time? Also, in couples in which the female is more attractive, what does it mean that these relationships are more power-oriented? Do these power plays represent negative relationship behavior, as correlations with relationship satisfaction would seem to suggest? Does this pattern of communication change as adolescents mature and enter into securely committed relationships such as marriage?

Murstein (1972) discussed the process of how individuals select romantic partners and highlighted that physical attractiveness often is important in the initial stages of mate selection. This is the first thing people see, quite literally, and if a potential partner is deemed to be not attractive enough, they may be struck from consideration before getting to know the person's other qualities. Townsend and Wasserman (1998) similarly discuss establishing a "threshold" pool of potential partners based on physical attractiveness. That is, there may be a select pool of potential partners based on attractiveness, ranging from those who are acceptable to those who are ideal based on this trait. After this threshold is established, an individual can then search for other desirable qualities such as sociability, intelligence, sense of humor, and so forth.

A good illustration of physical attractiveness as selection criteria comes from the relatively recent phenomenon of internet dating websites. On these websites, such as Match.com and eHarmony, users can post online "profiles" with their pictures and information about themselves. A recent Australian study (Couch & Liamputtong, 2008) found physical attractiveness (as judged by posted photos) was one of the most important pieces of information in the initial selection of potential partners.

This study highlights the importance of examining relative physical attractiveness in addition to examining absolute levels of physical attractiveness. In order to do this, researchers must continue to study physical attractiveness of *both* couple members within the context of romantic relationships. Only in this way can we begin to unravel the complexities of this construct on relationship outcomes and behavior.

While physical attractiveness appears to be extremely important in initial attraction and mate selection, attractiveness alone does not keep otherwise unsuitable partners together. There are many other important qualities that individuals look for in a romantic partner and which

translate into satisfying relationships. Indeed, in the present study physical attractiveness did not predict positive outcomes as expected, but instead was related to negative relationship experiences! In a study examining mate preferences in 37 different cultures, Buss (1989) found that kindness, along with physical attractiveness, was a trait rated as highly important in romantic partners across all cultures. A pretty face may reel someone in, but it is other qualities which keep partners invested long-term. Future research should examine how traits such as kindness, intelligence, humor, dominance, and sociability interact with physical attractiveness to influence mate selection and maintenance of relationships, both in adolescence and into adulthood.

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APPENDICES

APPENDIX A: TABLES

Table A-1

HLM Analyses Predicting Aspects of Relationship Satisfaction
From Physical Attractiveness (PA)

Outcome Variables	Absolute Participant PA Coefficient (SE)	Absolute Partner PA Coefficient (SE)	Relative PA Coefficient (SE)
Overall Relationship Satisfaction	-0.04(0.21)	-0.02(.021)	-0.01(0.15)
Own Possessiveness	0.18(0.19)	0.59(0.19)**	-0.38(0.16)*
Partner Possessiveness	0.36(0.17)*	0.27(0.17)	0.06(0.15)
Own Experience of Emotional Painfulness	0.45(0.20)*	0.47(0.20)*	-0.02(0.16)
Partner Experience of Emotional Painfulness	0.26(0.26)	0.75(0.20)***	-0.50(0.16)**
Own Commitment	0.05(0.14)	0.02(0.15)	0.03(0.15)
Partner Commitment	0.04(0.21)	0.17(0.21)	-0.13(0.21)

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$

Controlling for length of relationship

Table A-2

Linear Regression Predicting Relationship Length at Time 1
From Couple's Matching on Physical Attractiveness

	Matching		
	B	β	R^2
Relationship Length	1.73	0.02	0.04

* = p ≤ .05, ** = p ≤ .01, *** = p ≤ .001

Controlling for commitment

Table A-3

Logistic Regression Predicting Relationship Status
at Time 2 & Time 3
From Couple's Matching on Physical Attractiveness

	Matching		
Relationship Status	*B*	*SE B*	e^B
Status at Time 2	-0.21	0.24	0.81
Status at Time 3	0.26	0.42	1.29

* = p ≤ .05, ** = p ≤ .01, *** = p ≤ .001

Controlling for commitment

Table A-4

HLM Analyses Predicting Power Pattern
(Participant Persuading Followed by Partner Giving In)
From Physical Attractiveness (PA) and Gender

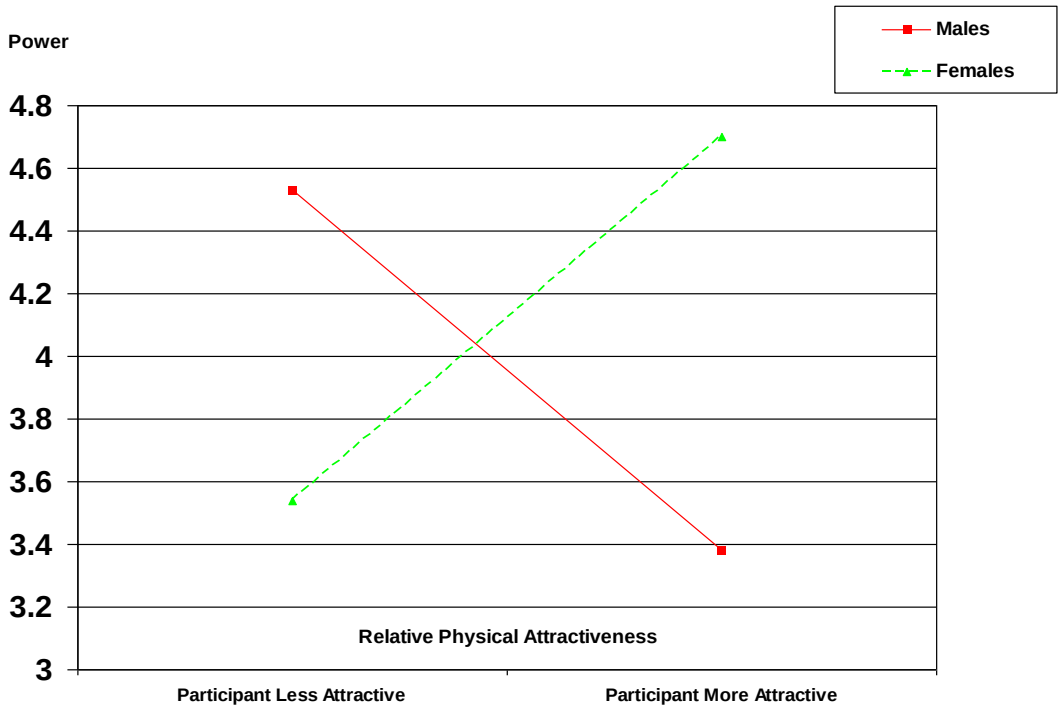
Physical Attractiveness	Power Coefficient(SE)
Gender	0.17(0.23)
Participant PA	-0.21(0.16)
Partner PA	-0.15(0.16)
PA Discrepancy	-0.09(0.12)
Gender X PA Discrepancy Interaction	1.79(0.54)***

* = $p \leq .05$, ** = $p \leq .01$, *** = $p \leq .001$

APPENDIX B: FIGURE

Figure B-1

Power and Gender by Relative Physical Attractiveness Interaction



APPENDIX C: CODING MANUAL

PERSUADING

******* Score based on quality of verbalizations and voice tone. Persuading is not coded once you find out that both partners share the same view. If you do not know the partner's it is coded.
QUALITIES MEASURED: influencing, convincing, coaxing.

SCORE

0 Code 0 if individual does not attempt to persuade during the segment.

1 **a) tone**: mild **content:** explanation
Relating own perspective or opinion in a matter of fact manner.
Eg., *I think we both are competitive.*

2 **a) tone:** mild/medium **content**: imploring
Asking other to see own view-point in a mild or medium imploring tone.
Repeating ones view point more than once OR trying to interrupt partner in order to make a point.
Eg., *Don't you see what I mean?*
b) tone: mild/medium **content:** comparative/competitive clarification
Directly comparing own perspective to that of the other in an attempt to establish superiority of own perspective. Supplying evidence for own position through examples or self-disclosure.
Eg., *Three kids? I was thinking four or five would be better?*

3 **a) tone:** medium **content:** convincing/lecturing
More emphatic attempt to make the other agree with own perspective. (finger pointing)
E.g., *You call me names so that's why I call you names.*
b) tone: medium **content:** commanding/ordering
Directly ordering the other to perform a task or take a position.
E.g., *You hold the card and read the questions; I'll do the talking.*
c) tone: medium content: imploring
Asking partner to be in similar situation. Role-playing.
E.g., *"How would you feel if I went over to Stephanie's party and slept in her bed?"*

4 **a) tone:** high **content:** demanding
Demanding that other agree with own perspective in an intense, emotional tone.
E.g., *Just listen to me. You have to understand what I'm saying.* I'm never going to believe you.
b) tone: high **content:** pleading
Begging or pleading with other to accept own point of view in a high emotional tone.
E.g., *Please, can you just agree with me for once.*
c) Threatening or giving an ultimatum for agreement

GIVING IN

******* Score based on quality of verbalizations and voice tone.
QUALITIES MEASURED: perspective taking; surrendering, giving in

*The code for giving in is unique in that it is somewhat dependent on the behavior of the partner. There must be an opinion or position that the individual is being persuaded to (i.e., the partner is trying to persuade). Also there is the assumption that the two partners are starting with different opinions and the ratee is moving towards agreement with the partner. If both participants start with the same position, support is the more likely code.

SCORE

0 Code 0 if individual is not giving in or taking the other's perspective at all during the segment.

1 **a) tone**: neutral/mild positive **content**: somewhat surrendering
Not full acceptance of other's view.
E.g., *Yes, but what about the ….*

2 **a) tone:** mild positive **content**: acknowledging; backing off
Unsuccessful attempt to interrupt partner and argue against partner's point of view. Allowing partner to successfully interrupt and continue with their point of view while abandoning their own.
E.g., *That is n…*
b) Minimizing ones point
Yeah, this is my issue but its not a big deal.

3 **a) tone:** neutral/negative **content:** acknowledging; affirming
Somewhat genuine acknowledgment of the other's perspective with a surrendering or conceding quality. Continuously allowing partner to successfully interrupt while abandoning their own point of view.
E.g., *Yeah-I guess I can see that.*

4 **a) tone**: negative **content:** surrendering
Surrendering completely or changing ones behavior for their partner, or apologizing.
E.g., *Alright-whatever you say.*
b) tone: none **content:** surrendering/withdrawing
Have opportunity to respond to partner's point but remains silent or ignoring partner's conflictual comments

VITA

Rebecca Furr Webb was born in Chapel Hill, North Carolina on September 23, 1981. She lived with her family in Riyadh, Saudi Arabia from 1985 until 1988, when they moved to Augusta, Georgia. She spent most of her childhood in Augusta, where she attended Warren Road Elementary School and Davidson Fine Arts Magnet School. She began playing the cello in the fourth grade and played competitively throughout middle school and high school. In 1994, her family moved back to Chapel Hill, and she graduated from East Chapel Hill High School in 1999.

She then attended the University of North Carolina at Asheville for her undergraduate studies. During her sophomore year, she completed a semester of study abroad at Chester College in Chester, England. It was during her studies in England, while taking an abnormal psychology course, when Rebecca decided to major in psychology. She graduated magna cum laude from UNC-Asheville in 2003 with distinction in psychology, distinction as a university scholar, and distinction as a university research scholar.

After graduating from college, Rebecca was accepted into the Clinical Psychology doctoral program at the University of Tennessee, and she began her graduate career there in the summer of 2003. She received her Master of Arts degree in August of 2006 while pursuing her doctoral degree. She is currently completing her one year predoctoral internship at the James H. Quillen Veteran Affairs Medical Center in Johnson City, TN. The doctoral degree will be received in August, 2009 following completion of this internship.