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**INFERTILITY INFORMATION MANAGEMENT:  
FACTORS AFFECTING INDIVIDUAL DISCLOSURES AND DISCREPANCIES  
BETWEEN HUSBANDS AND WIVES**

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by

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## ABSTRACT

The overall goal of this dissertation was to understand the processes at work as marital partners attempt to jointly manage private information within their marriage and with respect to their social networks. One theoretical foundation was communication privacy management theory, which discusses the process by which people negotiate privacy boundaries and coordinate information management. The revelation risk model identified factors that contribute to the sharing of sensitive information. Finally, mechanisms specified within the relational turbulence model were used to predict situations in which boundary turbulence might be particularly prominent. Hypotheses specified that stigma (H1), communication efficacy (H2), and perceived closeness (H3) are associated with the amount of disclosure to social network members, and that facets of relational uncertainty (H4) and partner interference (H5) would have a negative association with boundary turbulence between spouses.

To test these hypotheses, a study of married couples coping with infertility was conducted. Using a systematic process, couples selected five social convoy members and partners each reported characteristics of their relationships with those people, as well as details about their infertility-related disclosures to them. Each partner also completed questionnaires about their infertility experience and characteristics of their marriage. In total, 100 individuals (50 husbands and 50 wives) reported on a total of 500 social convoy relationships.

Results from hierarchical linear modeling documented a negative association between facets of stigma and disclosure, as well as positive associations between both communication efficacy and perceived closeness and disclosures to social convoy

members. Furthermore, as predicted, facets of relational uncertainty and partner interference were positively associated with boundary turbulence; which was operationalized as relative discomfort with partner disclosure, individuals' perceptions that their spouses think their disclosures are acceptable, and discrepancies between husbands' and wives' disclosures. This discussion highlights the theoretical advances promoted by considering individual, marital, and social network member characteristics when examining disclosure, and considering how characteristics of the marriage and the social network contribute to boundary turbulence between spouses.

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*A man doesn't plant a tree for himself, he does it for posterity.*  
Alexander Smith

## Chapter 1

Over the lifetime of a marriage, partners encounter numerous changes at both the personal and relational level. These changes might be expected, such as moving into a first house together, or unexpected, as in the case of a couple returning to a parent's house to save money. In either case, coping with change is a necessary component of relationships. In the words of Charles Darwin, "It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change." This dissertation aims to illuminate how married partners respond and adapt to transitions within the internal or external contexts in which their relationship exists.

Transitions are movements from one stage to another (Furstenberg, Rumbaut, & Settersten, 2005). The inherent nature of adapting to transitions involves some level of instability (Walker, 2001). Because previously functional patterns of behavior must be revised to fit new circumstances within personal relationships, transitions also create the potential for role disruption (Berger & Bradac, 1982). Despite these challenges, transitions can operate in both a positive and negative capacity. If a life change is viewed as positive, such as moving to a bigger house or earning a promotion, then the transition can be perceived as having improved quality of life and relationships. Conversely, if the stressor is an event like the death of a loved one or unemployment, then roles can shift in a way that provokes anxiety and requires unwelcomed readjustment (see Kaufman & Uhlenberg, 1998).

When a transition occurs, each spouse must individually navigate through changes they encounter (George, 1993), and they also have to consider the partner's role and response to the transition. For example, spouses may welcome the transition to

parenthood and look forward to having their first child together. Throughout their adjustment to becoming parents, each spouse may encounter a personal transition as he or she adjusts from an independent and self-focused individual to a person who is responsible for the care of an infant. In addition, the couple is forced to adjust to a marital dynamic that features a child within what was previously a relationship between two partners. Thus, transitions spark what Burlison (2005) called a “doubly developmental” process: individuals within relationships undergo change, while the relationship itself evolves. The disruption of roles and responsibilities exists both personally and dyadically within the marriage.

Transitions are further embedded within and impacted by their social context (Tomlinson, 1996). Social networks have the ability to influence perceptions and expectations of change. For example, family and friends shape perceptions of relationship ideology (e.g., Felmler, 2001) by influencing how couples think they should segregate their marital responsibilities (Bott, 1957) or decide on family size (see Felmler, 2001). The dynamic interplay between partners in a marriage and their social networks also allows a marital transition to reverberate throughout the network. For example, transitions alter peoples’ expectations and perceptions of their social network (Kahn & Antonucci, 1980). In addition, people may desire more or less interaction with their network members as they navigate change in their marital relationship (Felmler, 2001). Viewed in this way, transitions might best be conceived as “triple developmental” because the changes unfolding within individuals and marital relationships also interface with social networks in consequential ways.

The overall goal of this dissertation is to understand the processes at work as marital partners attempt to simultaneously manage transitions within their marriage and with respect to their social networks. Although a variety of transitions occur within marriages, this project focuses on the experience of infertility as a relationship transforming experience. Infertility affects 1 in 6 couples in the United States, and its discovery forces spouses to confront potentially altered future family goals. Moreover, the process of treating infertility can quickly overwhelm marriages, with many couples seeking counseling for both individual and relational issues (Griel, 1991). In the following section, I examine how family, friends, and acquaintances affect well-being, both in general and with respect to romantic relationships (e.g., Knobloch & Donovan-Kicken, 2006; Sprecher & Felmlee, 1992). Then, I describe infertility as the marital transition that is the focus of this dissertation.

### Social Networks and Well-Being

As noted by Felmlee “No couple is an island” (2001, p. 1283). In fact, couples are embedded within a social structure that has the potential to provide both positive and negative support throughout the lifespan. These structures, known as social networks, have the capability to alter an individual’s role within a couple, to affect how a couple interacts, and to influence the decisions a couple makes (see Felmlee, 2001). Prior research has examined how social network members’ opinions of a romantic relationship remain stable or fluctuate over time (Sprecher & Felmlee, 1992) and demonstrated that network support corresponds with relational quality (Felmlee & Sprecher, 2000). More recent research has focused on understanding how qualities of romantic relationships might influence how partners’ perceive their social networks (Knobloch & Donovan-

Kicken, 2006). In this section, I introduce the idea of a support convoy, a subset of a person's entire social network. Then, I discuss how the interplay of romantic relationships and support convoys can influence personal and marital well-being.

### *Support Convoys*

Kahn and Antonucci (1980) suggested that within a social network exists a smaller structure, called a support convoy, whose members have an especially strong impact on an individual's well-being. The notion of a convoy captures both how this network travels through life with a person and how its members are available to provide support when needed (Kahn & Antonucci, 1980). Because a support convoy is the part of a social network most likely to interface with married partners during a relationship transition, the following paragraphs define the structure of support convoys and discuss how support convoys develop and are maintained over time.

An individual's social network is comprised of people assuming many roles in his or her life, but a support convoy is reserved for those individuals who play a social support role, rather than a role that lacks the capacity for social support (e.g., a bus driver). In other words, membership in a person's convoy is restricted to those individuals who are salient in terms of social support, and it is not privy to those people who simply function within a person's social world (Kahn & Antonucci, 1980). Many individuals nominate between 14 and 23 people as members of their convoy, all of whom they consider to play a significant role in their lives (Wellman, 1990). Convoy membership commonly includes close family members, work colleagues, and neighbors. People have a tendency to organize these relationships hierarchically based on closeness, and those closest to them have the greatest impact on their well-being.

Convoys develop and change across the lifespan, as a function of the social roles people fill. People manage a variety of roles throughout their life (e.g., child, friend, parent, spouse), and these roles carry with them expectations for interpersonal behaviors. Convoy membership is often initiated by expectations related to social positions, because a connection is forged between people while they are performing roles that bring them together. The supportive capacity of each person may either be constrained to that role (e.g., a teacher who only provides academic support), or supportive functions can permeate the boundaries of the original role and extend into other contexts (e.g., a work associate offering support for marital distress).

According to Kahn and Antonucci (1980), the people who provide social support to an individual are hierarchically distributed across three levels of closeness within the convoy. The group representing the least amount of support is often comprised of those individuals who are not close to a person, and who are providing support that is constrained to their role (e.g., colleagues, neighbors). Membership in this group is often not stable, as correspondence with this person may be easily dissolved (e.g., reorganization of the office or moving neighborhoods). The second group consists of people who are closer to the individual and relationships that transcend social roles. In other words, if the role was changed or terminated for some reason, the support relationship has the potential to persevere. An example of this type of convoy member might be a former running partner who, although he or she no longer works out with a person, still provides support over weekly dinners or phone calls. The final group consists of the intimate others in an individual's life. These members not only provide the most support, but they are the most influential. Often comprised of a spouse and select family

members (Antonucci, 2001), these individuals usually maintain stable membership not because of their role, but because they continuously offer quality support (Kahn & Antonucci, 1980).

Because transitions involve a degree of disorganization within previously functional systems, they can create distress. During transitions, intimate members of the support convoy are called upon to help manage stress. As romantic partners experience the disruptions of roles that coincide with transitions, their close relationships contribute to reshaping the roles and goals of romantic partners (Felmlee, 2001). As a result, the intimate members of a person's convoy can contribute a great deal to the experience and outcome of a transition. The following section further examines how the support convoy, embedded within the larger social network, contributes to well-being.

#### *Social Networks and Relationships*

A large body of evidence connects network support with well-being. The availability of network members, particularly friends, has been found to contribute to both marital satisfaction and personal well-being (Willits & Crider, 1986). Lewis and Spanier (1979) reported that a feeling of belonging contributes to higher self-concept, which is associated with marital quality. Other empirical evidence offers further support for the notion that people's perceptions of network support predicts a variety of relationship components, including stability, satisfaction, and commitment (see Felmlee, 2001).

Social networks can exert considerable influence on perceptions of a growing romantic partnership. In a two-year longitudinal study of dating partners, Sprecher and Felmlee (1992) found that network support for a romantic relationship was positively

related to relationship quality both cross-sectionally and across time. Furthermore, Felmlee and Sprecher (2000) reported that individuals in dating relationships perceived an increased amount of approval and encouragement from their own and their partner's family and friends as the relationship progressed. Results from this program of research suggest that network support likely influences perceptions of romantic partnerships, and that network approval for a relationship might change as the relationship matures.

Qualities of relationships exert a reciprocal effect on partners' perceptions of their social network. Knobloch and Donovan-Kicken (2006) explored how characteristics of a dating relationship might impact the judgments those partners make about their social network. Results showed that courtships at low levels of intimacy, interference, and facilitation, and high levels of relational uncertainty reported high levels of perceived helpfulness from their social networks. Those courtships at moderate levels of intimacy, partner facilitation, and relational uncertainty reported the highest amount of interference from partners and perceived hindrance from network members. Finally, couples at a high level of intimacy and facilitation, and low levels of relational uncertainty and partner interference, perceived high levels of helpfulness from their social networks. In sum, people in courtships perceive their social networks differently depending on characteristics of their relationships.

Close friends outside the marriage may be especially beneficial to marriages. For example, Birditt and Antonucci (2007) found that people who report having a best friend and at least one other high quality relationship (spouse or friendship) demonstrated the highest level of general well-being. Amato, Booth, Johnson, and Rogers (2007) examined the relationship between friendship and marital quality and found that people with a large



number of friends reported being happier with their marriages, engaged in less conflict with spouses, perceived fewer problems with their spouses, and were less divorce prone than individuals reporting only a few friends.

Friends outside the marriage are most beneficial when they do not eclipse the marital relationship. For example, Lee (1988) reported that marital satisfaction in older couples was the greatest for those individuals who confided the most in their spouse, whereas those people who primarily revealed to someone other than their partner experienced below average marital satisfaction. Similarly, Julien and Markman (1991) found that younger individuals who confided in their friends about marital problems reported more marital distress than those who revealed their concerns directly to their spouse. Taken together, results suggest that confiding in multiple intimates is beneficial to a person in general, provided that the spouse is the prominent confidant when it comes to concerns related to the marriage.

This section offered insight into how marital partnerships color and are colored by the social network in which a couple exists. To review, individuals are embedded in social networks with people who have varying levels of influence over them that corresponds with their level of membership in their support convoy. Spouses, family members, and friends have the capacity to change roles, influence interactions, and affect decisions (see Felmler, 2001), and their ability to modify behaviors likely transforms across the lifespan. Social networks have the capacity to influence not just general well-being, but the quality and satisfaction of marital partnerships. Within a marriage, people not only have to negotiate the presence of their own network, but they also have to consider the peripheral effects of their spouse's social network as well. The following

section draws upon this understanding of social networks to identify a suitable context for testing how marriages manage their social networks during transitions.

### Infertility as a Marital Transition

The societal norm for a young romantic relationship is generally to date, marry, and then have children. In addition to perceiving parenthood as a relational stage, many people consider having a baby to be a welcomed and positive turning point in their relationship (Baxter & Bullis, 1986). External to the marriage, couples may be coping with pressure to produce grandchildren, to join their friends in activities related to parenting, or to reveal to network members their baby plans. Accordingly, a couple's inability to have children, known as infertility, can directly influence how they perceive their roles and relationships (see Griel, 1991), both within the marriage and within their social network. In this section, I describe the medical, psychological, and relational aspects of infertility.

### *Infertility as a Medical Experience*

Approximately 15% of couples, or 4.3 of the 28 million married couples in the United States, encounter difficulty conceiving at some point in their relational lifespan (Chandra, Martinez, Mosher, Abma, & Jones, 2005). Infertility is medically defined as being unable to conceive after 12 months of unprotected intercourse; however, many researchers also consider the inability to carry a baby to term as experiences of infertility (e.g., Griel, 1991). The section discusses the medical, financial, and psychological stressors associated with a reproductive disability.

Demographic trends suggest that recent cohorts are delaying marriage and childbearing later than past generations (Schneider & Forthofer, 2005). This trend toward

later marriages brings with it increased health concerns. Once a woman reaches the age of 30, her chance of giving birth decreases 3-5% per year – and those odds decrease much more rapidly once she turns 40 years old (Borad, 2008). These numbers are even more daunting given that the chance of miscarriage also increases with age: a woman in her 20s has a 12-15% chance of miscarriage, whereas women in their 40s face a 50% miscarriage rate. In addition to any personal or societal pressures women may feel to reproduce quickly, women in their late 30s and 40s have the added pressure of expiring biological opportunities.

There are also a variety of health conditions that can contribute to infertility. The number of sexually transmitted diseases that have been linked to infertility is on the rise (Center for Disease Control and Prevention, 2007). Infertility is also caused by radiation, especially in men, which can contribute to reduced sperm count and poor sperm quality. In women, endometriosis and thyroid disorders are major causes of infertility. In addition, chemotherapy, radiation, and surgeries for treating cancer can simultaneously cause premature menopause, destroy ovaries, or force the removal of reproductive organs all together. Other diseases, such as lupus and autoimmune disorders (e.g., rheumatoid arthritis), can also cause fertility problems. Couples who experience these serious health issues not only have to cope with treatments and their aftermath, but they may also be faced with diminished chances of having biological children.

Medical aspects of infertility also encompass efforts to treat the condition. The majority of infertile couples (i.e., 50-70%) seek some form of medical treatment in their quest to become biological parents (Schmidt, 2006). Some of the initial medical treatments for infertility take the form of medication or corrective surgeries; these

treatments account for almost 90% of all infertility services (see American Society for Reproductive Medicine, 2009). If fertility drugs and corrective surgeries do not improve the situation, couples are often referred to an infertility specialist, otherwise known as a reproductive endocrinologist (Peterson, Gold, & Feingold, 2007). Reproductive endocrinologists are able to utilize a variety of assisted reproductive technologies (ARTs) to help couples achieve a successful pregnancy. As reported in Peterson et al. (2007), even with a successful conception, these procedures often result in pregnancies that are subject to miscarriage, low birth rate, and preterm labor (see Shevell, Malone, Vidaver, Porter, Luthy, & Comstock, 2005). In addition, couples must consider issues such as multiple births and the imminent dangers associated with triplets, quadruplets, and quintuplets; these babies have significantly higher risks of suffering birth defects or being stillborn, and the mortality rate within the first year is 12 times higher for multiple birth babies than for single birth babies (Carter, 1999). Parents faced with the potential of multiple births are often offered the option of multifetal pregnancy reduction (MPR), which selectively terminates fetuses in hopes of increasing the chance of normal development for the remaining babies (Covington, 2006). This decision is often extremely difficult for parents and some may not even consider this option due to personal convictions or religious beliefs (Peterson et al., 2007). As this brief review makes clear, treating infertility is laden with challenges.

The financial cost of medical treatments is another source of stress for infertile couples. ART procedures are timely, expensive, and often not covered by insurance in the United States (Center for Disease Control and Prevention, 2007). Some insurance companies will cover diagnostic testing only, and others will limit the number of

treatments included under their plan. Out of pocket, procedures range from \$400 - \$20,500 per cycle, and many couples find they need more than one ART attempt before becoming pregnant (Center for Disease Control and Prevention, 2007). Specifically, initial treatments such as hormone inducing drugs (e.g., Clomid) can range from \$50 to \$1200 per cycle. More advanced treatment, such as intrauterine insemination, can range from \$345 to \$1,765 per cycle. In vitro fertilization, one of the most advanced ART procedures, starts at about \$6,190. Costs are even higher for those procedures involving donor eggs or sperm. The high cost of infertility treatment often results in couples postponing or foregoing being able to try the more advanced and expensive procedures.

To review, the medical aspects of infertility include disruptions in daily routine, difficult ethical decisions, and financial constraints. These practical consequences of infertility often result in experiences of personal and marital strain as couples negotiate their own and their partner's treatment preferences. Psychological aspects of reproductive disabilities are the focus of the following section.

### *Infertility as a Psychological Experience*

The psychological implications of infertility are considerable. Infertility is often linked to hopelessness, powerlessness, and inadequacy – all characteristics associated with depression (Peterson et al., 2007). Depression tends to peak around the third year after diagnosis (Domar, Clapp, Slawsby, Kessel, & Freizinger, 2000), and it seems to fluctuate depending on treatment options and outcomes. Another prevalent issue is the anxiety that infertile individuals experience about their disability and the eventual outcome. Not only do infertile men and women report higher levels of anxiety than their fertile counterparts (Fassino, Piero, Boggio, Piccioni, & Garzaro, 2002), but the presence

of high anxiety in men and women utilizing ARTs has been linked to treatment failure (Smeenk, Verhaak, Eugster, van Minnen, Zeilhuis, & Braat, 2001).

The psychological costs experienced by infertile women are noteworthy. Wirtberg, Moller, Hogstrom, Tronstad, and Lalos (2007) found that infertile women trying to conceive often feel inferior to other women, experience social isolation, and lack self-esteem. Infertile women also report depression, anxiety, anger, and feelings of guilt (Schmidt, 2006). Daniluk (1997) asserted that women may contend with these emotions because they feel their inability to conceive directly and negatively reflects on their identity and self-image, and women blame themselves or their past behaviors for their infertility. Even in cases where the source of the infertility is undetermined, women are more likely than men to blame the problem on themselves (Robinson & Stewart, 1996). Overall, failure to fill the role of motherhood, especially with societal expectations or external pressures, creates great emotional distress (Peterson et al., 2007).

Relative to women, men are more likely to frame infertility as a setback or an obstacle, but not a tragedy (Griel, 1991). Nonetheless, men experiencing infertility identify shame, guilt, anger, isolation, loss, personal failure, and low self-esteem as some of the negative emotions they contend with (Wright, Allard, Lecours, & Sabourin, 1989). In addition, Schmidt (2006) found that men with a non-pregnant wife experience higher levels of depressive symptoms and lower levels of sexual and relational satisfaction than those men with a pregnant wife. Daniluk (1997) also reported that infertile men attach more negative attributes to themselves, such as being useless or defective, and male infertility has also been correlated with high levels of anxiety (Glover, Gannon, Sheer, & Abel, 1996). In general, men's inability to control their reproductive situation often

leaves them with feelings of hopelessness and fears of losing their partner (Daniluk, 1997).

Men and women may mentally frame the experience of infertility differently, but their psychological responses are often similarly negative. Symptoms of depression and anxiety are not uncommon during this stressor, especially when treatment is chronically unsuccessful. The following section discusses how these aspects of infertility have the potential to contaminate a marriage.

### *Infertility as a Marital Transition*

Reproductive disabilities require couples to adjust their family goals. These adjustments entail partners' efforts to align both their mundane and goal-oriented behaviors to support their new reproductive plan. As spouses make these adjustments, they may experience some difficulties in their efforts to coordinate behaviors. The following paragraphs illuminate issues that confront infertile couples, as well as discuss their relational implications.

One major source of tension is the need to make decisions about infertility treatment. Spouses may experience conflict about whether to undergo medical treatment, which options to try, and for how long (Epstein & Rosenberg, 1997). When couples do attempt to treat their infertility, they can be overwhelmed by disruptions to their work schedules, social networks, and daily routines. Regardless of the intensity of the procedures, treatment has the potential to compromise the normalcy of the relationship. In a qualitative theme analysis of discourse posted online by people coping with infertility, Steuber and Solomon (2008) found that the goal of facilitating a successful pregnancy often becomes an obsession for one or both individuals in the partnership. The

study concluded that the process of treatment (e.g., keeping medical appointments and performing prescribed sexual activities) can quickly overwhelm marriages, and many individuals experience frustration when their partners focus too much or too little on overcoming infertility.

The stresses of managing the mundane details of infertility can also affect emotional aspects of relationships. The Steuber and Solomon (2008) study described previously found that some people felt invalidated by their partner's approach to the treatment process. For example, some individuals felt that their spouse was allowing infertility to take precedent over the normalcy of the marriage. Other individuals believed that their partner did not dedicate themselves enough to their goal of a biological child. In either case, individuals felt that their partner's priorities were out of order.

Steuber and Solomon (2008) also observed that blame is a prominent relational issue that confronts couples experiencing infertility. In that study, blame was especially prominent for individuals who had been coping with infertility for an extended period of time. That study also showed a tendency toward self-blame among individuals who were diagnosed as the cause of the reproductive disability, and a pattern of projecting blame onto partners who were seen as insufficiently active in their pursuit of a baby. Moreover, issues related to blame were associated with feelings of uncertainty about the relationship itself and doubts about the spouse's perception of relational events.

This section explicated the experience of infertility by discussing the medical, psychological, and relational problems the reproductive disability can evoke within a couple's life. Managing these stressors may force couples to reconsider and prioritize their goals, which can lead to changes in relationships and social roles. Although the



couple navigates many of these experiences within the confines of their relationship, their decisions and perceptions are informed by the environment in which they exist. Thus, infertility provides a context for illuminating the “triple developmental” aspect of transitions, as individuals, couples, and support convoys are all affected by this life-changing experience.

#### Focus of this Dissertation

This chapter defined transitions and positioned them as a consequential phase in marriages. I also highlighted the relevance of social networks to marital well-being. Finally, I identified infertility as a transformative event within marriage. This chapter opened by suggesting that adaptation is a necessary part of survival. Although Darwin was writing about biological organisms, his words apply to marital relationships as well. In fact, I suggested that the transitions married partners experience in their life together spark “triple developmental” processes, wherein individuals change in response to changed circumstances, partners transform their relationships to adjust to an altered environment, and social networks are modified by the changes that occur to both people and dyads. The general goal of this dissertation is to examine how married partners interface with each other and their social networks as they experience periods of change in the circumstances of their relationship.

One context that presents changes at both the marital and social network level is the experience of infertility. Reproductive disabilities force partners to revisit their family goals, make difficult decisions about treatment, and cope with the inherent uncertainty of their fate as biological or adoptive parents. Infertility also presents an element of uncertainty within social networks, as family and friends struggle to adjust their own

desires and behaviors in ways that support their infertile loved one. Consequently, the experience of infertility is a representation of the complexities associated with adapting to circumstances while simultaneously managing relationships.

This dissertation is implicitly grounded in the wealth of research on marriage, which primarily focuses on understanding marital well-being. To locate this investigation with respect to that body of work, the following chapter reviews perspectives on marriage.

## Chapter 2

As detailed in the preceding chapter, this dissertation examines the experience of infertility in marriage as a transformative event that has ramifications for individuals, marriages, and social networks. Because infertility inevitably emerges within mateship relationships, this investigation is informed by the wealth of research on marriage. In particular, a variety of epistemological lenses have been used to understand the rise and fall of marital well-being. Thus, as a foundation for this project, this chapter reviews the large body of research on this topic. The chapter begins with a discussion of the sociological contributions to understanding marital well-being, followed by sections addressing the psychological, communicative, and lifespan perspectives on marriage. This discussion highlights the myriad of factors that act upon partners who enter into a marital relationship.

### Sociological Contributions to Research on Marital Quality

Research emerging from the sociological perspective highlights demographic shifts in attitudes and behaviors towards family structure. The benefit of research stemming from this approach lies in its illustration of society's influence on marital well-being by documenting the community infrastructure that supports or dissuades general behaviors relevant to marriage. In other words, if individuals are situated within a family form that is considered normal in society, they often benefit from the acceptance and functional support that comes along with that norm. Specific to marriage and well-being, Amato and colleagues (2007) reported that the latter part of the 20<sup>th</sup> century brought with it a variety of demographic, social, economic, and cultural alterations in the U.S. population, and these changes had the capacity to positively or negatively impact the

institution of marriage. In this section, I discuss sociological trends that have influenced experiences within marriage.

### *Delay of Marriage*

One prominent behavioral shift in the United States is the delay in marriage (Amato et al., 2007). The 1998 U.S. Census Bureau showed that the average age to marry in 1990 was 24 for women and 26 for men – a 2 year increase from 10 years prior. Postponing marriage has been found to influence a plethora of family formation behaviors, such as cohabitation and fertility (see Arnett, 2000), but it also has been directly linked to quality of marriage.

This trend toward delayed marriage has the capacity to influence marital well-being in a variety of ways. First, this delay lengthens the period of time young adults have to settle into their adult roles and stable relationships (Arnett, 2000). In addition, individuals who postpone their nuptials have more time to explore suitable partners, may develop greater financial resources, and have more time to develop psychologically than their counterparts who marry at younger ages (Amato et al., 2007). Postponing marriage, then, gives individuals the opportunity to develop more as an adult and prepare for the responsibilities and changes that correspond with marriage. Empirical research also found that there are higher frequencies of marital problems (Amato & Rogers, 1997) and higher divorce rates in those couples who marry young (Bumpass, Martin, & Sweet, 1991).

### *Ideological Shifts*

Another shift in marriage within U.S. society is a recent conversion towards more egalitarian roles and attitudes about marriage. Although a topic of debate, some scholars believe these changes in ideology improve the quality of marriage (Coltrane, 1996).

Three decades ago, Scanzoni (1978) argued that egalitarianism is an essential foundation for emotional closeness between spouses because it helps spouses reach mutually acceptable solutions. In addition, it might help families adjust to the simultaneous economic shift of more women in the workplace. More recently, Oppenheimer (1997) asserted that egalitarian, or sharing, models are better equipped to respond to problems (e.g., unemployment, recession, disability) than a model based on a strict division of roles tied to gender.

Despite the logic supporting the benefits of an egalitarian perspective on marriage, empirical evidence suggests that marital satisfaction might be greater within non-egalitarian marriages. In fact, Amato and Booth (1995) found that wives who adopted less traditional gender attitudes reported less satisfaction within their marriages than those who use a traditional approach. This dissatisfaction might be partially due to the comfort each spouse has about non-traditional marriages. In particular, because women have embraced nontraditional views more quickly than men, spouses may have conflicting expectations when women hold non-traditional gender attitudes (Thorton & Young-Demarco, 2001).

This brief review illustrates how sociologists provide an important perspective on the study of marital well-being, by highlighting the effects of demographic trends and pressures that emerge from the societal infrastructure. In documenting the behaviors and expectations individuals have about the institution of marriage, scholars are able to link societal level changes with dyadic level behaviors. These insights remind researchers that the couple exists within a greater society, and that society can contribute to perceptions and behaviors within a marriage in a variety of ways.

## Psychological Contributions to Research on Marital Quality

The social psychological perspective differs from the sociological perspective in that it attends to the cognitions and affects that occur within the marital system.

Psychologists acknowledge the cognitive aspects and affective experiences that color marital quality, and they conceptualize the marital unit as a dynamic dyadic system. From Heider's (1958) early work on attributions to Gottman's (1994a) introduction of balance theory of marriage, the field of psychology has contributed greatly to our understanding of marital well-being. The following paragraphs highlight these contributions in greater detail.

### *Attributions*

In his seminal work on the psychology of interpersonal relationships, Heider (1958) argued that people use attributions to reconcile their global and specific perceptions of people. Furthermore, Heider suggested that behavioral judgments are influenced by the unique way people integrate their universal and particular impressions of others. Since Heider's work, researchers have empirically supported the assumption that attributions influence partners' evaluations of their relationships.

In the context of marriage, attributions reference the cognitive judgments that people make about their spouse's behaviors. A majority of the research examines whether the cause of the behavior is perceived as consistent (stable / unstable), generalizable (global / specific), and controllable (partner / external) (Bradbury & Fincham, 1990). The attributions that partners make about each other's behaviors have been tied to the level of distress within a marriage (see Bradbury & Fincham). Specifically, couples reporting distress in their marriage are likely to make attributions that minimize their spouse's

positive behaviors and intensify their negative behaviors (Bradbury & Fincham). Even more, couples who make negative cognitive judgments about their partners report more difficulty in maintaining marital quality during stress (McNulty & Karney, 2001).

### *Negative Reciprocity*

According to Fincham (2003), one pattern a marital couple may exhibit is negative reciprocity. Gottman (1998) asserts that once a couple begins using negative behaviors in a patterned format, it is extremely difficult to escape that cycle because distressed couples often respond to negative affect in a reciprocal manner. Specifically, when an interaction becomes frustrating for one spouse, he or she may attempt to repair that negative interaction by engaging in some type of metacommunication about the relationship. In response to that repair attempt, distressed couples often reciprocate with a comment that is perceived as equally negative and, simultaneously, acts as a catalyst towards reciprocated negativity.

When partners begin to feel a disproportionate amount of negative affect, such as feelings of sadness, disgust, or resentment, their behavioral patterns increasingly begin to consciously and subconsciously represent those emotions (Gottman, 1994b). According to the pattern identified and empirically supported by Gottman's research, the presence of frequent criticism is the first major sign of feelings of negative affect within a partnership. Criticism is using blame to attack the character rather than the behavior of someone (Gottman, 1994b). The reason that this behavior is so much more destructive than just complaining, which is a statement of some negativity, is that criticism attacks a global characteristic or behavior rather than an isolated act. Couples can quickly descend from a criticism phase of destructive conflict to into contempt. Contempt introduces the

intention to emotionally demoralize a partner and is the basis for invalidating communication (Gottman, 1994b). Contemptuous behaviors, such as insults or mockery, attack a partner's sense of self and cause the escalation of negative emotion.

When one partner feels as though he or she has been personally attacked, he or she feels the need to defend. Defensiveness, however, only escalates the argument and comes in the form of excuse making, denying responsibility, and cross-complaining (meeting one complaint immediately with another complaint). Defensiveness, although not usually intended to sabotage a relationship, is one of the most destructive conflict behaviors because it creates a competitive environment rather than the feeling of a partnership (Gottman, 1994b).

Finally, stonewalling is a conversational behavior one uses in an attempt to isolate himself or herself from the interaction (Gottman, 1994b). Stonewallers psychologically remove themselves from the conversation. Although stonewalling on occasion is somewhat functional (as it can be used to calm tempers, sort ideas, etc.), more serious problems arise when it becomes habitual and follows the three previous destructive behaviors. Gottman (1994b) suggested that the reason this behavioral sequence may be so deadly to a marriage is not necessarily the initial negativity, but rather the cycle of negativity that continues thereafter. Negative messages interfere with the hostile couple's communication and turns into a form of mutual psychological abuse. The negativity prevalent in distressed couples who embark on a cycle of criticism, contempt, defensiveness, and stonewalling is so strong that couples often consider termination of their relationship (Gottman, 1994b).



### *Affect*

According to Gottman (1994a), many important aspects of marital interaction are embedded in the assessment of affect. Negative affect, such as feelings of anger or disgust, may appear through such behavioral patterns as complaining or criticizing (Christensen & Heavey, 1990; Fincham, 2003). Conversely, feelings of positive affect, such as happiness, pride, or love, may be displayed by validating or showing interest in partners. Empirical research on marriage suggests that these cognitions often manifest in observable behavioral patterns between spouses. The patterns that couples employ not only remain stable over time (e.g., Noller, Feeney, Bonnell, & Callan, 1994), but they often correlate with marital well-being (e.g., Gottman, 1994b; Karney & Bradbury, 1995). The following paragraphs discuss how emotions evolve into behaviors during marital interaction, and how those actions color the quality of a marriage.

People demonstrate a variety of behaviors when interfacing with their spouses, and how those actions are perceived can have considerable consequences for a partner's view of the marriage. Representations of positive affect include affection, the ability to laugh together, and the interest partners demonstrate toward each other (Gottman, 1994b). Positive affect patterns are often characterized by warmth, interest in the dyadic interaction, and displays of genuine concern (Shapiro & Gottman, 2004). Positive interactions develop from displays of affection, shared humor, and expressions of joy. In fact, a clear indicator of positive affect is a validation of spouse's feelings or actions (Gottman, 1994ba, 1994b; Shapiro & Gottman, 2004).

On the other hand, negative affect is usually marked by actively directing negative communication towards a partner or by passively retaining signs of interest or care for each other. More specifically, manifestations of negative affect range from attacking a partner's actions to showing a marked increase in hopelessness or grief (Shapiro & Gottman, 2004). Other negative affects include fear, disgust, or sadness that become apparent through whining, defensiveness, belligerence, and domineering during conflict episodes (see Gottman, 1994b). When performed in isolation, these behaviors may only temporarily impact the status of a relationship. The problem lies in the fact that these actions are often accompanied by patterns of similar behaviors which, together, contain potentially fatal elements for a marriage.

Although negative reciprocity leads to dire results within a marriage, that type of behavior should not be confused with mundane marital conflict. Despite its negative connotation, conflict can contribute to the well-being of a dyad if carried out constructively. In fact, couples who avoid conflict altogether often report lower levels of satisfaction than those that are comfortable engaging in constructive disagreements (Gottman, 1994b). Indeed, it is not the presence of conflict that threatens the well-being of a couple, it is how the conflict is carried out that determines constructive or destructive outcomes. To capture this point, Gottman introduced the idea of a marital ecology (1994).

The ecology of a marriage is determined by the ratio of positive to negative interactions between spouses. Gottman (1994b) found that the stability of a marriage can be maintained if there are five positive interactions for every one negative interaction. If couples do not stabilize this equilibrium, the marital ecology is disrupted and partners feel frustrated or irritated and begin to quarrel excessively. One of the main reasons that

five positive interactions have to occur for each negative interaction is because negativity can easily become a state that is absorbing and difficult for couples to escape from (Gottman, 1998). When negativity takes over a conflict and the ratio is violated, distress in the relationship becomes apparent and the perception of well-being is lost. The longer the negative episode, the more likely a partner feels personally attacked or out of touch with the other partner. Further, the negative aspects of the relationship start a cascade that includes partners perceiving their relationships as severely dysfunctional and arranging parallel lifestyles rather than ones that intersect (Gottman, 1998).

Couples that can maintain the positive to negative ratio of the marital ecology can handle conflict in a variety of ways (e.g., avoiding, actively engaging, utilizing calm discussions), but most of these couples will engage in behaviors that are validating throughout the interaction. Validation is identified through behaviors such as maintaining eye contact during conversations (Shapiro & Gottman, 2004) and by paraphrasing or completing each other's sentences. When one partner validates another, the message being sent is that, regardless of the topic, they value each other's emotions and opinions (Gottman, 1994b; Holmes & Jarvis, 2003). Expressions of understanding, compliments, and validation present in daily marital interaction and conflict have been found to be linked to positive health benefits (Robles, Shaffer, Malarkey, & Keicolt-Gaiser, 2006) and tend to be positively reciprocated (Gottman, 1994b; Manusov, 2002).

Taken together, this work suggests that mundane conflict is a normative component of marital interaction that has the potential to exert a positive or negative influence on marital well-being. A variety of topics can act as catalysts for conflict, but the behaviors enlisted during the episode can perpetuate or relieve the situation. If

couples manage their behavior in a way that compensates for those natural and occasional negative moments, they can maintain the health of a relationship.

To summarize, the field of psychology has made great contributions to the study of marriage and well-being by considering cognitive judgments, affect, and their manifestations within relationships. By considering dimensions such as attributions, negative reciprocity, and affect, psychologists acknowledge the forces stemming from both the individual and the dyad as a system. Now that some of the contributions of the psychological perspective have been offered, I examine how the field of communication has extended the understanding of behaviors and marital well-being.

#### Communication Contributions to Research on Marital Quality

A communication perspective on marital well-being considers the cognitions and behaviors prevalent within marriages; however, the discipline also emphasizes how communication creates and sustains a relationship. The following paragraphs explain how relational expectations are communicated within relationships and how behaviors are the vehicle for maintaining partnerships.

Relationships are believed to move in a linear fashion and progress through predictable phases (Baxter & Bullis, 1986; Knapp, 1984) and milestones (Siegert & Stamp, 1994). Researchers have argued that relational stages define the trajectory of a relationship, as well as provide guidelines for stage-appropriate behavior between partners (Honeycutt, Cantrill, & Greene, 1989). Sequential patterns to these stages may be expected because every stage offers information for subsequent stages and, if one stage is skipped, a person may miss out on integral relational information. In fact, Knapp (1984) argued that sequential patterns of development help partners negotiate norms,

roles, and power. Partners also encounter milestones, or turning points, that can alter the trajectory or future of a relationship (Baxter & Bullis). Communication scholars use events to assess metacommunication and communication during change, because the way these events are handled can affect the outcome of a partnership (Siegert & Stamp).

Just as norms and turning points are natural components of a marriage, basic maintenance strategies are also embedded within intimate romantic relationships. From a communication perspective, relational maintenance encompasses the ways that individuals keep their intimate relationships intact through the use of communication. These types of interactions contribute to longevity and satisfaction within that relationship. Dainton and Stafford (1993) argued that relational maintenance can exist on two levels of consciousness: (a) strategic relational maintenance consist of behaviors enacted by partners to maintain a relationship consciously and intentionally, and (b) routine relational maintenance, on the other hand, consists of those behaviors stemming from a lower level of consciousness that may be more mundane.

Some studies of relational maintenance focus on equity in relationships, based on the assumption that individuals adopt more maintenance behaviors when they perceive their relationship to be equitable (e.g., Canary & Stafford, 2001). Other researchers have argued that commitment is the component that motivates relational maintenance (Rusbult, Olsen, Davis, & Hannon, 2001), suggesting that there is a positive relationship between relational maintenance and one's devotion to a partnership. Consistent with this view, one study found that some individuals in relationships with a relative suffering from a communication-debilitating illness or injury still made efforts to maintain that relationship, despite the absence of reciprocated benefits (Bute, Donovan-Kicken, &

Martins, 2007). These results suggest that there are other factors that contribute to an individual's evaluation of worthwhile relationships and the intensity of effort they are willing to invest in maintaining them.

Research within the field of communication also indicates that partners tend to display comparable skill levels (Burlison & Denton, 1992) and report similar behaviors used to manage their relationships (Canary & Stafford, 2001). Similarly, in a study assessing commitment indicators, Weigel (2008) found that men and women utilized and perceived similar behaviors when indicating commitment to their relationships.

Interestingly, couples not only utilize similar behaviors in their relationship maintenance behaviors, but how they view themselves also influences the attributions they make about their partners (Murray, Holmes, & Griffen, 1996). In fact, perceiving a partner as being similar to oneself was found to play an integral role in a partner's sense of security and predictability – both of which can create a feeling of understanding in a relationship.

To close, the field of communication highlights how individuals communicate expectations for stages within marriage. In addition, this discipline illuminates how individuals maintain the status of their relationships not just through intense interactions such as conflict, but also when they interface on a daily basis. By considering these more mundane behaviors, communication researchers understand that people define and sustain their partnerships through communication.

#### Life-span Contributions to Research on Marital Quality

The perspectives reviewed to this point together encompass societal, individual, and dyadic level factors that contribute to marital well-being. From a slightly different standpoint, the life-span perspective acknowledges the dynamic nature of relationships

and how past experiences influence perceptions and behaviors within a marriage. Using a life-span lens to examine marriage offers insight into how diversity and growth within a relationship impacts communication. This section defines the life-span framework and then describes how this perspective provides unique insight into understanding marital communication and well-being.

Life-span communication involves the description, explanation, and adjustment of the communication process across the life course (Pecchioni, Wright, & Nussbaum, 2005). Life-span scholars assert that communication influences and is influenced by our social realities (Pecchioni et al., 2005). Therefore, communication between spouses will be fashioned by their past interactions and relational history, and also impact how they negotiate future stressors. This perspective also maintains that influences at both the individual and societal level can affect communication, making it especially important to consider all the factors that can contribute to change. At an individual level, partners may become more acquainted with each other as their marriage progresses. Simultaneously, the pressures from family, friends, and society in general may all contribute to evaluations of the marriage and behaviors within it. Taken together, these factors can contribute to the changes that occur within that particular relationship across time. Thus, a lifespan perspective takes to heart the concept of time within a marriage and how it can manifest in communication between partners.

From a developmental perspective, the length of a relationship can influence marital interaction. Extant literature suggests a non-linear relationship of marital satisfaction with highest satisfaction found among newly married couples and older couples and less satisfaction associated with marriages at midlife (e.g. Glenn, 1990).

Research in general suggests that older marriages exhibit more positive interactions (Carstensen, Graff, Levenson, & Gottman, 1996), more displays of affection (Cartensen, Gottman, & Levenson, 1995), and less potential for conflict and an enhanced focus on pleasure (Levenson, Cartensen, & Gottman, 1993) compared to middle aged-partnerships. Cartensen and colleagues (1996) asserted that an individual's conflict style may fluctuate or change across the life-span as one's motivation to control their immediate emotional environment increases. Findings by Henry, Berg, Smith, and Florsheim (2007) indicated that older adults perceive greater partner positivity and less negativity in their day-to-day encounters with spouses, supporting the notion that older adults may prioritize pleasant interaction over long-term relationship goals.

When thinking about relationships developmentally, research suggests newly married couples and mature couples perceive their marriage and its function differently. According to Sillars and Wilmot (1989), early marriages require empathy, flexibility, supportiveness, and problem-solving, as it is often a time when couples are negotiating their roles within a relationship, adjusting to new responsibilities, increasing interdependence, and establishing family policies. And, whereas early marriages cite romantic love as major reason for people creating the union, later marriages may substitute attachment for love (Troll & Smith, 1976). Consequently, "the relationship is evaluated based on what it has been through, not what it has become" (Sillars & Wilmot, 1989, p. 240).

This perspective suggests that perhaps investment and commitment are higher in more mature marriages, as they have a relational history and a routine that they may not have the energy or desire to change at that point in their lives. Although this idea may be



particularly true for marriages in later life, newlywed couples and more developed marriages (e.g., of a decade or longer) may also experience divergent views on commitment. We know that the amount of interdependence and commitment seems to be at least partially influenced by the stage of a partnership (Canary, Cupach, & Messman, 1995), and the investment model (Rusbult, 1980), asserts that feelings of commitment are influenced by satisfaction level, perceived quality of alternatives, and investment size (Rusbult, Drigatos, & Verette, 1994). To close, the lifespan perspective encourages researchers to consider a variety of contextual, individual, and relational level variables when studying communication within a relationship.

### Conclusion

This chapter highlighted the variety of epistemological lenses that have contributed to the examination of marital well-being. Taken together, the perspectives offer a holistic view of the processes at work as couples continuously negotiate the circumstances of their relationship. From a societal perspective, demographic trends have modified traditional expectations for marriage. Specifically, people are postponing their nuptials and adopting a more egalitarian view of their romantic partnerships. These contextual factors not only influence the dynamic of marriages, but they also alter the environment in which a relationship exists. These sociological factors may impact relational norms and how couples perceive and communicate about their expectations.

Research from the psychological perspective indicates that people make mental judgments about their partner's behaviors, and those attributes in turn influence subsequent actions. Actions are also impacted by expectations, and research stemming from the communication field documents how people rely on relational stages and norms

to guide their behaviors. In turn, the cognitions and behaviors in partnerships contribute to behavioral patterns that impact the well-being of marriages.

Finally, the lifespan perspective endorses viewing a relationship as constantly changing and being changed by characteristics within and around it. By examining the behavior and perceptions inherent in relationships at all ages and levels of maturity, researchers can understand the role of time and experience in marital well-being. This investigation is contextualized by the information provided by these epistemological lenses. The following chapter focuses more specifically on the behavioral processes that occur as couples regulate their private information with respect to their social networks.

### Chapter 3

Infertile couples contend with personal and relational struggles surrounding their reproductive disability. Whereas the core of this stressor resides within the marriage, individuals often turn to their family and friends to help them cope with infertility. An infertility diagnosis can create considerable stress within social networks as the couple balances their desire for both privacy and support. The couple may be concerned with privacy for fear of being judged, ridiculed, or stigmatized. If the couple keeps their news private, their family and friends may be confused by behaviors displayed by the infertile couple, such as social isolation or withdrawal. If the social network does know of the diagnosis, communication may be strained as members strive to identify types of support perceived as helpful. The complexity of the communication issues experienced by infertile couples and their social networks suggest that spouses have difficult decisions to make regarding the dispersion of their infertility-related information, and that those decisions have an impact on the marriage and the overall experience of infertility. To explore these issues, I first turn to communication privacy management theory to understand privacy boundaries, rule coordination, and behaviors. I then drew upon the revelation risk model to identify factors that contribute to the sharing of sensitive information. Finally, I use the mechanisms of the relational turbulence model to predict situations in which coordinating information boundaries may be especially difficult.

#### A Communication Privacy Management Perspective on Infertility Disclosure

Communication privacy management theory (CPM) is a grounded theory focusing on the management of private information (Petronio, 2002). The theory distinguishes itself from previous views on disclosure by conceptualizing the

concealment of private information as in dialectical tension with the disclosure of that information. The need to simultaneously regulate revealing and concealing information forces people to turn to a management system – a system that consists of rule foundations and boundaries. CPM is structured around major principles that address the management of private disclosures, as well as the dyadic issues involved with regulating private information (Petronio & Durham, 2008). The following sections discuss these two sets of assumptions in turn.

### *The Management of Private Disclosures*

The foundation for CPM is the characterization of privacy management as problematic. In other words, the theory assumes that people often struggle with the regulation of their private information. In addition, the theory specifies that the choices people make regarding disclosure are often colored by criteria that correspond with their perceptions of privacy, in general, as well as the specific context for communication. The following paragraphs elaborate on these points.

CPM conceptualizes private information as a possession (Petronio, 2002). This ownership gives people the right to regulate their information as they see fit, making decisions about revealing and concealing it based on personal criteria. This viewpoint extends into the conceptualization of boundaries (Petronio, 2002). CPM uses boundaries as a metaphorical representation of the line between public and private. People erect boundaries around their private information as a way to control who has access to their private information.

CPM also describes the process of regulating private information as dialectical in nature (Petronio, 1991), such that privacy and disclosure are distinct features that

function incompatibly (Petronio, 2002). As people manage their private details, they often face a push and pull friction representing their simultaneous desire to reveal and conceal their information. In this sense, CPM aligns with other perspectives, such as relationship dialectics theory (Baxter & Montgomery, 1996), that emphasize competing motivations to share information and to refrain from disclosure.

The idea that people own their private information, build boundaries around those details, and experience dialectical tension suggests that they need to develop rules to regulate privacy. Privacy rules are the criteria people rely on when making choices about the dissemination of their private information (Petronio, 2002). According to Petronio (2002), people are influenced by five criteria when creating privacy rules. The first, culture, is important because society often endorses a perspective on information management. If the culture defines closedness as a form of politeness, then the reaction from people within that culture will likely be to preserve privacy. Second, gender contributes to the creation of rules. Petronio (2002) argued that women need to feel secure about the target of their disclosure, whereas men need security in the appropriateness of the context in which they disclose. People's motivations to reveal or conceal also play a large role in the creation of privacy rules. If individuals want to protect themselves or others, they may decide to protect the information; if they feel the target of their disclosure has the right or need to know the private details, they may reveal. Finally, the context is an influential factor in the manufacturing of privacy rules. As contexts change, such as when married partners become divorced, boundaries change and rules are renegotiated.

*Dyadic Aspects of Privacy Disclosure*

CPM is inherently dyadic in that it was conceptualized within a communication perspective and the tenets of the theory speak directly to the behaviors involved in information management between people (Petronio & Durham, 2008). According to the theory, both the discloser and recipient of information are principal actors, and the exchange of messages between them is the key phenomenon the theory seeks to explain. The dyadic aspects of CPM are highlighted by the assumptions it makes about shared information.

Petronio (2002) asserted that whether private information is shared with another person is a fundamental feature that defines privacy issues. Some information is inherently co-owned, such as when people go through an experience together and have shared knowledge of that episode. Information can also become co-owned through communication when one person gives information to another. Whether information is co-owned because of shared experiences or disclosure, shared information is no longer the sole property of one person. Through collective experiences and communication, information might be co-owned within a dyad, a family, a peer group, or even an organization. In any context, having shared information requires coordination of boundaries for that information as people manage their privacy.

Boundary linkages refer to unions formed between a discloser and his or her recipients. Linkages can occur intentionally, such as when the information is voluntarily revealed to the recipient, or unintentionally, such as when the private information is overheard by an unplanned recipient. The way linkages are formed influences the perceptions of and control over ownership. Whereas an intended recipient might feel an

obligation to protect the disclosure and his or her private information, an unintended recipient might perceive less responsibility in preserving the privacy.

Petronio (2002) used the term boundary ownership to capture the privileges and responsibilities of the co-owners of private information. In other words, ownership over information entails being privy to that content, but it also means having the task of regulating the dispersion of those details. Petronio (2002) maintained that if the parameters, or rules, surrounding the private information are clear, then co-owners are more likely to manage the information effectively. Conversely, if the parameters are unclear, there is likely to be a breach in the co-management of information. Boundary management runs most smoothly when owners all enact negotiated rules about how to share or protect that information.

Finally, boundary permeability pertains to the amount of access or openness within a boundary. Boundaries become more permeable as access to the private information increases; thinner walls represent more openness and thicker walls contribute to less access. Collective boundaries can be coordinated in three ways. Disproportionate management exists if one person discloses more information than the other. When people have equitable sharing and ownership over the information, each co-owner is equally responsible for the information. Finally, collective boundaries can be managed in a unified fashion. These unified boundaries represent situations in which personal information affects both the group and the individual (Petronio, 2002), and each person is jointly responsible for the information.

Incongruent expectations and misconstrued parameters often result in conflicting privacy management behaviors; when boundary coordination fails, boundary turbulence

often occurs. Petronio (2002) identified several factors that could result in boundary turbulence. First, people could intentionally violate privacy rules and share the information with unintended recipients. Individuals could also mistakenly breach rules and further spread access to private information. Privacy dilemmas, such as when a doctor discovers that a patient is knowingly spreading a disease and has to decide if he or she should intervene, can also lead to conflict over communication boundaries. Finally, people might be unclear about boundaries, and the vagueness could contribute to information leaking unintentionally. The potential for boundary turbulence presents a continuous challenge to individuals as they negotiate private information.

CPM highlights the tensions and challenges involved in deciding whether to disclose information to others, and also the complexities that emerge when people who share information coordinate the disclosure of co-owned information to others. One limitation of CPM, however, is its relative inattention to specifying the conditions under which people will reveal or conceal private information or when co-owners of information will disagree about communication boundaries and violate expectations. To answer these questions, I turn to theories developed to explain information revelation and the experience of turbulence in romantic relationships. Specifically, the subsequent section presents the revelation risk model and deduces hypotheses that specify factors that influence disclosures of infertility information to social network members. Then, I draw upon the relational turbulence model to clarify the relationship qualities likely to increase disagreement about infertility information boundaries and the experience of boundary turbulence.



### Factors Affecting Infertility Information Sharing

The revelation risk model (RRM) asserts that risk directly impacts a person's readiness or willingness to disclose private information or secrets (Afifi & Steuber, 2009). The RRM draws from the several theoretical frameworks to create a holistic model of the major components contributing to a person's decision to reveal a secret. The model posits that the higher the perceived risk to themselves, to others, or to their relationships, the less likely people are to disclose that information; however, if people perceive the risk associated with the revelation to be low, they will be more inclined to share their private information. In addition, people are more willing to reveal their secrets for catharsis, if they feel the target has the right or need to know the information, and if they are being encouraged to reveal the secret. RRM further specifies that, when the risks are minimal, people should experience high confidence in their ability to communicate their secret. Finally, because people perceive fewer risks associated with disclosing to close relationship partners, the theory specifies that the closer people are to the target of the disclosure, the more likely they are to reveal their information (Vangelisti & Caughlin, 1997). The paragraphs that follow examine constructs of RRM, namely risk, communication efficacy, and perceived closeness, as they apply to the dyadic context of marriage and infertility.

#### *Risk*

RRM asserts that risk is a central component in information regulation. Decisions to reveal or conceal secrets are often impacted by issues related to protection and risk (Afifi, Afifi, Morse, & Hamrick, 2008; Caughlin, Afifi, Carpenter-Theune, & Miller, 2005; Petronio, 2002). In making information regulation decisions, people consider risk

in three areas: (a) risk to the self, (b) risk to the relationship, and (c) risk to other people. Risk to self is associated with self-protection, which entails concealing information to avoid judgment, harm, ridicule, or embarrassment (Afifi & Guerrero, 2000). Expectations for negative self-exposure may stem from reactions to previous revelations (see Afifi, Olsen, & Armstrong, 2005). Relationship risk focuses on the restriction of privacy boundaries in an effort to preserve a relationship by preventing it from harm or keeping a cohesive bond intact (Afifi & Burgoon, 1998; Afifi & Schrodt, 2003). The final risk, risk to others, emerges when people perceive that other people would be hurt if the information was divulged. The risk is associated with concern about directly hurting the target of the secret or having a negative, peripheral impact on them or others.

Because reproductive issues are inherently private, individuals who are experiencing infertility may be inclined to withhold information, perhaps to shield themselves and their partners from ridicule or gossip. Van Balen, Trimbos-Kemper, and Verdurmen (1996) reported that spouses may be inclined to protect each other from the stigma related to infertility, especially pertaining to male-factor infertility. This motivation to protect may stem from the idea that men perceive infertility to be more socially acceptable for women than men (Rowland, 1985) and the expectation that women would receive social support to help cope with the diagnosis, whereas men would be socially ridiculed (Carmeli & Birenbaum-Carmeli, 1994). These factors suggest that people may perceive the revelation of their infertility diagnosis or their treatment decisions as potentially risky, with specific concern about themselves and their partner being stigmatized. Following the theoretical framework provided by RRM, I propose that perceptions of risk in the context of infertility, in the form of perceiving stigma

associated with an infertility status, inhibits sharing information with people outside the marital dyad.

H1: Feelings of stigma related to infertility are negatively correlated with the tendency to share infertility information with social network members.

### *Communication Efficacy*

RRM considers communication efficacy as another factor that directly impacts the revelation of secrets. In practice, communication efficacy is conceptualized as more than being able to deliver particular content – it is a self-perceived ability to broach difficult topics, engage in social confrontation, and communicate explicitly about potentially divisive or sensitive issues (see Afifi et al., 2005; Makoul & Roloff, 1998). Within the tenets of RRM, if people lack confidence in their ability to communicate a secret to someone else, they are more likely to withhold the information. Conversely, if they are confident in their ability to talk to that person, then they may be more likely to reveal that information.

In the context of infertility and information management, I predict that communication efficacy will impact decisions to disclose. If individuals believe they can communicate honestly and openly with their social convoy member about their infertility, as well as the implications infertility might have for their relationship, then people will be more likely to disclose to that convoy member. Therefore, the following hypothesis is forwarded:

H2: Communication efficacy within a social convoy relationship is positively associated with a tendency to share infertility information with that person.

*Closeness*

It is well documented that closeness is a predictor of disclosure in family relationships (e.g., Golish & Caughlin, 2002; Vangelisti & Caughlin, 1997). Closeness fosters or involves feelings of trust that promote private disclosures. Accordingly, RRM proposes that degree of closeness should be a pertinent factor in determining whether or not secrets or private information is revealed.

The details of an infertility diagnosis, treatment process, and subsequent treatment outcomes entail private information about individuals and couples. In fact, the processes that couples go through in their attempt to have a child can be timely, expensive, and embarrassing. Due to the sensitive nature of infertility and the potential for stigma (Van Balen et al., 1996), people experiencing conception difficulties may refrain from divulging details of their experience to anyone other than those individuals closest to them. Therefore, the following hypothesis is offered:

H3: Closeness between an individual and a social convoy member is positively associated with a tendency to share infertility information with that person.

In sum, the RRM posits that many factors contribute to a decision to reveal secrets to others. Specifically, aspects of the model propose that risk perception, communication efficacy, and closeness all impact whether or not people share information. These elements can also be applied to information sharing about infertility, particularly with issues related to stigma, communication efficacy, and degree of closeness to social network members. Thus, RRM provides a framework for considering the factors that contribute to information sharing between infertile individuals and their

social network. Next, I consider how the relational turbulence model offers insight into boundary coordination between spouses.

### Factors Affecting Boundary Coordination between Spouses

A number of variables may weigh into boundary coordination. For example, time since diagnosis may correlate positively with boundary coordination, because the more experience partners have regulating their treatment decisions and outcomes, the more they may be able to anticipate responses and rely on past circumstances to guide their information management decisions. The type of diagnosis may also factor into boundary coordination; for example, if the source of infertility is a specific condition within one spouse, that individual may be more protective of that private medical information than the non-infertile spouse. Beyond these contextual features, aspects of the relationship between spouses can affect their ability to establish, recognize, and meet information sharing expectations. The relational turbulence model (RTM) highlights the relationship qualities that can emerge during transitions and complicate communication between spouses. In the following sections, I review the main assumptions of RTM and deduce hypotheses linking relational characteristics to the coordination of boundaries for infertility information.

#### *Relational Uncertainty*

The relational turbulence model positions relational uncertainty as one of the underlying mechanisms contributing to heightened reactivity to events occurring within romantic relationships. *Relational uncertainty* refers to the degree of confidence individuals have in their perceptions of involvement within a relationship, and it arises from three interconnected sources (Berger & Bradac, 1982; Knobloch & Solomon, 1999,

2002a). *Self uncertainty* addresses the questions people have of their own involvement in a relationship, *partner uncertainty* pertains to doubts individuals may have about their partner's level of involvement, and *relationship uncertainty* encompasses ambiguity about the nature of the dyadic unit. The relational turbulence model proposes assumptions about both the causes and consequences of relational uncertainty within romantic relationships.

According to the theory, relational uncertainty increases when partners transition between levels of involvement. The transition considered in the formulation of the relational turbulence model was the conversion from casual to serious dating. Within new romantic relationships, dating partners can rely on scripts for first dates and casual romances to guide their behavior (e.g., Honeycutt, 1993; Honeycutt & Cantrill, 2001). If partners contemplate a mutual commitment to each other, they face a turning point that requires them to address issues about their involvement in the particular relationship (Baxter & Bullis, 1986). Moreover, when relationships have progressed beyond the initial phase, but lack a clear and mutual commitment, people may wonder about their own relationship ideals, the partner's investment in the relationship, and the status of the relationship itself (see also Baxter, 1988). More recent instantiations of the theory suggest that relational uncertainty can resurface whenever relationship changes prompt partners to revisit questions about their own involvement in the relationship, their partner's participation, and the relationship itself (Solomon, Weber, & Steuber, 2010).

Empirical tests of the relational turbulence model have not consistently documented the increase in relational uncertainty during the transition from casual to serious involvement that is predicted by the theory (e.g., Solomon & Knobloch, 2001,

2004); however, the impact of relational uncertainty on reactions to events has been substantiated. Research has documented that uncertainty about a relationship correlates with polarized cognitive reactions, such as a tendency to view relationship irritations more as more serious (Solomon & Knobloch, 2004; Theiss & Solomon, 2006), and the inability to make clear relationship inferences (Knobloch & Solomon, 2002a). Relational uncertainty also corresponds with more extreme emotional reactions to surprising events (Knobloch & Solomon, 2002b, 2003), jealousy threats (Afifi & Reichert, 1996; Knobloch, Solomon, & Cruz, 2001), and changes in sexual intimacy (Theiss & Solomon, 2007). The prevalence of relational uncertainty has also been tied to avoidance of conversations about the relationship (Baxter & Wilmot, 1985), avoiding topics or withholding private information (Afifi & Burgoon, 1998; Afifi & Guerrero, 2000; Knobloch & Carpenter-Theune, 2004), and evasion of discussions about surprising relationship events (Knobloch & Solomon, 2002b). This body of research characterizes a person experiencing relational uncertainty as someone who has strong cognitive and emotional experiences, but is also reluctant to communicate with a partner about those topics.

The Steuber and Solomon (2008) study described previously showed how relational uncertainty surfaces within infertile couples. In particular, that qualitative study concluded that the difficulty inherent in balancing the treatment process and maintaining a marriage often contributes to feelings of relational uncertainty. The discourse examined in that study also showed that the management of blame, either directed towards the self or the partner, instigates sentiments of relational uncertainty. Because these issues are inherent aspects of infertility, couples may have to make decisions about disclosure to

social network members in a relational context characterized by doubts and ambiguities. Engaging in this negotiation process becomes problematic in couples coping with relational uncertainty because partners characterized by that ambiguity often avoid conversations about relationships (Baxter & Wilmot, 1985) and withhold private information (e.g., Knobloch & Carpenter-Theune, 2004). Because couples coping with relational uncertainty are less likely to openly communicate, the opportunities for spouses to negotiate privacy management boundaries might be particularly limited. When expectations and rules are not established, there might be less boundary coordination between spouses, resulting in boundary turbulence. Therefore, the following hypothesis is offered:

H4: Husbands' and wives' relational uncertainty is (a) positively associated with husbands' and wives' relative discomfort with their spouses' infertility-related disclosures to social convoy members; (b) negatively associated with their perceptions that their disclosures to social convoy members are acceptable to their spouses; and (c) positively associated with the size of the discrepancy between partners' disclosures of infertility-related information to social convoy members.

#### *Interference from a Partner*

The second mechanism stipulated by the relational turbulence model focuses on the difficulties that emerge as partners begin to integrate their daily routines. Interdependence, the extent to which partners rely on and affect each other in the pursuit of everyday goals, is considered synonymous with intimacy (Kelley et al., 1983). Because the development of interdependence requires that partners increasingly allow



each other to take part in their daily routines, a partner's presence can contribute to the perception of either facilitation or interference. A partner's integration into day to day activities is experienced as facilitation when it allows routines to be more effective or increases the likelihood that goals will be achieved (Berscheid, 1983; Knobloch & Solomon, 2004). When a partner's influence disrupts the performance of a behavioral routine, the result is the experience of *interference from a partner* (Berscheid, 1983; Knobloch & Solomon, 2004). As in the case of relational uncertainty, the relational turbulence model advances claims about the causes and consequences of interference from a partner.

The relational turbulence model proposes that experiences of interference from a partner are heightened when couples encounter changes in their patterns of interdependence (see also Berscheid, 1983). When a person initially permits a partner to impact a previously independent routine, that partner is likely to disrupt the performance of the activity. Over time and with practice, partners can learn to coordinate behaviors so that interdependence affords opportunities for facilitation. Although the relational turbulence model originally focused on disruptive patterns of interdependence during partners' initial efforts to coordinate their activities, the logic of the theory suggests that interference from a partner increases whenever couples encounter modifications in their pre-existing routines.

Empirical research has documented a nonlinear association between intimacy in dating relationships and interference from partners. Specifically, partners are perceived as more disruptive at moderate levels of intimacy (Knobloch & Donovan-Kicken, 2006; Knobloch & Solomon, 2004; Solomon & Knobloch, 2001) when behavioral routines are

connected but not well-integrated. Like relational uncertainty, interference from a partner is also positively correlated with the perceived severity of relational irritations (Solomon & Knobloch, 2004; Theiss & Solomon, 2006) and the intensity of emotional jealousy (Knobloch, Solomon, & Cruz, 2001). Conversely, facilitation from partners, when a partner assists in an individual's plan or sequence of events, tends to increase gradually as intimacy increases (Bersheid, 1983; Knobloch, 2007). Partners who are able to promote everyday activities, rather than disrupt them, might also manage information in a way that facilitates each other's goals.

The heightened emotional reactivity and the lack of coordination associated with interference from a person can lead to disrupted regulation of private information. Partner interference has been documented in infertile couples, with individuals reporting discrepancies in treatment approaches and marital maintenance strategies (Steuber & Solomon, 2008). In cases where interference is contributing to behavioral ambiguity in treatment and marital maintenance, couples experiencing partner interference may respond more intensely to relational irritations (Solomon & Knobloch, 2004). In addition, this lack of coordination, in several aspects of their relationships and within the infertility experience, may extend to the coordination of rules for information sharing. Accordingly, the increased focus on relational maintenance might distract from the negotiation of privacy rules, and the disrupted routines may hinder boundary coordination. Therefore, the following hypotheses are posited:

H5: Husbands' and wives' partner interference is (a) positively associated with husbands' and wives' relative discomfort with their spouses' infertility-related disclosures to social convoy members; (b) is negatively associated

with their perceptions that their disclosures to social convoy members are acceptable to their spouses; and (c) positively associated with the size of the discrepancy between partners' disclosures of infertility-related information to social convoy members.

To summarize, the relational turbulence model highlights how transitions require couples to establish or revisit the foundations of their intimacy in ways that can raise questions about the relationship and disrupt everyday routines. This model supplements CPM by offering a predictive framework that explains increases or decreases in boundary turbulence. Whereas CPM provides a perspective for studying the processes at work when couples experience boundary turbulence, RTM identifies specific mechanisms that might contribute to boundary turbulence.

### Conclusion

This chapter considered the role of privacy in information management at both the marital and social network level. A first set of hypotheses drew upon the revelation risk model to deduce predictions focused on information sharing between infertile individuals and social network members. The specific hypotheses advanced are:

- H1: Feelings of stigma related to infertility are negatively associated with the tendency to share infertility information with social network members.
- H2: Communication efficacy within a social convoy relationship is positively associated with a tendency to share infertility information with that person.
- H3: Closeness between an individual and a social convoy member is positively associated with a tendency to share infertility information with that person.

A second set of hypotheses turned to the relational turbulence model to identify aspects of marriages as predictors of boundary turbulence. Specifically, relational uncertainty and partner interference were two mechanisms considered to influence perceptions and violations of rules regarding sharing information with social network members. The specific hypotheses forwarded are:

H4: Husbands' and wives' relational uncertainty is (a) positively associated with husbands' and wives' relative discomfort with their spouses' infertility-related disclosures to social convoy members; (b) negatively associated with their perceptions that their disclosures to social convoy members are acceptable to their spouses; and (c) positively associated with the size of the discrepancy between partners' disclosures of infertility-related information to social convoy members.

H5: Husbands' and wives' partner interference is (a) positively associated with husbands' and wives' relative discomfort with their spouses' infertility-related disclosures to social convoy members; (b) is negatively associated with their perceptions that their disclosures to social convoy members are acceptable to their spouses; and (c) positively associated with the size of the discrepancy between partners' disclosures of infertility-related information to social convoy members.

Together, these sets of hypotheses reflect the core assumptions embodied within CPM. Consistent with that perspective, infertility information management is considered problematic, such that people have reasons for wanting to reveal it and wanting to conceal it. This communication tension resides in two places: (a) between individuals and

others, and (b) between partners who co-own information. By deducing hypotheses on both of these issues, this chapter considers the twin challenges of infertility information management in concert. The next chapter reports the methods used to assess the hypotheses offered.

## Chapter 4

In the previous chapters, I introduced the focus of this dissertation, which is to examine factors that influence infertility information management with respect to social networks. More specifically, I reviewed the rich literature on marital well-being, which provides the foundation for the study of marital communication. I also reviewed communication privacy management theory as a framework exploring how spouses coordinate their co-owned information about infertility. Finally, I presented components of the revelation risk model and the relational turbulence model as mechanisms that predict information sharing and boundary coordination. In Chapter 3, I also deduced hypotheses about the relationship between components of the revelation risk model and information sharing, as well as hypotheses exploring the associations between relational uncertainty and partner interference and spouses' coordination of information sharing with social network members. In this chapter, I describe the methodology used to test those predictions.

### Method

To test the proposed hypotheses, I conducted a study of married couples coping with infertility. Couples were first guided through a systematic process to identify five social convoy members to be the focus throughout the study. Next, each partner individually provided information about their demographics, marriage, and infertility experience. Finally, each partner reported on their relationship with and disclosures to the five members of their support convoy.

### *Participants*

Participants were 50 heterosexual married couples (100 individuals) who were recruited in various ways. The majority of couples responded to advertisements posted in the northeast region of the website Craigslist ( $n = 18$  couples, 36%). The remaining couples were recruited from a participant list from a previous study (Steuber & Solomon, 2008;  $n = 4$  couples, 8%), from a northeast chapter of a national infertility organization ( $n = 11$  couples, 22%), from doctors' offices in the Pennsylvania and New Jersey areas ( $n = 7$  couples, 14%), from a university Listserv announcing the study ( $n = 8$  couples, 16%), from flyers posted in public meeting places ( $n = 1$  couple, 2%), and from radio announcements ( $n = 1$  couple, 2%).

The sample consisted of couples who had been married between one and 14 years ( $M = 5.57$  years,  $SD = 3.15$ ). A majority of individuals reported being in their first marriage (91 people, 91%), seven people were in their second marriage (7%), and two people were in their third or more marriage (3%).

Participants identified as predominantly Caucasian (90 individuals, 90%), with six people who identified as Hispanic or Latino (6%), five people who identified as Black or African American (5%), one person who identified as Asian (1%), one person who identified as Afghan (1%), and two people who identified as "other" (2%). The group also identified as predominantly Christian (79 individuals, 79%). Other individuals identified with Judaism (7 individuals, 7%), Islam (3 individuals, 3%), Atheism (2 individuals, 2%), no religious affiliation (8 individuals, 8%), "other" (3 individuals, 3%), Buddhism (1 individual, 1%), and Hinduism (1 individual, 1%).

Regarding total household income, seven individuals (7%) reported earning between \$25,001- \$37,500 per year, 11 individuals (11%) selected \$37,501 - \$50,000 per year, 15 individuals (15%) reported earning between \$50,001 and \$62,500 annually, 10 individuals (10%) reported earning \$62, 501 - \$75,000 per year, 22 people (22%) reported between a \$75,001 and \$100,000 annual income, 28 individuals (28%) reported an annual income of between \$100,001 and \$150,000, and nine people (9%) reported earning over \$150,000 per year. Education levels ranged from high school degrees to doctoral level degrees, with seven individuals (7%) completing high school, 12 individuals (12%) earning an associate's degree, 13 people (13%) completing some college, 35 (35%) earning a bachelor's degree, five people (5%) finishing some graduate school, 18 individuals (18%) earning a master's degree, two people (2%) finishing law school, and eight individuals (8%) earning doctoral level degrees.

Couples had been coping with infertility for between eight months and five years ( $M = 2.64$ ,  $SD = 1.19$ ). A majority of the sample, 78 individuals (78%), was coping with primary infertility (no previous children), and 22 individuals (22%) were coping with secondary infertility (13 individuals had one previous child; one person had two previous children; seven individuals had three previous children; one individual had five previous children). Over half of the sample ( $n = 57$ ; 57%) had never experienced a miscarriage; however, 28 people (28%) had coped with one miscarriage, nine individuals (9%) had two miscarriages, four individuals (4%) experienced three miscarriages, and two individuals (2%) had been through four miscarriages.

Infertility causes and treatment experiences varied across couples. When asked about the source of their reproductive disabilities, 45 people (45%) reported the infertility



was female factor, 15 individuals (15%) reported it being male factor, 16 individuals (16%) reported the infertility was caused by both partners having health problems, and 24 people (24%) reported their infertility cause was unexplained. Nearly all individuals ( $n = 88$ , 88%) reported having used some form of at-home treatment attempt, such as monitoring body temperature or charting menstrual cycles. In addition, 82% of participants ( $n = 82$ ) reported having tried ovulation-inducing drugs, 36% of people ( $n = 36$ ) reported having a corrective surgery, 68% of individuals ( $n = 68$ ) turned to intrauterine insemination, and 28% of the sample ( $n = 28$ ) had tried in-vitro insemination. A smaller portion of the sample, 5% ( $n = 5$ ) reported having turned to either donor sperm or a surrogate mother during their treatment attempts. When asked about finances and treatment, 47 individuals (47%) documented that their treatment had not been constrained by finances, 26 people (26%) stated that it was slightly constrained, 18 individuals (18%) suggested it was constrained by finances, and nine individuals (9%) reported that their treatment was very much constrained by finances.

### *Procedures*

Infertile couples who contacted the researcher and qualified for the study were scheduled for a meeting at a location convenient and comfortable for them. Many meetings took place at local coffee shops or libraries, and the appointments lasted between 45 minutes and 120 minutes. Although both partners were present for the duration of the meeting, they only interacted with each other during the convoy member selection process. The following paragraphs describe the procedures for the study.

After reading and signing an informed consent form, spouses were asked to individually report current or recent members of their social convoy. Both current and

recent members were requested because social network relationships can change as a result of infertility stress (Peronace, Boivin, & Schmidt, 2007), and I wanted to index both positive and negative aspects of these relationships. Spouses were asked to write each convoy member's first name or initials on an index card, as well as the role that person played in their life (i.e., parent, sibling, friend, doctor).

Once each spouse felt he or she had exhausted his or her mental list of support members, the researcher took the pile of cards from each spouse. Together, the couple and the researcher determined which individuals were nominated by both spouses. Determining individuals with dual membership involved both the researcher and the respondents so that alternate name references were appropriately matched (e.g., one spouse writes "my mom" on the card, and the other spouse references the mother-in-law by "Sandy" or "mom"), and to expedite the matching process. Those individuals selected by both participants were collapsed into one pile. The remaining two piles represented those individuals in each spouse's respective social convoy (who were not also nominated by their partner). Three names were randomly drawn from the joint pile, and one name each was drawn from each independent pile. In the cases where there were fewer than three people in the joint pile, the maximum number of people was selected. If only zero or two members were from the joint pile, the couple was asked to select the person closest to both of them out of the social convoy members in the individual piles. That person was put in the joint pile so that an equal number of members could be drawn from the individual piles.

Following that step, if one person was in the joint pile, then two members each were drawn from the individual piles; if three people were in the joint pile, then one

person each was drawn from the individual pile. The names drawn from the individual piles were cross-checked to make sure that the non-nominating spouse knew of the person, regardless if they had interacted or not (e.g., a work colleague that the other spouse has never communicated with, but knows of through stories was included, whereas an online support group friend who has never been discussed would not be included). The completion of these steps resulted in five network members being chosen for the couple to reference for the rest of the study.

The individual convoys that couples self-recalled ranged from two individuals to 32 individuals ( $M = 10.00$ ,  $SD = 5.43$ ). Once the convoys were narrowed down to the five joint convoy members that the couples reported on, there was a total of 250 convoy members (5 members per 50 couples). Of the 250 convoy members, 74 were from wives' individual convoy (29.6%), 69 were from the husbands' individual convoy (27.4%), and 107 were from the joint piles (42.9%). Individuals independently reported knowing their joint convoy members for between 0.15 and 47.00 years ( $M = 14.50$ ,  $SD = 11.90$ ). Of those 250 convoy members, 138 were female (55.5%). Convoy members represented a variety of roles in the couple's life. Many of the convoy members were friends ( $n = 101$ , 40.4%), parents ( $n = 72$ , 28.8%), and siblings ( $n = 41$ , 16.4%). The remaining convoy members were classified as counselors/clergy ( $n = 11$ , 4.0%), co-workers ( $n = 9$ , 3.6%), doctors/nurses ( $n = 5$ , 2.0%), aunts/uncles ( $n = 4$ , 1.6%), grandparents ( $n = 3$ , 1.2%), cousins ( $n = 2$ , 0.8%), a neighbor ( $n = 1$ , 0.4%), and a nephew ( $n = 1$ , 0.4%).

Once basic information was elicited for each convoy member, participants completed a questionnaire detailing their perceived closeness with each convoy member, as well as their communication efficacy with regard to confronting the person about his

or her handling of infertility-related information. For each social network member, spouses were asked to answer six disclosure-related questions for five topics related to infertility. The first topic pertained to decisions related to their treatment of infertility. Participants were asked to think about how “much information this social convoy member knows about the treatment plans you and your spouse have made about treating or not treating infertility, and the steps you’ve taken to follow through with those plans.” Similarly, the second topic referenced treatment outcomes by asking individuals to think about “how much this person knows about your successful or failed treatment outcomes.” For the third topic, participants were prompted to think about “how much this person knows about how long or far you are willing to go, or not go, in your attempt to become parents.” Participants were also asked to consider how much “this person knows about how you’ve been coping with the difficulties of infertility.” Finally, participants considered how much “this person knows about how infertility is affecting the relationship between you and your spouse.” Questions pertaining to the degree of disclosure and comfort related to that disclosure were asked for each topic.

### *Measures*

Once the social convoy information was elicited and the five members were chosen, participants completed measures pertaining to their perception of stigma related to their infertility experience, marital characteristics, and more detailed aspects of their five social convoy relationships. The following paragraphs discuss each of the measures and provide descriptive information for the variables.

*Stigma.* Participants completed a version of Berger, Ferrans, and Lashley’s (2001) HIV Stigma Scale that was revised to address *stigma* in the context of infertility.

Participants were asked to use a four point scale (1 = *strongly disagree*, 4 = *strongly agree*) to answer questions addressing two aspects of stigma: *personalized stigma* and *disclosure concerns*. Four items represented personalized stigma, the personal fears or experiences of the infertile individual (e.g., I have been hurt by how people react to learning we are infertile,  $\alpha = .87$ ,  $M = 1.66$ ,  $SD = 0.70$ ). The second component, disclosure concerns, was composed of four items referencing the desire to control information related to infertility (e.g., I am very careful whom I tell we are infertile,  $\alpha = .82$ ,  $M = 2.42$ ,  $SD = 0.77$ ). This measure was subjected to a confirmatory factor analysis, and the data were found to adequately fit the model,  $\chi^2/df = 1.10$ ; CFI = .94; RMSEA = .04 (Brown & Cudeck, 1993; Kline, 1998).

*Marital characteristics.* Participants provided responses to measures about marital satisfaction, partner interference, and relational uncertainty. These scales were subjected to a confirmatory factor analysis, but the data did not fit the measurement model. Modification indices suggested that the relational uncertainty items were contributing to the lack of fit because of deviations from normality apparent in those items. With items indexing relational uncertainty removed, the measurement model for the three remaining measures fit the data ( $\chi^2/df = 1.70$ ; CFI = .94; RMSEA = .09). The following paragraphs discuss each marital characteristic in more detail.

Items from the Relationship Assessment Scale (RAS; Hendrick, Dicke, & Hendrick, 1998) were used to measure *marital satisfaction*. Participants answered items on a scale from one to five (five being most satisfied), documenting relational needs, regrets, and expectations (e.g., how well does your partner meet your needs, to what extent has your relationship met your general expectations?) The four items ( $\alpha = .88$ ) were

averaged to form a composite score ( $M = 4.40$ ,  $SD = 0.67$ ). Marital satisfaction was not used in substantive analyses, but it was included to provide descriptive information about the sample. In sum, people in the sample were predominately satisfied with their marriages.

Partner interference was represented by two facets: *interference* and *facilitation*. Respondents used a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*) to answer a series of questions addressing the disruption of routines and plans by a partner (Knobloch & Solomon, 2004). The interference scale (e.g., in the past two weeks, my partner has disrupted my daily routine) consisted of four items ( $\alpha = .80$ ,  $M = 2.12$ ,  $SD = 0.91$ ). Similarly, the facilitation scale (e.g., in the past two weeks, my partner helped me to do the things I need to do each day) consisted of four items ( $\alpha = .84$ ,  $M = 3.94$ ,  $SD = 0.82$ ). Although the hypothesis advanced previously focused on interference from a partner, facilitation was assessed to provide a second index of coordinated interdependence between partners.

Abbreviated versions of Knobloch and Solomon's (1999) scales were used to assess *relational uncertainty* (see Knobloch, Miller, Bond, & Mannone, 2007). Participants responded using a 6-point scale (1 = *completely or almost completely uncertain*, 6 = *completely or almost completely certain*) to items describing how they felt about their marriage over the past two weeks. Items were rescored so that higher values reflected more uncertainty. *Self uncertainty* reflected the presence of doubts about the respondent's own involvement in the relationship, *partner uncertainty* represented the respondent's doubts about the spouse's involvement in the relationship, and *relationship uncertainty* addressed questions about the future of the relationship in general.

Reliability for the three facets of relational uncertainty were acceptable in past studies (self uncertainty,  $\alpha = .84$ ; partner uncertainty,  $\alpha = .90$ ; relationship uncertainty,  $\alpha = .85$ ; Knobloch, Miller, Bond, & Mannone, 2007) and the current study (self-uncertainty,  $\alpha = .86$ ; partner uncertainty,  $\alpha = .93$ ; relationship uncertainty,  $\alpha = .88$ ); however, confirmatory factor analyses for this variable suggested that the data did not fit the measurement model well ( $\chi^2/df = 2.30$ ; CFI = .89; RMSEA = .12). With this caveat, the measures were retained to allow a test of the corresponding hypothesis.

One reason that the data did not adequately fit the measurement model could be the limited variance in relational uncertainty within the sample. Couples who volunteer to participate in studies often contain individuals who are satisfied with their partnerships. As noted previously, couples in this study reported high levels of satisfaction ( $M = 4.40$ ,  $SD = 0.67$  on a 5-point scale), which has been linked to low levels of relational uncertainty (Knobloch, 2008). Accordingly, reports of relational uncertainty within this sample were low (self uncertainty  $M = 1.33$ ,  $SD = 0.56$ ; partner uncertainty  $M = 1.51$ ,  $SD = 0.81$ ; relationship uncertainty  $M = 1.48$ ,  $SD = 0.73$ ). In addition, I observed strong, negative correlations between the marital satisfaction and the relational uncertainty variables (self uncertainty,  $r = -.74$ ,  $p < .01$ ; partner uncertainty,  $r = -.68$ ,  $p < .001$ ; relationship uncertainty,  $r = -.73$ ,  $p < .001$ ).

*Network characteristics.* Once each couple had provided general information about the five specific convoy members, they individually completed questionnaires eliciting information about their relationships with those convoy members. Two measures were included in a measurement model that was found to adequately fit the data ( $\chi^2/df = 2.89$ , CFI = .95; RMSEA = .07): communication efficacy and perceived closeness.

*Communication efficacy* was assessed using adjusted items from Makoul and Roloff's (1998) measure of confrontation self-efficacy. Using a Likert-type scale (1 = *very strongly disagree*, 6 = *very strongly agree*), respondents provided answers to items based on their agreement that confronting this social convoy member would be "very easy." Sample items included "It would be very easy for me to tell this person about things he or she did that concerned me related to my infertility" and "It would be very easy for me to ask this person to change his or her behavior in reference to my infertility." Efficacy at being confrontative in particular was measured because the nature of infertility often has individuals managing information not just about the initial diagnosis, but about details of the diagnosis and treatment for the duration of the experience. Accordingly, it was important to measure the ability to follow-up with a person if they are not managing pieces of information well. Five items demonstrated high reliability ( $\alpha = .91$ ) and were averaged to form a composite variable ( $M = 3.86$ ,  $SD = 1.41$ ).

The participant's *perceived closeness* with the social convoy member was measured using a revised version of Buchanan et al.'s (1991) closeness scale. Participants responded to five items (1 = *not at all*, 7 = *very much*) about how close they feel to the person, how confident they are this person would help them if needed, and how interested the person is in their life ( $\alpha = .92$ ,  $M = 3.87$ ,  $SD = 1.03$ ).

*Communication variables.* Recall that participants were asked to report their degree of disclosure and comfort with their own and their spouse's disclosures for five different topics: treatment plans, treatment outcomes, treatment perspectives, emotional aspects related to infertility, and marital aspects related to infertility. Specifically, they



were asked to report, on a scale from one through five (1 = *no information*, 5 = *a great deal of information*) how much information they reveal to the social network member regarding each topic. In addition, participants were asked to report how comfortable (1 = *not at all comfortable*, 5 = *very comfortable*) they are with how much information they revealed for each topic, how comfortable they think their spouse is with the amount of information they revealed for each topic, and how comfortable they are with the amount of information they think their spouse revealed about each topic.

Multiple topics were used to capture a range of issues that individuals might discuss with their social convoy members. For each topic, participants responded to single items, which were aggregated across topics. In this measure, the individual items for each topic are indicators of a latent construct representing communication with the social network about infertility issues, in general, and having multiple topics is akin to having multiple items within a scale. Items across topics displayed high scores for Cronbach's alpha (disclosure,  $\alpha = .95$ ; comfort with own disclosure,  $\alpha = .95$ ; perceived spouse comfort,  $\alpha = .93$ ; and comfort with spouse disclosure,  $\alpha = .95$ ) indicating acceptable reliability (see Table 4.1 for descriptive statistics).

For the first set of hypotheses predicting each spouse's individual disclosure to convoy members, the disclosure variable was created by averaging the scores for the first question, which asked participants how much information they reveal to the convoy member, across all five topics ( $M = 2.60$ ,  $SD = 1.38$ ,  $\alpha = .95$ ). This variable was used as dependent variable for the hypotheses predicting individual disclosure to convoy members (H1-H3).

For the second set of hypotheses predicting aspects of boundary turbulence (H4, H5), three different outcome variables were used. First, to test the associations between relational uncertainty or partner interference and relative discomfort (H4a, H5a), two discrepancy scores were created. For husband's relative discomfort with his wife's disclosure, the husband's response to "How comfortable are you with the amount of information your spouse has shared" was subtracted from the wife's response to "How comfortable are you with the amount of information you've shared with this person." This discrepancy was calculated across all five topics and then averaged ( $M = 0.16$ ,  $SD = 1.27$ ,  $\alpha = .94$ ). The parallel computation was used to operationalize wives' relative discomfort with husbands' disclosures ( $M = 0.05$ ,  $SD = 1.31$ ,  $\alpha = .93$ ).

To test the associations between relational uncertainty or partner interference and a partner's perceived acceptability from their spouse with the amount of information disclosed (H4b, H5b), the response to the item "How comfortable do you think your spouse is with the amount of information you've shared with this person" was used to compute the dependent variable. Responses across all five topics were averaged ( $\alpha = .93$ ). Perceived partner acceptance was computed for husbands ( $M = 4.18$ ,  $SD = 1.01$ ,  $\alpha = .93$ ) and wives ( $M = 4.19$ ,  $SD = 1.03$ ,  $\alpha = .94$ ).

Recall that H4c and H5c predicted that relational uncertainty or partner interference was positively associated with the size of the discrepancy between partners' disclosures to social convoy members. The dependent variable was computed using the item "How much information have you shared with this person?" The variable was computed by taking the absolute value of the difference between the wife's disclosure and the husband's disclosure on each of the five topics. The five scores were then

averaged to get one disclosure discrepancy score for each social convoy member ( $M = 1.48$ ,  $SD = 1.10$ ,  $\alpha = .90$ ).

In this chapter, I reviewed details of the procedures and measures, as well as the process for computing the dependent variables. The next chapter will describe the preliminary and substantive analyses that were used to test the hypotheses, as well as report the results of those analyses.

Table 4.1

*Descriptive Information for Infertility-Related Topics*


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| Topics                 | Disclosure  | Comfort with Own Disclosures | Perceived Spouse Comfort | Comfort with Spouse Disclosure |
|------------------------|-------------|------------------------------|--------------------------|--------------------------------|
| Treatment Plans        | 2.86 (1.57) | 4.33 (1.10)                  | 4.16 (1.17)              | 4.23 (1.19)                    |
| Treatment Outcomes     | 2.89 (1.67) | 4.35 (1.10)                  | 4.23 (1.13)              | 4.25 (1.20)                    |
| Treatment Perspectives | 2.70 (1.58) | 4.35 (1.07)                  | 4.26 (1.10)              | 4.25 (1.18)                    |
| Emotional Responses    | 2.53 (1.48) | 4.24 (1.14)                  | 4.15 (1.16)              | 4.14 (1.24)                    |
| Marital Issues         | 2.01 (1.32) | 4.23 (1.15)                  | 4.13 (1.19)              | 4.12 (1.25)                    |

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*Note.* Cell entries are means; standard deviations are in parentheses. All responses were on a 5-point scale.

## Chapter 5

The fundamental unit of analysis when studying interpersonal communication is the dyad (Kenny, Kashy, & Cook, 2006). One of the main benefits of using dyadic data is that it acknowledges the linkages between two individuals within a partnership. For example, a husband's satisfaction with his marriage is not only a reflection of characteristics of himself, but also those of his wife. This linkage is referred to as nonindependence (Kenny, Kashy, & Cook, 2006).

When using dyadic data, adjustments have to be made for the dependency that is inherent in the dataset. In this study, dependency exists at two levels. First, the husband and wife data is linked as exemplified above. Similarly, the husband and wife individually reported on the same five convoy members. Those convoy members are in a cluster, and people within a cluster are often grouped due to some commonalities among them, and they typically have more commonality among one another than with those not in the cluster (Slater, Snyder, & Hayes, 2006). Thus, the nonindependence present within the convoy membership must be considered, as well. To address these two dependencies, multilevel modeling was used. One of the benefits of multi-level modeling is that it can handle nested, or clustered, data (Byrk & Raudenbush, 2002). This nesting controls for the dependency inherent in the levels of analysis. This chapter first describes the analyses conducted in preparation for the substantive analyses, and then reports the results from the multi-level models estimated to test the hypotheses.

### Preliminary Analyses and Results

Before conducting the multilevel models to test the hypotheses, I computed correlations and conducted *t*-tests to examine the relationships between many of the

variables. In addition, variability was partitioned across levels in the multi-level models to determine variance accounted for by each level.

First, I examined the correlations among independent variables (see Table 5.1). Not surprisingly, the three measures of relational uncertainty were positively correlated. Those measures were also positively correlated with partner interference and negatively associated with partner facilitation and marital satisfaction. Partner interference had a negative relationship with partner facilitation and marital satisfaction, and partner facilitation and marital satisfaction were positively correlated.

Second, I conducted paired sample *t*-tests to explore differences between husbands' and wives' scores on the network and marital variables (see Table 5.2). Results suggest that wives experience more personalized stigma related to infertility than their husbands, and that husbands experience more communication efficacy in their convoy relationships than their wives. In addition, wives disclose significantly more to their convoy members than their husbands disclose. There were no significant differences between husband and wife scores on any of the remaining variables.

Independent sample *t*-tests were also computed to see if husbands and wives had significantly different experiences with female and male social convoy members (see Table 5.3). For husbands, there were no significant differences between female and male network members for perceived closeness, communication efficacy, and disclosure. In contrast, wives reported feeling significantly closer to their female network members, having more communication efficacy with their female network members, and also revealing more to females than males.

To test H1-H3, in which the dependent variable was an individual's disclosure to particular social convoy members, I constructed a three level model. Individual participants, husbands and wives, were the unit of analysis at Level 1, and variables at this level were participants' reports with respect to particular social convoy members. Husbands' and wives' variables for social convoy members were nested within each of the five social network members, hence, social convoy members were at Level 2. Finally, the five social convoy members addressed by each couple were nested within marital dyads, which represented Level 3 (see Figure 5.1).

The unconditional model was run to determine the level of variability in the outcome variable (i.e., disclosure to a target) accounted for by each level. Output suggested that Level 1 accounted for the majority of the variance in the model ( $\sigma^2 / \sigma^2 + \tau_\pi + \tau_\beta = .74$ ), which means that most of the variance in disclosure was predicted by variance between individuals in the study. Level 2 ( $\tau_\pi / \sigma^2 + \tau_\pi + \tau_\beta = .09$ ) contributed to the variance the least, suggesting relatively little variability across social network members. Level 3 ( $\tau_\beta / \sigma^2 + \tau_\pi + \tau_\beta = .17$ ) accounted for 17% of the variance in disclosure, representing the extent to which couple characteristics shaped individual disclosures.

For the second set of hypotheses predicting discrepancies in disclosure and acceptability (H4, H5), two-level models were estimated. Two, rather than three, levels were used for these models because the hypotheses are predicting an outcome based on both husbands' and wives' behavior with respect to a particular social network member. Accordingly, social convoy members were at Level 1, and the five social convoy members addressed by each couple were nested within marital dyads, which represented Level 2 (see Figure 5.2).

For a two-level model, the intraclass correlation calculates the proportion of variance in the dependent variable that can be attributed to each level in the model. A  $\rho$  closer to 1 indicates that most of the variance in the dependent variable is based on Level 2 differences, in this analysis, differences between couples. A  $\rho$  closer to 0 indicates that most of the variance in the dependent variable is based on Level 1 differences, which reflect differences between social convoy members in this analysis (Kreft & De Leeuw, 2002; Snijders & Bosker, 2003). For the discrepancy in disclosure model,  $\rho = .03$ , suggesting that most of the variance reflects differences among social network members. For the model estimating wife's relative discomfort with husband's disclosures ( $\rho = .39$ ), husband's relative discomfort with wife's disclosures ( $\rho = .37$ ), wife's accuracy in predicting husband's comfort ( $\rho = .47$ ), and husband's accuracy in predicting wife's comfort ( $\rho = .44$ ), scores suggested that variance in these dependent variables reflects both within and between couple effects.

### Substantive Analyses

To test the hypotheses proposed in this study, data were analyzed with multilevel modeling (Bryk & Raudenbush, 1992), utilizing Hierarchical Linear Modeling (HLM) software version 6.06. The following paragraphs present the models for these hypotheses.

#### *Hypotheses 1 - 3*

To test the impact of individual, network member, and couple characteristics on the tendency to disclose infertility-related information with social network members (H1 – H3), a three-level HLM model was estimated in which participants were nested in network members, and network members were nested within couples. In the following



models, the subscript  $i$  refers to the participant (Level 1), the subscript  $j$  refers to the social convoy member (Level 2), and the subscript  $k$  refers to the couple (Level 3).

Based on existing literature on disclosure tendencies and the results of the preliminary analyses, participant sex and social convoy member sex were included in all models. Participant sex was measured at Level 1, so it is a predictor in the Level 1 equation. Social convoy member sex was measured at Level 2 and, based on preliminary analyses, was entered on the slope for participant sex. In this way, the interactive effects of participant and social convoy member sex were considered. With the exception of participant sex and target sex, which were not centered, all variables entered into the model were grand mean centered, making the observed scores centered around the sample mean for the variable. Thus, the baseline model predicting disclosure was as follows:

Model 1: Baseline model

Level 1 equation:

$$Y_{ijk} = \pi_{0jk} + \pi_{1jk}(\text{participant sex}_{ijk}) + e_{ijk}$$

Level 2 equation:

$$\pi_{0jk} = \beta_{00k} + r_{0jk}$$

$$\pi_{1jk} = \beta_{01k} + \beta_{10k} (\text{social convoy member sex}_{jk}) + r_{1jk}$$

Level 3 equation:

$$\beta_{00k} = \gamma_{000} + u_{00k}$$

$$\beta_{01k} = \gamma_{010} + u_{01k}$$

$$\beta_{10k} = \gamma_{100} + u_{10k}$$

In the Level 1 model,  $Y_{ijk}$  is the disclosure of participant  $i$ , to target  $j$ , in couple  $k$ ;

$\pi_{0jk}$  is the mean disclosure to target  $j$  in couple  $k$ ;  $e_{ijk}$  is the random “participant effect” or the deviation of participant  $ijk$ ’s score from the target mean. In Level 2,  $\beta_{00k}$  is the mean disclosure to target  $k$  and  $r_{0jk}$  is the random “target effect” or the deviation of target  $jk$ ’s mean from the couple’s mean. Finally, in Level 3,  $\gamma_{000}$  is the grand mean, and  $u_{00k}$  is a random “couple effect” or the deviation of couple  $k$ ’s mean from the grand mean.

To test H1, the prediction that stigma is negatively associated with disclosure, husbands’ personalized stigma and wives’ personalized stigma were entered on the intercept at Level 3 of the baseline model. The stigma variables were treated as a couple level variable because research on infertility suggests that spouses may be inclined to protect each other from the stigma related to infertility, especially pertaining to male-factor infertility (Van Balen et al., 1996). Consequently, a wife’s behaviors might be changed if she knows her husband is coping with feelings of stigma, even if she is not coping with those feelings as well. In the same ways, both wives’ and husbands’ disclosure can be affected by a wives’ experience of stigma. Accordingly, stigma was treated as a couple-level variable and entered on Level 3 of the model. Model 2 shows the equations used to assess personal disclosure stigma; an identical model assessed husbands’ and wives’ disclosure concern stigma by substituting that variable for personalized stigma.

#### Model 2: Personalized Stigma model

Level 1 equation:

$$Y_{ijk} = \pi_{0jk} + \pi_{1jk}(\text{participant sex}) + e_{ijk}$$

Level 2 equation:

$$\pi_{0jk} = \beta_{00k} + \beta_{01k} (\text{social convoy member sex}) + r_{0jk}$$

$$\pi_{1jk} = \beta_{10k} + r_{1jk}$$

Level 3 equation:

$$\beta_{00k} = \gamma_{000} + \gamma_{001}(\text{wife personal stigma}) + \gamma_{002}(\text{wife disclosure concern}) + u_{00k}$$

$$\beta_{01k} = \gamma_{010} + u_{01k}$$

$$\beta_{10k} = \gamma_{100} + u_{10k}$$

In similar fashion, I assessed efficacy (H2) and perceived closeness (H3) as predictor variables. The following model displays the model used to evaluate efficacy; closeness was tested by an identical model in which closeness was substituted for efficacy.

Model 3: Efficacy as a predictor of disclosure

Level 1 equation:

$$Y_{ijk} = \pi_{0jk} + \pi_{1jk}(\text{participant sex}) + \pi_{2jk}(\text{efficacy}) + e_{ijk}$$

Level 2 equation:

$$\pi_{0jk} = \beta_{00k} + \beta_{01k} (\text{social convoy member sex}) + r_{0jk}$$

$$\pi_{1jk} = \beta_{10k} + r_{1jk}$$

$$\pi_{2jk} = \beta_{20k} + r_{2jk}$$

Level 3 equation:

$$\beta_{00k} = \gamma_{000} + u_{00k}$$

$$\beta_{01k} = \gamma_{010} + u_{01k}$$

$$\beta_{10k} = \gamma_{100} + u_{10k}$$

$$\beta_{20k} = \gamma_{200} + u_{20k}$$

Finally, all the predictor variables were added to the baseline model to test the effects simultaneously. I evaluated this model to determine if any of the relationships changed when examined in the presence of other variables:

Model 4: Combined model

Level 1 equation:

$$Y_{ijk} = \pi_{0jk} + \pi_{1jk}(\text{participant sex}) + \pi_{2jk}(\text{efficacy}) + \pi_{3jk}(\text{closeness}) + e_{ijk}$$

Level 2 equation:

$$\pi_{0jk} = \beta_{00k} + \beta_{01k}(\text{social convoy member sex}) + r_{0jk}$$

$$\pi_{1jk} = \beta_{10k} + r_{1jk}$$

$$\pi_{2jk} = \beta_{20k} + r_{2jk}$$

$$\pi_{3jk} = \beta_{30k} + r_{3jk}$$

Level 3 equation:

$$\beta_{00k} = \gamma_{000} + \gamma_{001}(\text{wife personal stigma}) + \gamma_{002}(\text{wife disclosure concern}) + \gamma_{003}(\text{husband personal stigma}) + \gamma_{004}(\text{husband disclosure concern}) + u_{00k}$$

$$\beta_{01k} = \gamma_{010} + u_{01k}$$

$$\beta_{10k} = \gamma_{100} + u_{10k}$$

$$\beta_{20k} = \gamma_{200} + u_{20k}$$

$$\beta_{30k} = \gamma_{300} + u_{30k}$$

*Hypotheses 4 & 5*

To test the relationship between marital characteristics (i.e., relational uncertainty, partner interference) and disclosure tendencies and acceptability, I utilized the two-level modeling previously described (see Figure 5.2). In these analyses communication patterns with the five social convoy members were nested within couples.

Hypotheses predicted that relational uncertainty (H4) and partner interference (H5) are positively associated with relative discomfort, negatively associated with perceived acceptability, and positively associated with discrepancies in spousal disclosures. First, consistent with the previous models for H1-H3, the social convoy member's sex was included in the model. The social convoy member is at Level 1 in this analysis, putting the social convoy member's sex as a predictor at Level 1. In separate analyses, facets of relational uncertainty (i.e., wife self uncertainty, husband self uncertainty, wife partner uncertainty, husband partner uncertainty, wife relationship uncertainty, husband relationship uncertainty) and facets of partner interference (i.e., wife partner interference, husband partner interference, wife partner facilitation, husband partner facilitation) were entered on the intercept at Level 2. Separate analyses were used so that the distinct facets of relational uncertainty and partner interference could be examined individually. The relationship variables were grand mean centered, making the observed scores centered around the sample mean for the variable. As before, the sex variable was not centered.

In the following equations, the subscript  $i$  refers to social convoy member and the subscript  $j$  refers to the couple. The model below shows wife self uncertainty as a predictor, identical models evaluated the other relationship variables by substituting them for wife self uncertainty:

Model 1: Wife self uncertainty as a predictor of relative discomfort, perceived acceptability, and disclosure discrepancies (H4)

Level 1 equation:

$$Y_{ij} = \beta_{0j} + \beta_{1j}(\text{social convoy member sex}) + r_{ij}$$

Level 2 equation:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} (\text{wife self uncertainty}) + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + u_{1j}$$

In the above model,  $\beta_{0j}$  is the mean disclosure to target  $i$ , and  $r_{ij}$  is the random “target effect” or the deviation of target  $ij$ ’s mean from the couple’s mean.  $\gamma_{00}$  is the grand mean, and  $u_{0j}$  is a random “couple effect” or the deviation of couple  $j$ ’s mean from the grand mean. The same model was run for husband self uncertainty, husband and wife partner uncertainty, and husband and wife relationship uncertainty, husband and wife partner interference, and husband and wife partner facilitation. In total, H4 and H5 involved running 40 models, reflecting five different dependent variables (i.e., husband and wife relative discomfort, husband and wife perceived acceptability, disclosure discrepancy) by eight different independent variables (i.e., husband and wife self uncertainty, husband and wife partner uncertainty, husband and wife relationship uncertainty, husband and wife partner interference, husband and wife partner facilitation).

### Results for Substantive Analyses

#### *Individual Disclosure Hypotheses (H1 – H3)*

Consistent with H1 through H3, results from the hierarchical linear models indicated that stigma, efficacy, and closeness are associated with tendencies to reveal infertility-related information (see Table 5.4). These hypotheses were tested in both separate multi-level models, as well as in one combined model. Recall that the baseline model for the hypotheses predicting individual disclosure to social convoy members included participant sex as a Level 1 predictor, with convoy member sex on the slope for participant sex. The baseline model, individual models for each hypothesis, and the

combined model all found a significant main effect indicating that wives disclose more than males, and a significant effect for social convoy sex, indicating that the tendency for females to disclose more than males was more pronounced when convoy members were female rather than male.

The first hypothesis predicted that stigma related to infertility is negatively correlated with the tendency to disclose information to social convoy members. Recall that there were two components to the stigma variables: personalized stigma and disclosure concerns. Neither husbands' personalized stigma nor wives' personalized stigma was significantly associated with disclosure. On the other hand, results showed a negative association between disclosure concerns and disclosure for individuals in couples where either spouse reported that facet of stigma. Taken together, H1 was partially supported in that couples characterized by husbands with disclosure concerns and wives with disclosure concerns disclosed significantly less to social convoy members than couples who experienced those stigma types to a lesser degree.

H2 was also supported, such that communication efficacy was positively correlated with the tendency to disclose information to social convoy members. Similarly, and as predicted by H3, closeness had a positive association with the tendency to share infertility-related information with social network members.

When entered into a combined model testing disclosure as the outcome, all relationships remained consistent with the individual models testing the independent hypotheses, with the exception of wives' disclosure concerns. In the combined model, wives' disclosure concerns was only marginally significant ( $p = .052$ ). In sum, significant results were found for participant sex, closeness, and efficacy as predictors of disclosure.

Sex of the social convoy member was found to be a significant predictor on the slope for participant sex at Level 2, and husbands' disclosure concern was found to be a significant predictor for the model intercept at Level 3.

*Relational Uncertainty Hypothesis (H4)*

The relationship forwarded in H4 predicted that relational uncertainty correlates positively with husbands' and wives' relative discomfort with their spouses' infertility-related disclosures to social convoy members (H4a), negatively with husbands' and wives' perceived acceptability (H4b), and positively with discrepancies in spouses' disclosures (H4c). The following paragraphs describe the relevant findings.

Recall that husbands' relative discomfort with wives' disclosures is represented by the discrepancy between the wife's reported comfort with her own sharing and the husband's reported comfort with the wife's sharing. Wives' relative discomfort with husbands' disclosures was computed similarly. Results from the two-level models for H4a suggest that two facets of relational uncertainty contribute to the wives' relative discomfort with husbands' disclosures (see Table 5.5). In couples with wives experiencing partner uncertainty and in couples with wives experiencing relationship uncertainty, wives have more relative discomfort with their husband's disclosures than wives in marriages not experiencing those uncertainties. Wife self uncertainty and husband self uncertainty are both positively associated with husbands' relative discomfort. In other words, when wives are coping with ambiguities in their partners' goals for the relationship or in the future of the relationship itself, they also feel more discomfort with how husbands are managing their infertility-related information. On the other hand, results suggest husbands in marriages experiencing wife and husband self



uncertainty experience more relative discomfort with wives' disclosures than those husbands not coping with those uncertainties. There were no other significant results for the remaining facets of relational uncertainty. These results provide limited support for H4a.

Results for H4b suggest a negative relationship between wives' partner uncertainty and perceived acceptance from wives (see Table 5.6). Results found negative associations between all facets of relational uncertainty and husbands' perceived acceptability from wife. In addition, although not specifically posited in H4b, results from this model suggest that husbands perceive higher acceptability from wives when their disclosures are to female convoy members. This finding suggests that when couples have wives who are uncertain about their husbands' involvement in the relationship, they are more likely to have wives who think their husbands are less accepting of their disclosures. Husbands from marriages characterized by any facet of relational uncertainty report lower perceived acceptance from their wives with regard to their infertility-related disclosures, and husbands think their wives approve of their disclosures more when they are made to females. No other significant results were found for facets of relational uncertainty and perceived acceptability. These findings provide partial support for the associations posited in H4b.

To test the association between facets of relational uncertainty and the discrepancy between partners' tendencies to disclose infertility-related information to social convoy members (H4c), a two-level linear model was estimated with disclosure discrepancy as the outcome variable. Results from this model (see Table 5.7) suggest a positive, significant relationship between wife self uncertainty, husband self uncertainty,

wife partner uncertainty, and wife relationship uncertainty and disclosure discrepancies between spouses. There were no significant findings for husband partner uncertainty and husband relationship uncertainty. In addition, results indicated more discrepancies between partners when disclosing to female social convoy members. These results provide partial support for H4c.

*Partner Interference Hypothesis (H5)*

Results pertaining to H5a, which predicted that there was a positive association between interference and relative discomfort, are presented in Table 5.8. Consistent with the hypothesis, there was a negative association between wives' perceptions of facilitation from her husband and her relative discomfort. In addition, there was a positive association between wives' perception of interference from her husband and her relative discomfort. There were no other significant results in the models for wives' relative discomfort. There were also no significant results in any models for husbands' relative discomfort with wives' disclosures.

H5b predicted that partner interference correlates negatively with a partner's perception that their disclosures to social convoy members are acceptable to their spouses. Results suggested that there were no significant relationships between any facet of partner interference and the wives' perceptions that their disclosures to social convoy members are acceptable to their husbands (see Table 5.9). In contrast, husbands' perceptions of facilitation from wives was positively correlated with husbands' perceptions that his disclosures were acceptable to his wife. In addition, husbands perceived more acceptance from their wives when they disclosed to female social convoy members. Thus, there was partial support for H5b.

Finally, H5c predicted that husbands' and wives' partner interference is positively associated with the size of the discrepancy between partners' disclosures of infertility-related information to social convoy members. Results suggested that there were no significant associations between the interference variables and disclosure discrepancies (see Table 5.10); however, results suggest a larger discrepancy in disclosures to female convoy members than to male convoy members. Thus, the findings do not support H5c.

In sum, the hypotheses forwarded in this dissertation were partially supported. H1 predicted that feelings of stigma related to infertility were negatively associated with the tendency to share infertility-related information with social network members. Results suggested husbands' and wives' disclosure concerns, a facet of stigma, were negatively associated with the tendency to reveal information to convoy members. In addition, support was found for H2, which posited that communication efficacy with convoy members would have a positive association with disclosure. Similarly, H3 was supported in the prediction that closeness with convoy members would be positively associated with disclosure to them. With regard to relational uncertainty, H4a was partially supported in that facets of wives' uncertainty were positively correlated with wives' relative discomfort with husband disclosures, and husband and wife self uncertainty were both positively correlated with husbands' relative discomfort with wives' disclosures. Similarly, H4b was partially supported in that wives' partner uncertainty was negatively correlated with wives' perceptions that their disclosures are acceptable to husbands, and all facets of relational uncertainty were negatively associated with husbands' perceptions that their disclosures were acceptable to their wives. Multiple facets of relational uncertainty were found to positively correlate with discrepancies in disclosures between

spouses (H4c). Partial support was found for H5a in that both wives' perceived facilitation from husband and wives' perceived interference from husband were associated with wives' relative discomfort with husband disclosures; however, there were no significant associations between partner interference and husbands' relative discomfort with wife disclosures. Limited support was found for H5b in that the only significant association between partner interference and perceived acceptability from spouses was between husbands' perceived facilitation from wives and husbands' perceived acceptability from wives. Finally, H5c, the prediction that interference would contribute to disclosure discrepancies between spouses, was not supported.

Table 5.1

*Correlations Among Independent Variables*


---

|                              | V1     | V2     | V3     | V4     | V5     | V6     |
|------------------------------|--------|--------|--------|--------|--------|--------|
| V1: Self Uncertainty         | ---    | .74**  | .85**  | .28*   | -.38** | -.79** |
| V2: Partner Uncertainty      | .86**  | ---    | .78**  | .27    | -.29*  | -.71** |
| V3: Relationship Uncertainty | .91**  | .85**  | ---    | .35*   | -.37** | -.74** |
| V4: Partner Interference     | .36*   | .31*   | .50**  | ---    | -.43** | -.47** |
| V5: Partner Facilitation     | -.40** | -.46** | -.44** | -.57** | ---    | .52**  |
| V6: Marital Satisfaction     | -.70** | -.68** | -.75** | -.36*  | .47**  | ---    |

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*Note.* Correlations above the diagonal represent wives (n = 50), correlations below the diagonal represent husbands (n = 50).

\* $p < .05$ , \*\* $p < .01$ .

Table 5.2

*Paired Sample t-Tests Comparing Network Characteristics for Husbands and Wives*

|   | Husbands    | Wives       | <i>t</i> |
|---|-------------|-------------|----------|
| Personalized stigma ( <i>n</i> = 49)      | 1.47 (0.55) | 1.85 (0.85) | 4.29**   |
| Disclosure concerns ( <i>n</i> = 49)      | 2.43 (0.71) | 2.43 (0.83) | .041     |
| Communication efficacy ( <i>n</i> = 250)  | 4.20 (1.28) | 3.52 (1.45) | 5.50**   |
| Perceived closeness ( <i>n</i> = 250)     | 3.79 (1.03) | 3.97 (1.00) | 1.90     |
| Disclosure ( <i>n</i> = 250)              | 2.46 (1.30) | 2.74 (1.46) | 2.52*    |
| Self uncertainty ( <i>n</i> = 50)         | 1.36 (0.59) | 1.31 (0.54) | 0.94     |
| Partner uncertainty ( <i>n</i> = 50)      | 1.58 (0.86) | 1.45 (0.76) | 1.31     |
| Relationship uncertainty ( <i>n</i> = 50) | 1.55 (0.75) | 1.41 (0.71) | 1.67     |
| Partner interference ( <i>n</i> = 50)     | 2.21 (0.81) | 2.01 (0.99) | 1.10     |
| Partner facilitation ( <i>n</i> = 50)     | 3.92 (0.75) | 3.80 (0.91) | 0.73     |

*Note.* Cell entries for husbands and wives are means; parenthetical values are standard deviations.

\* $p < .05$ . \*\* $p < .001$ .

Table 5.3

*Independent Samples t-Tests Comparing Sex of Convoy Members on Network Characteristics for Husbands and Wives*

## Network Variables for Husbands

|                        | Social Convoy Member Sex |                        | <i>t</i> |
|------------------------|--------------------------|------------------------|----------|
|                        | Female ( <i>n</i> = 138) | Male ( <i>n</i> = 112) |          |
| Perceived Closeness    | 3.72 (1.13)              | 3.89 (0.90)            | 1.33     |
| Communication Efficacy | 4.10 (1.31)              | 4.32 (1.22)            | 1.33     |
| General Disclosure     | 2.37 (1.29)              | 2.57 (1.30)            | 1.26     |

## Network Relationships for Wives

|                        | Social Convoy Member Sex |                        | <i>t</i> |
|------------------------|--------------------------|------------------------|----------|
|                        | Female ( <i>n</i> = 138) | Male ( <i>n</i> = 112) |          |
| Perceived Closeness    | 4.21 (0.85)              | 3.64 (1.09)            | 4.46**   |
| Communication Efficacy | 3.76 (1.42)              | 3.22 (1.45)            | 3.00**   |
| General Disclosure     | 3.20 (1.37)              | 2.18 (1.28)            | 5.86**   |

*Note.* Cell entries for female and male social convoy members are means; parenthetical values are standard deviations.

\* $p < .05$ . \*\* $p < .001$ .

Table 5.4

*Results for the Multi-Level Models Predicting Disclosure (H1-H3)*

|                         | Baseline Model | Personalized Stigma Model |         | Disclosure Stigma Model |          |
|-------------------------|----------------|---------------------------|---------|-------------------------|----------|
|                         |                | Husband                   | Wife    | Husband                 | Wife     |
| Intercept               | 2.21***        | 2.21***                   | 2.21*** | 2.22***                 | 2.21***  |
| Level 1                 |                |                           |         |                         |          |
| Participant sex         | 0.32**         | 0.31**                    | 0.31**  | 0.31**                  | 0.32**   |
| Closeness               |                |                           |         |                         |          |
| Efficacy                |                |                           |         |                         |          |
| Level 2                 |                |                           |         |                         |          |
| Target sex <sup>a</sup> | 0.41***        | 0.42***                   | 0.41*** | 0.40**                  | 0.41**   |
| Level 3                 |                |                           |         |                         |          |
| Stigma                  |                | 0.16                      | 0.19    | -0.55***                | -0.36*** |

*Note.* Cell entries are the coefficients for each variable. For the unconditional model with disclosure as the outcome variable, the variability at Level 1 was .74, Level 2 was .09, and Level 3 was .17.

<sup>a</sup> Target sex was entered on the slope for participant's sex.

\*p < .05, \*\*p < .01, \*\*\*p < .001.



Table 5.4 (continued)

*Results for the Multi-level Models Predicting Disclosure (H1-H3)*

|                         | Efficacy Model | Closeness Model | Combined Model |
|-------------------------|----------------|-----------------|----------------|
| Intercept               | 2.09***        | 2.34***         | 2.26***        |
| Level 1                 |                |                 |                |
| Participant sex         | 0.63***        | 0.21**          | 0.39**         |
| Efficacy                | 0.47***        |                 | 0.24***        |
| Closeness               |                | 0.71***         | 0.54***        |
| Level 2                 |                |                 |                |
| Target sex <sup>a</sup> | 0.34***        | 0.28***         | 0.25*          |
| Level 3                 |                |                 |                |
| Personalized Stigma     |                |                 |                |
| Husband                 |                |                 | 0.46           |
| Wife                    |                |                 | 0.36           |
| Disclosure Stigma       |                |                 |                |
| Husband                 |                |                 | -0.38**        |
| Wife                    |                |                 | -0.16          |

*Note.* Cell entries are the coefficients for each variable. For the unconditional model with disclosure as the outcome variable, the variability at Level 1 was .74, Level 2 was .09, and Level 3 was .17.

<sup>a</sup> Target sex was entered on the slope for participant's sex.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 5.5

*Results for the Hierarchical Linear Models Predicting Relative Discomfort with Spouse Disclosures (H4a)*

|  | Self Uncertainty |         | Partner Uncertainty |         | Relationship Uncertainty |         |
|--|------------------|---------|---------------------|---------|--------------------------|---------|
|  | Wife             | Husband | Wife                | Husband | Wife                     | Husband |
| <b>Wife Relative Discomfort with Husband Disclosures</b> |                  |         |                     |         |                          |         |
| Intercept  | 0.07             | 0.07    | 0.06                | 0.06    | 0.07                     | 0.07    |
| Convoy member sex  | -0.03            | -0.03   | -0.03               | -0.03   | -0.04                    | -0.04   |
| Relational uncertainty <sup>a</sup>                      | 0.41             | 0.25    | 0.43*               | 0.16    | 0.38*                    | 0.24    |
| <b>Husband Relative Discomfort with Wife Disclosures</b> |                  |         |                     |         |                          |         |
| Intercept  | 0.16             | 0.16    | 0.16                | 0.15    | 0.16                     | 0.16    |
| Convoy member sex  | 0.01             | 0.01    | 0.01                | 0.01    | 0.01                     | 0.01    |
| Relational Uncertainty <sup>a</sup>                      | 0.47*            | 0.48**  | 0.20                | 0.22    | 0.28                     | 0.38    |

*Note.* Cell entries are model coefficients. The intraclass correlation was .39 for the model with wife relative discomfort as the outcome variable and .37 for the model with husband relative discomfort as the outcome variable.

<sup>a</sup>Relational uncertainty references the facet of relational uncertainty noted in the title of the columns that was on the slope at Level 2.

\* $p < .05$ , \*\* $p < .01$ .

Table 5.6

*Results for the Hierarchical Linear Models Predicting Perceived Acceptance from Spouse (H4b)*

|                                     | Self Uncertainty |          | Partner Uncertainty |         | Relationship Uncertainty |          |
|-------------------------------------|------------------|----------|---------------------|---------|--------------------------|----------|
|                                     | Wife             | Husband  | Wife                | Husband | Wife                     | Husband  |
| <b>Wife Acceptance from Husband</b> |                  |          |                     |         |                          |          |
| Intercept                           | 4.16***          | 4.16***  | 4.16***             | 4.16*** | 4.16***                  | 4.16***  |
| Convoy member sex                   | 0.05             | 0.05     | 0.04                | 0.04    | 0.05                     | 0.05     |
| Relational uncertainty <sup>a</sup> | -0.32            | -0.33    | -0.37*              | -0.17   | -0.33                    | -0.24    |
| <b>Husband Acceptance from Wife</b> |                  |          |                     |         |                          |          |
| Intercept                           | 3.98***          | 3.98***  | 3.99***             | 3.99*** | 3.98***                  | 3.98***  |
| Convoy member sex                   | 0.35**           | 0.35**   | 0.35***             | 0.32**  | 0.35***                  | 0.35***  |
| Relational uncertainty <sup>a</sup> | -0.54**          | -0.56*** | -0.39**             | -0.30** | -0.44***                 | -0.42*** |

*Note.* Cell entries are model coefficients. The intraclass correlation was .47 for the model with wife acceptance from husband as the outcome variable and .44 for the model with husband acceptance from wife as the outcome variable.

<sup>a</sup>Relational uncertainty references the facet of relational uncertainty noted in the title of the columns that was on the slope at Level 2.

\*\* $p < .01$ , \*\*\* $p < .001$ .

Table 5.7

*Results for the Hierarchical Linear Models Predicting Disclosure Discrepancies Between Spouses (H4c)*

|                                     | Self Uncertainty |         | Partner Uncertainty |         | Relationship Uncertainty |         |
|-------------------------------------|------------------|---------|---------------------|---------|--------------------------|---------|
|                                     | Wife             | Husband | Wife                | Husband | Wife                     | Husband |
| Intercept                           | 1.12***          | 1.31*** | 1.31***             | 1.31*** | 1.31***                  | 1.31*** |
| Convoy member sex                   | 0.30**           | 0.31**  | 0.32**              | 0.32**  | 0.30**                   | 0.31**  |
| Relational uncertainty <sup>a</sup> | 0.26**           | 0.17*   | 0.19*               | 0.04    | 0.21**                   | 0.08    |

*Note.* Cell entries are model coefficients. The intraclass correlation for this model was .03.

<sup>a</sup>Relational uncertainty references the facet of relational uncertainty noted in the title of the columns that was on the slope at Level 2.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Table 5.8

*Results for the Hierarchical Linear Models Predicting Relative Discomfort (H5a)*

|  | Facilitation |         | Interference |         |
|--|--------------|---------|--------------|---------|
|  | Wife         | Husband | Wife         | Husband |
| <b>Wives' Relative Discomfort with Husbands' Disclosures</b> |              |         |              |         |
| Intercept  | 0.07         | 0.07    | 0.06         | 0.07    |
| Convoy member sex  | -0.04        | -0.04   | -0.02        | -0.04   |
| Partner interference variables <sup>a</sup>                  | -0.27*       | -0.15   | 0.29*        | 0.12    |
| <b>Husbands' Relative Discomfort with Wives' Disclosures</b> |              |         |              |         |
| Intercept  | 0.16         | 0.15    | 0.16         | 0.16    |
| Convoy member sex  | 0.01         | 0.01    | 0.01         | 0.01    |
| Partner interference variable <sup>a</sup>                   | 0.02         | -0.15   | -0.16        | 0.18    |

*Note.* Cell entries are model coefficients. The intraclass correlation was .39 for the model with wife relative discomfort as the outcome variable and .37 for the model with husband relative discomfort as the outcome variable.

<sup>a</sup>Partner interference variables reference the interference or facilitation variables noted in the title of the columns that were on the slope at Level 2.

\* $p < .05$ .

Table 5.9

*Results for the Hierarchical Linear Models Predicting Perceived Acceptance from Spouse (H5b)*

|  | Facilitation |         | Interference |         |
|--|--------------|---------|--------------|---------|
|  | Wife         | Husband | Wife         | Husband |
| <b>Wives' Perceived Acceptance from Husbands</b> |              |         |              |         |
| Intercept  | 4.16***      | 4.16*** | 4.16***      | 4.16*** |
| Convoy member sex                                | -0.05        | -0.05   | -0.05        | 0.05    |
| Partner interference variable <sup>a</sup>       | 0.08         | 0.20    | -0.11        | -0.12   |
| <b>Husbands' Perceived Acceptance from Wives</b> |              |         |              |         |
| Intercept  | 3.99***      | 3.99*** | 3.98***      | 3.99*** |
| Convoy member sex                                | 0.34***      | 0.35*** | 0.35**       | 0.35*** |
| Partner interference variable                    | -0.05        | 0.28*   | 0.09         | -0.15   |

*Note.* Cell entries are model coefficients. The intraclass correlation was .47 for the model with wife acceptance from husband as the outcome variable and .44 for the model with husband acceptance from wife as the outcome variable.

<sup>a</sup>Partner interference variables reference the interference or facilitation variables noted in the title of the columns that were on the slope at Level 2.

\*\*\* $p < .001$ .

Table 5.10

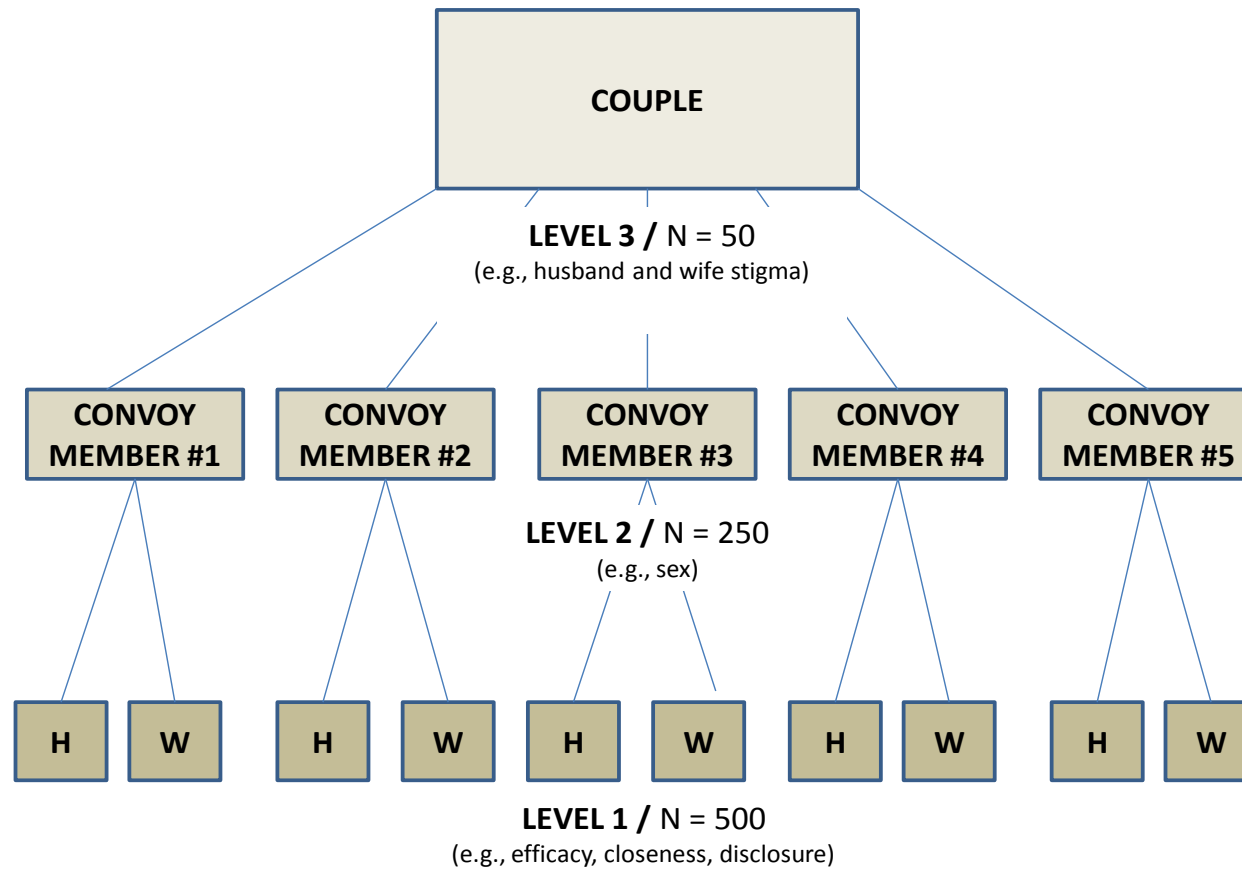
*Results for the Hierarchical Linear Models Predicting Disclosure Discrepancies Between Spouses (H5c)*

|  | Facilitation |         | Interference |         |
|--|--------------|---------|--------------|---------|
|  | Wife         | Husband | Wife         | Husband |
| Intercept                                  | 1.31***      | 1.31*** | 1.31***      | 1.31*** |
| Convoy member sex                          | 0.30**       | 0.32**  | 0.32**       | 0.32**  |
| Partner interference variable <sup>a</sup> | -0.16        | -0.06   | 0.15         | -0.05   |

*Note.* Cell entries are model coefficients. The intraclass correlation for this model was .03.

<sup>a</sup>Partner interference variables reference the interference or facilitation variables noted in the title of the columns that were on the slope at Level 2.

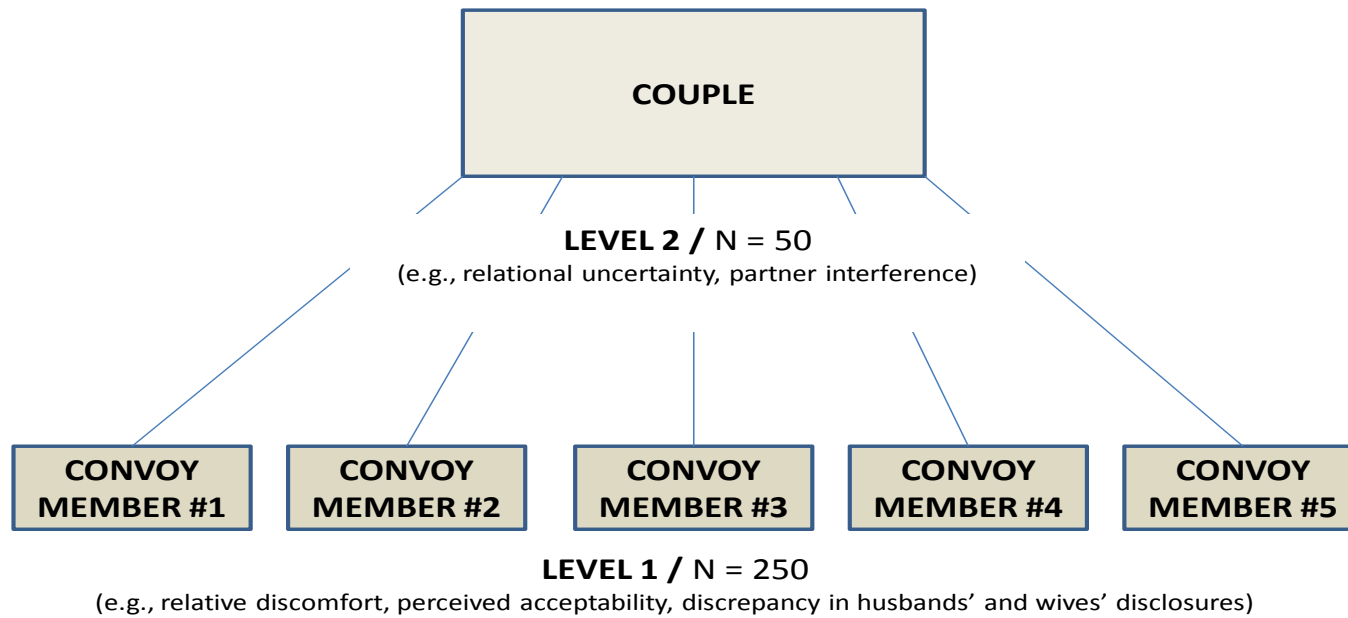
\*\* $p < .01$ , \*\*\* $p < .005$ .



*Figure 5.1.* Diagram of three-level model for H1-H3.

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*Figure 5.2.* Diagram of two-level model for H4 and H5.

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## Chapter 6

This dissertation focuses on marriage as a committed romantic partnership in which family plans form, unfold, and change. Along with the marital relationship, individuals are embedded within a social structure, called a support convoy, which is comprised of individuals who also have considerable influence on their lives. These people, often close family members, work colleagues, and neighbors, have the capability to alter an individual's role within a couple, to affect how a couple interacts, and to influence decisions a couple makes (see Felmler, 2001). The project highlighted how marital and social relationships do not exist independently from one another; rather, they co-exist and impact one another in ways that influence how people experience each partnership (Felmler, 2001; Felmler & Sprecher, 2000).

This dissertation positioned transitions as a consequential phase in marriages. In fact, I suggested that the transitions married partners experience in their life together spark “triple developmental” processes, wherein individuals change in response to changed circumstances, partners transform their relationships to adjust to an altered environment, and social convoys are modified by the changes that occur to both people and dyads. These social convoys are comprised of individuals hierarchically distributed across three levels of closeness within the convoy, and the majority of convoy members in this study represented those individuals closest to the participants (i.e., parents, friends, siblings). The general goal of this dissertation was to examine how married partners interface with each other and these close friends and family as they experience periods of change in the circumstances of their relationship.

One context that presents changes at both the marital and social network level is the experience of infertility. Reproductive disabilities force partners to revisit their family goals, make difficult decisions about treatment, and cope with the inherent uncertainty of their fate as biological or adoptive parents. Infertility also presents an element of uncertainty within social networks, as family and friends struggle to adjust their own desires and behaviors in response to their loved one's experience of infertility. Consequently, the experience of infertility is a representation of the complexities associated with adapting to circumstances while simultaneously managing relationships.

This dissertation draws from the idea that there is a tension between wanting to maintain privacy and wanting to reveal personal information (Petronio, 2002), especially related to transitions such as infertility (Steuber & Solomon, in press). People seek to manage the details of their private information to protect themselves, the people around them, and their relationships; but, they also want to divulge information to people in hope that they can offer comfort and support. This dialectical tension results in the development of rules for how individuals manage privacy (Petronio, 2002). When couples have difficulty coordinating rules for their co-owned information, they experience boundary turbulence.

Infertility information management occurs on two fronts, as individuals choose how much to disclose to people outside the marriage and as partners coordinate those disclosures with each other. The first issue is related to qualities of the relationship between individuals and social network members, whereas the latter relates to marital qualities. Both of these issues are central to understand information boundary coordination within marriage. The individual focus addresses when and to whom

individuals disclose personal details. The dyadic focus considers how well spouses calibrate their individual behaviors in a mutually acceptable way. By considering both, this dissertation recognizes that information management is a complicated balance of personal preferences and responsible co-ownership. I discuss in the remainder of the chapter the implications of the results of the study and the strengths and limitations of this project.

### Implications

Communication privacy management (Petronio, 2002) was used as a general framework for information management in this dissertation. To address the multiple foci of the theory, two sets of hypotheses were offered. The first set drew upon the tenets of revelation risk model to explore individual characteristics that contribute to tendencies to disclose private information (Afifi & Steuber, 2009). The second set of hypotheses used assumptions of RTM to predict marital characteristics that contribute to the boundary turbulence between spouses (Solomon & Knobloch, 2002, 2004). The following sections review the results as they align with these theories.

#### *Revelation Risk Model*

RRM asserts that risk directly impacts a person's readiness or willingness to disclose private information or secrets (Afifi & Steuber, 2009). Using tenets of RRM, this dissertation examined individual factors associated with disclosure, social convoy member characteristics associated with disclosure, and couple-level aspects that might influence disclosure.

Recall that, in the context of this study, risk was operationalized by the perception of stigma. Results suggested that wives experienced significantly more personalized

stigma (i.e., concerns over how they will be treated if identified as infertile) than their husbands, but wives and husbands experienced disclosure concerns (i.e., concerns about protecting the information to avoid being stigmatized) similarly. Although neither husbands' nor wives' personalized stigma was found to associate with disclosure, disclosure concerns did impact disclosure with social convoy members. Specifically, to the extent that individuals were part of a couple where the husband experienced disclosure concerns, individuals disclosed significantly less to social network members. These results align with evidence that partnerships are more protective of the husbands' public face (Van Balen et al., 1996), because his concerns about the consequences of disclosure prompted both partners to withhold information.

Significant results were found for the disclosure concerns facet of stigma; however, there were no significant associations for personalized stigma. These results suggest that perhaps, in the context of infertility, a major facet of stigma revolves around privacy control rather than issues of self-image or concerns with public attitudes toward the disability, which are more prominent in medical issues such as HIV (Berger et al., 2001). Another explanation could be that stigma pertains not just to the diagnosis of infertility, but to the social judgments made about decisions to have or not have children, treatment choices, and the intensity or longevity with which to try to overcome the reproductive disability. In these cases, judgments are made at a societal level based on perceptions of norms, religion, and practicality. Perhaps future measures need to tap all these areas of societal judgment to capture the many facets of stigma related to infertility, as well as to parse out distinctions between privacy concerns and perceptions of stigma.

Findings from this study suggest that components of RRM may extend beyond situations involving secret disclosures. Whereas RRM was developed to explain secret-keeping and revealing per se, this project focused on disclosures related to ongoing topics of a personal nature. The results of this study suggest that the assumptions of the model may translate to information management contexts in which stigma is a factor.

Information management theories offer insight into how people coordinate co-owned, private information, and the assessment of risk associated with stigmatized information may lead to a more intensified privacy dialectic. In those situations, considering social perceptions of the private information may be particularly important.

Communication efficacy was also considered as a factor in predicting disclosures to social convoy members (H2). In the context of this study, communication efficacy was defined as the ability to voice complaints about behaviors related to infertility with the social convoy members. Husbands reported significantly higher communication efficacy with their social convoy members than wives reported. Whereas there was no significant difference between sex of the convoy member for husbands, wives reported significantly higher communication efficacy with their female convoy members than their male convoy members. With regard to substantive analyses, communication efficacy was found to have a positive impact on disclosure, such that the more confidence a person has in their ability to voice relational complaints to their social convoy member, the more likely they are to reveal private information to that person as well. This finding is important because it shows that people's expectations about future control over shared information shapes their decision to divulge information.

Notably, RRM operationalizes communication efficacy by considering the extent to which people can talk about the secret with the targets of disclosure, more specifically by focusing on whether people can broach the topic with others. In applying RRM to information management, rather than secret revelations, I conceptualized communication efficacy in terms of the participants' ability to voice complaints about the reactions of the targets or revisit issues related to the targets' handling of the private information. In this context, communication efficacy might be tied more to communicating about relationship maintenance and less about confidence in the ability to communicate the information itself. In other words, communication efficacy might not only be necessary at the moment of disclosure, but must be maintained beyond that point in time by being able to revisit the issue with the target of disclosure and renegotiate how he or she is handling that information.

Finally, the impact of closeness to the target of the disclosure was examined (H3). Husbands and wives in this sample perceived similar levels of closeness to their social convoy members, but women reported feeling significantly closer to their female convoy members than their male convoy members. In the substantive analysis, closeness was found to be a positive predictor of disclosure. In other words, the closer people feel to their convoy member, the more likely they are to reveal infertility-related information. This finding is consistent with a wealth of research linking closeness and disclosure (e.g., Golish & Caughlin, 2002; Vangelisti & Caughlin, 1997), but it also suggests that female dyads are the most likely context for information sharing. If wives are revealing information to other women that husbands believe are private to the marriage, the

violation could result in feelings of embarrassment or betrayal for the husband (Petronio, 2002).

In total, the results suggest that stigma, communication efficacy, and closeness interplay in a way that influences individual sharing of co-owned infertility-related information. Specifically, in couples where a husband is coping with disclosure concerns, individuals disclose less information to their social convoy members, perhaps to protect themselves or their partners from the risk associated with revealing that information. As predicted, communication efficacy and closeness within individual relationships with the social convoy members are positively associated with disclosure. These three factors, tested individually and together, all affect disclosures to social convoy members.

#### *Relational Turbulence Model*

This dissertation drew from the relational turbulence model to extend CPM by identifying marital characteristics that might contribute to breaches in boundary coordination. Petronio (2002) emphasized how the complexity of co-owning information sometimes results in disrupted coordination, otherwise known as boundary turbulence. Petronio suggested that several factors can contribute to boundary turbulence, including an intentional leak, a mistaken breach of rules, privacy dilemmas about who has the right to know information, and unclear boundaries. Beyond identifying these threats to coordinated information management, the theory does not specify the relational conditions that contribute to instances of boundary turbulence.

In this project, I considered three manifestations of boundary turbulence, and I examined how they relate to relational qualities featured in RTM. One way boundary turbulence can be explored is by considering relative discomfort with spousal disclosures



(H4a, H5a). Wives' uncertainty about their husbands' commitment to the relationship and the future of the relationship itself were positively associated with wives' relative discomfort with husbands' disclosures. Taken together, these findings highlight how women's confidence in their relationships can reap benefits for husbands and wives. To the extent that wives in a marriage are certain about a husband's involvement and they experience helpful contributions to their goals, wives also have greater comfort with how that husband represents private information about the marriage to others. In notable contrast, only a husband's self uncertainty had bearing on a husband's discomfort with his wife's disclosures. Although speculative, these patterns suggest that the conditions which evoke relative discomfort with disclosures are different for wives and husbands.

A second marker of boundary turbulence is disapproval regarding disclosures to friends and family outside the marital dyad (H4b, H5b). In this study, wives' uncertainty about their husbands' commitment to the relationship was negatively associated with wives' perceptions that husbands were accepting of their disclosures. More notably, there was a negative association between all facets of relational uncertainty and husbands' perceptions that wives were accepting of their disclosures. I also observed a positive association between husbands' perceptions of facilitation from their wives and perceived acceptance from wives. With regard to partner interference, wives' perceived interference from their husbands was associated with wives' relative discomfort. These results associated with relational uncertainty and the acceptability of husbands' disclosures are reminiscent of the pessimism bias documented by Knobloch and colleagues (2007). Results from that study found that relational uncertainty was negatively associated with people's perceptions of affiliation and involvement in their spouse's messages. These

findings suggest that spouses grappling with doubts about their marriage perceive less liking, less engagement, and more aggressiveness in their conversations with each other. In the context of infertile couples, relational uncertainty appears to direct those negative evaluations to the disclosure behaviors of husbands, but not wives.

Boundary turbulence was also operationalized by discrepancies between spouses' actual disclosures, measured by comparing the independent self-reports of wives and husbands. Wives' self, partner, and relationship uncertainty were positively associated with discrepancies in disclosures between spouses. On the other hand, husbands' self uncertainty was the only facet of relational uncertainty that was associated with discrepancies in disclosures. These findings, that coordinating levels of disclosures between spouses is especially challenging when wives are experiencing relational uncertainty, suggests that wives perceptions of the marriage may have more impact on the status of the partnership. In their longitudinal studies of marriage, Bradbury and Fincham (1987) found that wives' later marital satisfaction was predicted by both causal and responsibility attributions, whereas husbands' attributions did not impact marital satisfaction. Similarly, wives' relational uncertainty might impact the marriage to a greater extent than husbands' perceptions of uncertainty.

The results associated with relational uncertainty are qualified by the relatively low level of uncertainty within this sample. One explanation for the limited relational uncertainty in this sample is that participants who self-select themselves to take part in a research study are often the same partners who are experiencing marital stability. An alternative possibility is that the relational uncertainty measures I employed are not tapping the appropriate sources of ambiguity within a marriage. Recent research

(Knobloch, 2008) examined the substance of relational uncertainty within the more established context of marriage to see if the sources of uncertainty were different from dating relationships, the original dyadic context the theory addressed. Of the 12 content areas found to contribute to relational uncertainty in marriage, only one addressed a commitment to the relationship, the rest focused on children, finances, family members, and other relational issues. Knobloch (2008) asserted that, whereas the content of ambiguity within dating relationships was focused on the establishment and sustenance of the relationship, most of the sources of ambiguity within a marriage may actually stem from the external pressures on the relationship. These findings suggest that measuring relational uncertainty in different contexts may require unique measures tailored to the dyadic context being investigated.

Results from this study may substantiate the idea that using a common scale across different relationship domains does not appropriately capture relational uncertainty. In a qualitative study of discourse within online forums dedicated to infertility support, relational uncertainty was prominent in themes involving invalidation of the marriage and feelings of blame connected with infertility (Steuber & Solomon, 2008). Feelings of ambiguity about their relationship permeated through the discourse for each topic. Despite the presence of relational uncertainty themes in the qualitative study, quantitative results from this study, which used the original measure focused on commitment to the relationship, suggest that infertile couples in this sample are coping with low amounts of uncertainty. Adjusting the relational uncertainty measure to the marital context is one strategy for better indexing the phenomena observed by Steuber and Solomon.

Significant associations were found between wives' perceptions of partner interference and facilitation and wives' relative discomfort, as well as husbands' perceptions of facilitation from wives and husbands' perceptions of acceptability. The remaining facets of partner uncertainty were not associated with relative discomfort, perceived acceptance, or disclosure discrepancies. The limited support found for the impact of partner interference on boundary turbulence suggests that facilitation of everyday routines might not impact a couple's ability to coordinate boundaries. Another explanation could be that the frustration associated with interference from partners contributes to a dialogue between spouses to negotiate those disruptions, perhaps clarifying expectations between them. Positive associations have been found between interference from partners and appraised negativity of potential relational irritations (Solomon & Knobloch, 2004), as well as emotional jealousy (Knobloch et al., 2001). Furthermore, empirical evidence has documented a positive link between interference and direct communication within relationships (Theiss & Solomon, 2006). Perhaps the direct communication associated with partner interference acts as a buffer for boundary turbulence by instigating a discussion about disruptions of goals. Future studies should further explore the potential links between partner interference, direct communication, and boundary coordination.

#### *Communication Privacy Management*

Petronio (2002) maintained that if the parameters surrounding the private information are clear, then information management between co-owners should be more effective, and boundary management runs most smoothly when owners enact all the negotiated rules about how to share or protect information. What is less clear from the

theory is how relational conditions affect whether co-owners of information disagree about communication boundaries and violate expectations. This study highlighted two considerations related to these assumptions of CPM. The first is that co-owners may not be actively negotiating those rules. In the case of married couples, partners who are coping with relational uncertainty may actually not be communicating about those expectations in the first place. If relational uncertainty is decreasing communication, the reason those couples might be experiencing more boundary turbulence is simply because they are not discussing ways to jointly manage that information.

Another consideration, although more speculative, is that perhaps couples agree on rules that are different for each spouse. The results of this investigation suggested that women are disclosing more information to social network members than men do. Following CPM, I took discrepancies in reported disclosures to be a sign of boundary turbulence. Perhaps, however, mutually agreed upon rules allow spouses different boundaries for disclosure. In fact, the couple might collectively manage information by designating one partner as the interface with social networks. If replicated in future work, this finding points to an important refinement of the assumptions articulated within CPM.

This dissertation examines individual and relational characteristics to expand theories on communication, namely communication privacy management. Just as the foundation for this study was built from various disciplines, the results related to communication privacy management have the potential to be expanded by those viewpoints. For example, by adopting a psychological perspective, future studies on information management can focus on the cognitions and affect that occur within the

marital system. Gottman (1994b) asserted that many important aspects of marital interaction are embedded in the assessment of affect. Similar to how this study placed relational uncertainty as factor in boundary turbulence, it would be interesting to consider how positive and negative affect influence discussions of information management. Because positive and negative affect often manifest in observable behavior patterns between spouses (e.g., Noller et al., 1994), they may influence a couple's ability to coordinate boundaries, as well as their willingness to abide by them.

The sociological perspective highlights the effects of demographic trends and pressures that emerge from the societal infrastructure. These norms influence what people perceive as risky to share. For example, if the societal norm is to have children and a couple decides they do not want to become parents, they may be less likely to reveal their motivations for that decision because of the high expectation for parenthood. More specific to infertility, using donor sperm and surrogate mothers as a treatment for infertility is still uncommon, and some individuals may perceive a stigma associated with those options. Consequently, parents who attempt that treatment or conceive a child as a result of it might be hesitant to divulge that information. Just as "test-tube babies" via in vitro fertilization have become more common and accepted through the years (Seibel & Levin, 1987), perhaps these less normative treatments will follow the same trajectory, resulting in more openness about treatment experiences.

Finally, the lifespan perspective acknowledges the dynamic nature of relationships and how past experiences influence perceptions and behaviors within a marriage (Pecchioni et al., 2005). Exploring boundary coordination from this viewpoint suggests that, just as partners may become more acquainted with each other as their

marriage progresses, they may require less negotiation to maintain privacy rules. Having simply experienced the need to coordinate boundaries earlier in the marriage may equip spouses with the necessary skills to manage information as their relationship progresses, simply because there is less doubt about their partner's preferences. Furthermore, the point in time that spouses face situations that require boundary management might influence the level of privacy they desire. For instance, younger couples coping with a health situation may desire a high degree of privacy from their family members, but older parents might be more comfortable with their adult children knowing the details of their health condition as they require health care assistance. Each of these perspectives offers a more holistic view of the processes at work as couples negotiate information management, and they also suggest avenues for future study.

#### Strengths and Limitations

The conclusions advanced in this document are contextualized by the strengths and limitations of the study reported. A major strength of the study was that all couples were actively treating their reproductive disability, allowing them to offer in-the-moment perspectives on their infertility experience. Another strength was that the perspective of each spouse was captured, which allowed me to compare husbands' and wives' perceptions and disclosure behaviors. The analysis conducted also allowed for multiple levels of analysis to be examined. Specifically, the use of a three-level HLM model allowed differences between individuals, social convoy members, and couples to be parsed out in ways that shed light on how various components come together to predict an individual's disclosure. Similarly, examining boundary turbulence in a two-level HLM allowed both individual and couple level variables to be considered. Had the hypotheses

not been analyzed as they were, distinctions between wife and husband stigma, relational uncertainty, and partner interference variables would not have been documented.

This dissertation placed infertility as a marital transition that forces couples to adjust their family goals, but couples were only measured at one point in time. Following a couple through the infertility experience could shed light on what situational and marital circumstances contribute to changes between partners and social convoy members. In fact, the diverse infertility experiences across couples in this study suggest that not only does the reproductive disability present itself differently among couples, but components of that experience can drastically change within couples. For example, whereas most of the couples in this study coped with primary infertility, there was a notable proportion managing secondary infertility (22%). Being able to differentiate between those two experiences requires further study, and could perhaps shed light on how contextual aspects of the experience impact privacy rules differently. Similarly, 43% of this sample had coped with a miscarriage, and 15% had suffered through more than one. For those couples, the infertility experience may have started off as an obstacle, and evolved into a more intense feeling of loss as they progressed through losing a pregnancy.

Applying the findings from this study to other transitions within marriage is another equally important direction for future research. This study was founded on the idea that marriages transcend through a variety of transitions, and the context of infertility represents one of the many potential turning points and changes couples encounter. Finding commonalities across transitions is necessary to distinguish the individual and marital features that are integral aspects of jointly managing private information, and



those that are especially pertinent to the context of infertility. For example, the stigma associated with infertility (e.g., Rowland, 1996; Van Balen et al., 1996) might be less relevant to topics that are more normative, such as the passing of an elderly member of the family or a child's college decision. In those situations, the presence of risk might not be as prominent or may take different forms. Assessing the relationships documented in this study in other marital transitions will provide a firmer foundation for claims about information management related to transformative events within marriage.

Another limitation to this study concerns the representativeness of the sample. Notably, the majority of participants were aggressively treating their disability. Expectedly, 88% of the sample reported having used at-home, non-prescription treatment attempts, such as monitoring body temperature or charting menstrual cycles. These treatment behaviors are not expensive and not intrusive, making them easy to implement for many couples. What was less expected was that 82% of the sample reported using ovulation inducing drugs, and 68% had tried intrauterine insemination. Both of these treatments require being under the supervision of a doctor, often a specialist, which suggests that the majority of these couples are actively and seriously treating their reproductive disability. Although the sample was gathered from a range of socioeconomic statuses, the reports of treatment suggest that these couples are highly prioritizing their goal of having a baby, despite the costs associated with them. Conversely, couples who are less aggressively treating their infertility are underrepresented in this study. Understanding what differentiates the couples who actively fight their disability from those who do not might shed light on the different ways people process and approach this stressor.

Relatively high-quality relationships were another characteristic of the sample. In general, participants reported being in high-quality marriages with low levels of relational uncertainty, limiting the variance of the relational quality variable. This restricted variance could have had implications for my statistical inferences, making it particularly important for future studies to capture diversity in the quality of relationships. Although speculative, it seems that couples who are experiencing some level of stability in their marriage are the ones who are willing to come in together and talk about their partnership, leaving out those couples who are uncomfortable or unwilling to allow researchers into the private aspects of their life and marriage. Perhaps if those couples were also represented, there would be more variance in the stability of partnerships. Similarly, those couples who have divorced or split up due to the pressures of infertility are not represented in this sample, and following couples longitudinally may enable researchers to capture some of those experiences as they unfold as well.

Finally, although the diversity within the sample has been documented, the sample in the study represents only couples who have been coping with infertility for five years or less. Literature suggest that couples identify as infertile for upward of ten years (e.g., Griel, 1991; Steuber & Solomon, 2008), and the experience of infertility, as well as the management of information related to it, is likely very different for those couples who have been coping for longer than five years. It is important for future studies to examine the changes that exist for couples who have been coping with infertility for an extended period of time. In addition, to better grasp a lifespan perspective on the marriage and the infertility experience, future studies should explore how infertility impacts marriages differently across age and length of relationship. There were differences present within

the sample for this study, but the size of the sample did not allow for those differences to be statistically explored.

### Conclusion

The aim of this dissertation was to understand the processes at work as marital partners attempt to simultaneously manage infertility within their marriage and with respect to their social networks. I addressed this goal by adopting a communication privacy management perspective and integrating aspects of the revelation risk model and relational turbulence model. Findings from this study identify individual, marital, and social convoy member characteristics that might impact individual disclosures to social convoy members. Results also extend our understanding of what marital characteristics might coincide with boundary turbulence between spouses.

## REFERENCES

- Afifi, T. D., Afifi, W. A., Morse, C., & Hamrick, K. (2008). Adolescents' avoidance tendencies and physiological reactions to discussions about their parents' relationship: Implications for post-divorce and non-divorced families. *Communication Monographs, 75*, 290-317.
- Afifi, T. D., Olsen, L. N., & Armstrong, C. (2005). The chilling effect and family secrets. *Human Communication Research, 31*, 564-598.
- Afifi, T. D., & Schrodt, P. (2003). Uncertainty and the avoidance of the state of one's family/relationships in stepfamilies, post-divorce single parent families, and first marriage families. *Human Communication Research, 29*, 516-533.
- Afifi, T. D., & Steuber, K. R. (2009). The revelation risk model (RRM): Factors that predict the revelation of secrets and the strategies used to reveal them. *Communication Monographs, 76*, 144-176.
- Afifi, W. A., & Burgoon, J. K. (1998). "We never talk about that": A comparison of cross-sex friendships and dating relationships on uncertainty and topic avoidance. *Personal Relationships, 5*, 255-272.
- Afifi, W.A. & Guerrero, L. K. (2000). Motivations underlying topic avoidance in close relationships. In S. Petronio (Ed.), *Balancing the secrets of private disclosures* (pp.165-180). Mahwah, NJ.
- Afifi, W. A., & Reichert, T. (1996). Understanding the role of uncertainty in jealousy experience and expression. *Communication Reports, 9*, 94-103.
- Amato, P.R., & Booth, A. (1995). Changes in gender role attitudes and perceived marital quality. *American Sociological Review, 60*, 58-66.

- Amato, P.R., Booth, A., Johnson, D.R., & Rogers, S.J. (2007). *Alone together: How marriage in America is changing*. Cambridge: Harvard University Press.
- Amato, P., & Rogers, S. (1997). A longitudinal study of marital problems and subsequent divorce. *Journal of Marriage and the Family*, 59, 612-624.
- American Society for Reproductive Medicine (2009). *Frequently asked questions about infertility*. <http://www.asrm.org/Patients/faqs.html#Q4>:
- Antonucci, T. C. (2001). Social relations: An examination of social networks, social support, and sense of control. In J. E. Birren (Ed.), *Handbook of the psychology of aging* (pp. 427 – 453). San Diego, CA: Academic Press.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through twenties. *American Psychologist*, 55, 469-480.
- Barad, D. (2008). *Online library – Fact sheets: Age and female fertility*. American Fertility Association. <http://www.theafa.org/library/facts/>.
- Baxter, L. A. (1988). A dialectical perspective on communication strategies in relationship development. In S. Duck, D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.), *Handbook of personal relationship: Theory, research and interventions* (pp. 257-273). Oxford, England: John Wiley & Sons.
- Baxter, L. A., & Bullis, C. (1986). Turning points in developing romantic relationships. *Human Communication Research*, 12, 469-493.
- Baxter, L. A., & Montgomery, B. M. (1996). *Relating: Dialogues and dialectics*. New York, NY: Guilford.
- Baxter, L. A., & Wilmot, W. W. (1985). Taboo topics in close relationships. *Journal of Social and Personal Relationships*, 2, 253-269.

- Berger, B., Ferrans, C. E., & Lashley, F. R. (2001). Measuring stigma in people with HIV: Psychometric assessment of the HIV stigma scale. *Research in Nursing and Health, 24*, 518-529.
- Berger, C. R., & Bradac, J. J. (1982). *Language and social knowledge: Uncertainty in interpersonal relations*. London: Edward Arnold.
- Berscheid, E. (1983). Emotion. In H. H. Kelley, E. Berscheid, A. Christensen, J. Harvey, T. L. Huston, G. Levinger, *et al.* (Eds.), *Close relationships* (pp. 110-168). San Francisco, CA: Freeman.
- Birditt, K. S., & Antonucci, T. C. (2007). Relationship quality profiles and well-being among married adults. *Journal of Family Psychology, 21*, 595-604.
- Bott, E. (1957). *Family and social networks*. Tavistock.
- Bradbury, T. N., & Fincham, F. D. (1987). The impact of attributions in marriage: A longitudinal analysis. *Journal of Personality and Social Psychology, 53*, 510-517.
- Bradbury, T. N., & Fincham, F. D. (1990). Attribution in marriage: Review and critique. *Psychology Bulletin, 107*, 3-33.
- Braiker, H. B., & Kelley, H. H. (1979). Conflict in the development of close relationships. In R. L. Burgess and T. L. Huston (Eds.), *Social exchange in developing relationships* (pp. 135-168). New York: Academic Press.
- Brown, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp.136-162). Newbury Park, CA: Sage.
- Buchanan, C. M., Maccoby, E. E., & Dornbusch, S. M. (1991). Caught between parents: Adolescents' experience in divorced homes. *Child Development, 62*, 1008-1029.

- Bumpass, L. L., Martin, T. C., & Sweet, J. A. (1991). The impact of family background and early marital factors on marital disruption. *Journal of Family Issues, 12*, 22-44.
- Burleson, B. R. (2005). Some ethical considerations concerning the pragmatic application of research on personal relationships: Evaluating the safety and efficacy of our prescriptions. *Relationship Research News, 4*, 14-20.
- Burleson, B. R., & Denton, W. H. (1992). A new look at similarity and attraction in marriage: Similarities in social-cognitive and communication skills as predictors of attraction and satisfaction. *Communication Monographs, 59*, 268-287.
- Bute, J. J., Donovan-Kicken, E., Martins, N. (2007). Effects of communication-debilitating illness and injuries on close relationships: A relational maintenance perspective. *Health Communication, 21*, 235-246.
- Byrk, A. S., & Raudenbush, S. W. (2002). *Hierarchical linear models: Applications and data analysis methods*. Thousand Oaks: Sage.
- Canary, D., Cupach, W. R., & Messman, S. J. (1995). *Relationship conflict: Conflict in parent-child, friendship, and romantic relationships*. Thousand Oaks, CA: Sage.
- Canary, D. J., & Stafford, L. (2001). Equity in the preservation of personal relationships. In J. Harvey and A. Wenzel (Eds.), *Close romantic relationships* (pp. 133-152). London: Routledge.
- Carmeli, Y. S., Birenbaum-Carmeli, D. (1994). The predicament of masculinity: Towards understanding the male's experience of infertility. *Sex Roles, 30*, 663-677.
- Cartensen, L. L., Gottman, J. M., & Levenson, R. W. (1995). Emotional behavior in long-term marriage. *Psychology and Aging, 10*, 140-149.

- Cartensen, L. L., Graff, J., Levenson, R. W., & Gottman, J.M. (1996). Affect in intimate relationships: The developmental course in marriage. In C. Magai & S. H. McFadden (Eds.), *Handbook of emotion, adult development, and aging* (pp.227-247). San Diego, CA: Academic Press.
- Carter, B. (1999). Becoming parents: The family with young children. In B. Carter & M. McGoldrick (Eds.), *Expanded family life cycle: Individual, family, and social perspectives* (pp.249-271). Boston: Allyn & Bacon.
- Caughlin, J. P., Afifi, W.A., Carpenter-Theune, K. E., & Miller, L. E. (2005). Reasons for, and consequences of, revealing personal secrets in close relationships: A longitudinal study. *Personal Relationships, 12*, 43-49
- Center for Disease Control and Prevention. (2007). *2004 Assisted Reproductive Technology Report*. August 1, 2007. <http://www.cdc.gov/art/ART2004/index.htm>.
- Chandra, A., Martinez, G. M., Mosher, W. D., Abma, J. C., & Jones, J. (2005). Fertility, family planning, and reproductive health of U.S. women: Data from the 2002 National Survey of Family Growth. *Vital Health Statistics, 23*, 1-160.
- Christensen, A. & Heavey, C. L. (1990). Gender and social structure in the demand/withdraw pattern of marital interaction. *Journal of Personality and Social Psychology, 59*, 73-81.
- Coltrane, S. (1996). *Family man: Fatherhood, housework, and gender equity*. New York: Oxford University Press.
- Covington, S. N. (2006). Pregnancy loss. In S. N. Covington & L. H. Burns (Eds), *Infertility counseling: A comprehensive handbook for clinicians* (pp. 290-304). New York: Cambridge University Press.



- Dainton, M., & Stafford, L. (1993). Routine maintenance behaviors: A comparison of relationship type, partner similarity, and sex differences. *Journal of Social and Personal Relationships, 10*, 255-271.
- Daniluk, J. C. (1997). Gender and infertility. In S. Leiblum (Ed.), *Infertility: Psychological issues and counseling strategies* (pp. 103-125). New York: John Wiley & Sons.
- Domar, A. D., Clapp, D., Slawsby, E. A., Dusek, J., Kessel, B., & Freizinger, M. (2000). Impact of group psychological interventions on pregnancy rates in infertile women. *Fertility and Sterility, 73*, 493-498.
- Epstein, Y. M. & Rosenberg, H. S. (1997). He does, she doesn't; she does, he doesn't: Couple conflicts about infertility. In S. R. Leiblum (Ed.), *Infertility: Psychological issues and counseling strategies* (pp. 129-148). Oxford, England: John Wiley & Sons .
- Fassino, S., Piero, A., Boggio, S., Piccioni, V., & Garzaro, L. (2002). Anxiety, depression and anger suppression in infertile couples: A controlled study. *Human Reproduction, 17*, 2986-2994.
- Felmlee, D. H. (2001). No couple is an island: A social network perspective on dyadic stability. *Social Forces, 79*, 1259-1287.
- Felmlee, D., & Sprecher, S. (2000). Close relationships and social psychology: Intersections and future paths. *Social Psychology Quarterly, 63*, 365-376.
- Fincham, F. D. (2003). Marital conflicts: Correlates, structure, and context. *Current Directions in Psychological Science, 94*, 183-190.

- Furstenberg, F. F., Rumbaut, R. G., Settersten, R. A., (2005). On the frontier of adulthood. In R. A. Settersten, F. F. Furstenberg, & R. G. Rumbaut (Eds.), *On the frontier of adulthood: Theory, research, and public policy* (pp. 3 -25). Chicago: University of Chicago Press.
- George, L. K. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology, 19*, 353-373.
- Glenn, H. A. (1990) Parental death as a precipitant of marital conflict in middle age. *Journal of Marital and Family Therapy, 17*, 81-87,
- Glover, I., Gannon, K., Sherr, L. & Abel, P. D. (1996). Distress in sub-fertile men: A longitudinal study. *Journal of Reproductive and Infant Psychology, 14*, 23-36.
- Golish, T. D., & Caughlin, J. P. (2002). I'd rather not talk about it: Adolescents' and young adults' use of topic avoidance in stepfamilies. *Journal of Applied Communication Research, 30*, 78-106.
- Gottman, J. M. (1994a). *What predicts divorce: The relationship between marital process and marital outcomes*. Hillsdale, NJ: Lawrence Erlbaum.
- Gottman, J.M. (1994b). *Why Marriages Succeed or Fail*. New York: Simon and Schuster.
- Gottman, J.M. (1998). Psychology and the study of marital processes. *Annual Review of Psychology, 49*, 169-197.
- Greil, A. L. (1991). *Not yet pregnant: Infertile couples in contemporary America*. New Brunswick, NJ: Rutgers University Press.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Hendrick, S.S., Dicke, A., & Hendrick, C. (1998). The relationship assessment scale. *Journal of Social and Personal Relationships, 15*, 137-142.

- Henry, N., Berg, C., Smith, T., & Florsheim, P. (2007). Positive and negative characteristics of marital interaction and their association with marital satisfaction in middle-aged and older couples. *Psychology and Aging, 22*, 428-441.
- Holmes, T. B., & Jarvis, M. O. (2003). Hostile, volatile, avoiding, and validating couple-conflict types: An investigation of Gottman's couple-conflict types. *Personal Relationships, 10*, 267-282.
- Honeycutt, J. M. (1993). Memory structures for the rise and fall of personal relationships: The role of intrapersonal phenomena. In S. Duck (Ed.), *Individuals in relationships* (pp.60-88). Newbury Park, CA: Sage.
- Honeycutt, J. M., & Cantrill, J. G. (2001). *Cognition, communication, and romantic relationships*. Mahwah, NJ: Erlbaum.
- Honeycutt, J. M., Cantrill, J. G., & Greene, R. W. (1989). Memory structures for relational escalation: A cognitive test of the sequencing of relational actions and stages. *Human Communication Research, 16*, 62-90.
- Julien, D. & Markman, H. (1991). Social support and social networks as determinants of individual and marital outcomes. *Journal of Social and Personal Relationships, 8*, 549-568.
- Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachments, roles, and social support. In P. B. Baltes and O. G. Brim, (Eds), *Life-Span Development and Behavior*. Academic Press: New York.
- Karney, B. R., & Bradbury, T. N. (1995). The longitudinal course of marital quality and stability: A review of theory, methods, and research. *Psychological Bulletin, 118*, 3-34.

- Kaufman, G., & Uhlenberg, P. (1998). Effects of life course transitions on the quality of relationships between adult children and their parents. *Journal of Marriage and the Family, 60*, 924-938.
- Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston, T. L., Levinger, G., et al. (1983). *Analyzing close relationships*. San Francisco: Freeman.
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York: Guilford.
- Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York: Guilford.
- Knapp, M. (1984). The study of nonverbal behavior vis-à-vis human communication theory. In A. Wolfgang (Ed.) *Nonverbal behavior: Perspectives, applications, intercultural insights* (pp.15-40). Ashland, OH: Hogrefe & Huber.
- Knobloch, L. K. (2007). Perceptions of turmoil within courtship: Associations with intimacy, relational uncertainty, and interference from partners. *Journal of Social and Personal Relationships, 24*, 363-384.
- Knobloch, L. K. (2008). The content of relational uncertainty within a marriage. *Journal of Social and Personal Relationships, 25*, 467-495.
- Knobloch, L. K., & Carpenter-Theune, K. E. (2004). Topic avoidance in developing romantic relationships: Associations with intimacy and relational uncertainty. *Communication Research, 31*, 173-205.
- Knobloch, L. K., & Donovan-Kicken, E. (2006). Perceived involvement of network members in courtships: A test of the relational turbulence model. *Personal Relationships, 13*, 281-302.

- Knobloch, L. K., Miller, L. E., Bond, B. J., & Mannone, S. E. (2007). Relational uncertainty and message processing in marriage. *Communication Monographs*, 74, 154-180.
- Knobloch, L. K., & Solomon, D. H. (1999). Measuring the sources and content of relational uncertainty. *Communication Studies*, 50, 261-278.
- Knobloch, L. K., & Solomon, D. H. (2002a). Information-seeking beyond initial interaction: Managing relational uncertainty within close relationships. *Human Communication Research*, 28, 243-257.
- Knobloch, L. K., & Solomon, D. H. (2002b). Intimacy and the magnitude and experience of episodic relational uncertainty within romantic relationships. *Personal Relationships*, 9, 457-478.
- Knobloch, L. K., & Solomon, D. H. (2003). Manifestations of relationship conceptualizations in conversation. *Human Communication Research*, 29, 482-515.
- Knobloch, L. K. & Solomon, D. H. (2004). Interference and facilitation from partners in the development of interdependence within romantic relationships. *Personal Relationships*, 11, 115-130.
- Knobloch, L. K., Solomon, D. H., & Cruz, M. (2001). The role of relationship development and attachment in the experience of romantic jealousy. *Personal Relationships*, 8, 205.
- Kreft, I. & DeLeeuw, J. (2002). *Introducing multi-level modeling*. Thousand Oaks, CA: Sage.

- Lee, G. R. (1988). Marital satisfaction in later life: The effects of nonmarital roles. *Journal of Marriage and the Family, 50*, 775-783.
- Levenson, R. W., Cartensen, L. L., & Gottman, J. M. (1993). Long-term marriage: Age, gender, and satisfaction. *Psychology and Aging, 8*, 301-313.
- Lewis, R. A., & Spanier, G. B. (1979). Theorizing about the quality and stability of marriage. In W. R. Burr, R. Hill, F. I. Nye, & I. L. Reiss (Eds.), *Contemporary theories about the family* (pp. 268-294). New York: Free.
- Makoul, G. & Roloff, M. (1998). The role of efficacy and outcome expectations in the decision to withhold relational complaints. *Communication Research, 25*, 5-29.
- Manusov, V. (2002). Thought and action: Connecting attributions to behaviors in married couples' interactions. In P. Noller & J. A. Feeney (Eds.), *Understanding marriage* (pp. 14-31). New York: Cambridge.
- McNulty, J. K., & Karney, B. R. (2001). Attributions in marriage: Integrating specific and global evaluations of a relationship. *Personality and Social Psychology, 27*, 943-955.
- Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology, 70*, 79-98
- Noller, P., Feeney, J. A., Bonnell, D., & Callan, V. J. (1994). A longitudinal study of conflict in early marriage. *Journal of Social and Personal Relationships, 11*, 233-252.
- Oppenheimer, V. K. (1997). Women's employment and the gain to marriage: The specialization and trading model. *Annual Review of Sociology, 23*, 431-453.

- Pecchioni, L. L., Wright, K. B., & Nussbaum, J. F. (2005). *Life-span communication*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Peronace, L. A., Boivin, J., & Schmidt, L. (2007). Patterns of suffering and social interactions in infertile men: 12 months after unsuccessful treatment. *Journal of Psychosomatic Obstetrics & Gynecology*, 28, 105-114.
- Peterson, B. D., Gold, L., & Feingold, T. (2007). The experience and influence of infertility: Considerations for couple counselors. *The Family Journal*, 15, 251 – 257.
- Petronio, S. (1991). Communication boundary management: A theoretical model of managing disclosure of private information between marital couples. *Communication Theory*, 1, 311-335.
- Petronio, S. (2002). *Boundaries of privacy: Dialectics of disclosure*. Albany, NY: SUNY Press.
- Petronio, S., & Durham, W. T. (2008). Communication and privacy management theory. In L. A. Baxter & D. O. Braithwaite (Eds.) *Engaging theories in interpersonal communication*. (pp 309 – 323). Thousand Oaks, CA: Sage.
- Robinson, G. E., & Stewart, D. E. (1996). The psychological impact of infertility and new reproductive technologies. *Harvard Review of Psychiatry*, 4, 168-172.
- Robles, T. F., Shaffer, V. A., Malarkey, W. B., & Kiecolt-Glaser, J. K. (2006). Positive behaviors during marital conflict: Influences on stress hormones. *Journal of Social and Personal Relationships*, 23, 305-325.
- Rowland, R. (1985). The social and psychological consequences of secrecy in artificial insemination by donor (AID) programmes. *Social Science Medicine*, 21, 391-396.

- Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16*, 172-186.
- Rusbult, C. E., Drigotas, S. M., & Verette, J. (1994). The investment model: An interdependence analysis of commitment processes and relationship maintenance phenomena. In D. J. Canary & L. Stafford (Eds.), *Communication and relational maintenance* (pp. 115-140). New York: Academic Press.
- Rusbult, C. E., Olsen, N., Davis, J. L., Hannon, P. A. (2001). Commitment and relationship maintenance mechanisms. In J. Harvey & A. Wenzel (Eds.), *Close romantic relationships* (pp. 87- 113). London: Routledge.
- Scanzoni, J. (1978). *Sex roles, women's work, and marital conflict: A study of family change*. Lexington, MA: Heath.
- Schmidt, L. (2006). Infertility and assisted reproduction in Denmark. *Danish Medical Bulletin, 53*, 390-417.
- Schneider, M. G., & Forthofer, M. S. (2005). Associations of psychosocial factors with the stress of infertility treatment. *Health and Social Work, 30*, 183-191.
- Seibel, M., & Levin, S. (1986). A new era in reproductive technology: The emotional stages of in vitro fertilization. *Journal of in Vitro Fertilization and Embryo Transfer, 4*, 135-140.
- Shapiro, A. F., & Gottman, J. M. (2004). The specific affect coding system. In P. K. Kerig, & D. H. Baucom (Eds.), *Couple observational coding systems* (pp. 191-208). Mahwah, NJ: Lawrence Earlbaum.



- Shevell, T., Malone, F. D., Vidaver, J., Porter, F., Luthy, D. A., & Comstock, C. H. (2005). Assisted reproductive technology and pregnancy outcome. *Obstetrics & Gynecology, 106*, 1039-1045.
- Siegert, J. R., & Stamp, G. H. (1994). "Our first big fight" as a milestone in the development of close relationships. *Communication Monographs, 61*, 345-360.
- Sillars, A. L., & Wilmot, W. W. (1989). Marital communication across the life-span. In J. F. Nussbaum (Ed.), *Life-span communication: Normative processes* (pp. 225-248). Hillsdale, NJ: Lawrence Erlbaum.
- Slater, M., Snyder, L., & Hayes, A. F. (2006). Thinking and modeling at multiple levels: The potential contribution of multilevel modeling to communication theory and research. *Human Communication Research, 32*, 375-384.
- Smeenk, J. M. J., Verhaak, C. M., Eugster, A., van Minnen, A., Zeilhuis, G. A., & Braat, D. D. M. (2001). The effect of anxiety and depression on the outcome of in-vitro fertilization. *Human Reproduction, 16*, 1420-1423.
- Snijders, T. & Bosker, R. (2003). *Multilevel Analysis: An introduction to basic and advanced multilevel modeling*. Thousand Oaks, CA: Sage.
- Solomon, D. H., & Knobloch, L. K. (2001). Relationship uncertainty, partner interference, and intimacy in dating relationships. *Journal of Social and Personal Relationships, 18*, 804-820.
- Solomon, D. H., & Knobloch, L. K. (2004). A model of relational turbulence: The role of intimacy, relational uncertainty, and interference from partners in appraisals of irritations. *Journal of Social and Personal Relationships, 21*, 795-816.

- Solomon, D. H., Weber, K., & Steuber, K. R. (2010). Turbulence in relational transitions. In S. W. Smith & S. R. Wilson (Eds.), *New directions in interpersonal communication research* (pp. 115-134). Thousand Oaks, CA: Sage.
- Sprecher, S., & Felmlee, D. (1992). The influence of parents and friends on the quality and stability of romantic relationships: A three-wave longitudinal investigation. *Journal of Marriage and the Family*, *54*, 888-900.
- Sprecher, S., & Felmlee, D. (1997). The balance of power in romantic heterosexual couples over time from "his" and "her" perspectives. *Sex Roles*, *37*, 361-379.
- Steuber, K. R., & Solomon, D. H. (*in press*). Managing information within social networks during infertility. In M. Miller-Day (Ed.), "*Going through this together*": *Family communication, connection, and health transitions*. Hampton Press.
- Steuber, K. R., & Solomon, D. H. (2008). Relational uncertainty, partner interference, and infertility: A qualitative study of online discourse. *Journal of Social and Personal Relationships*, *25*, 831-855.
- Theiss, J. & Solomon, D.H. (2006). A relational turbulence model of communication about irritations in romantic relationships. *Communication Research*, *33*, 391-418.
- Theiss, J. & Solomon, D.H. (2007). Communication and the emotional, cognitive, and relational consequences of first sexual encounters in heterosexual dyads. *Communication Quarterly*, *55*, 179-206.
- Thorton, A., & Young-DeMarco, L. (2001). Four decades of trends in attitudes towards family issues in the United States: The 1960s through the 1990s. *Journal of Marriage and the Family*, *63*, 1009-1037.

- Tomlinson, P. (1996). Marital relationship change in the transition to parenthood: A reexamination as interpreted through transition theory. *Journal of Family Nursing, 2*, 286-305.
- Troll, L. E., & Smith, J. (1976). Attachment through the life-span: Some questions about dyadic bonds among adults. *Human Development, 19*, 156-170.
- Van Balen, F., Trimbos-Kemper, T., Verdurmen, J. (1996). Perception of diagnosis and openness of patients about infertility. *Patient Education Counseling, 28*, 247-252.
- Vangelisti, A. L. & Caughlin, J. P. (1997). Revealing family secrets: The influence of topic, function, and relationship. *Journal of Social and Personal Relationships, 14*, 679.
- Walker, A. (2001). Trajectory, transition and vulnerability in adult medical-surgical patients: A framework for understanding in-hospital convalescence. *Contemporary Nursing, 11*, 206-216.
- Weigel, D. (2008). A dyadic assessment of how couples indicate their commitment to each other. *Personal Relationships, 15*, 17-39.
- Wellman, B. (1990). The place of kinfolk in personal community networks. *Marriage and Family Review, 15*, 195-228.
- Willits, F., & Crider, D. (1986). *Well-being at midlife*. (Agricultural Experiment Station Bulletin 863). University Park, Pennsylvania State University.
- Wirtberg, I., Moller, A., Hogstrom, L., Tronstad, S. E., & Lalos, A. (2007). Life 20 years after unsuccessful infertility treatment. *Human Reproduction, 22*, 598-604.

Wright, J., Allard, M., Lecours, A., & Sabourin, S. (1989). Psychosocial distress and infertility: A review of controlled research. *International Journal of Fertility*, 34, 126-142.

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**EDUCATION**

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**PUBLICATIONS**

- Solomon, D. H., Weber, K., & Steuber, K. R. (2010). Turbulence in relational transitions. In S. Smith & S. Wilson (Eds.), *New directions in interpersonal research* (pp. 115-134). Thousand Oaks, CA: Sage.
- Afifi, T. A., McManus, T., Steuber, K. R., & Coho, A. (2009). Verbal avoidance and dissatisfaction in intimate conflict situations. *Human Communication Research*, 35, 357-383.
- Afifi, T. A., & Steuber, K. R. (2009). The revelation risk model (RRM): Factors that predict the revelation of secrets and the strategies used to reveal them. *Communication Monographs*, 76, 144-176.
- Steuber, K. R., & Solomon, D. H. (2008). Relational uncertainty, partner interference, and infertility: A qualitative study of discourse within Online forums. *Journal of Social and Personal Relationships*, 25, 831-855.
- Steuber, K. R., & Solomon, D. H. (*in press*). Managing information within social networks during infertility. In M. Miller-Day (Ed.), *"Going through this together": Family communication, connection, and health transitions*. Hampton Press.
- Holbert, R.L., Tschida, D., Dixon, M., Cherry, K., Steuber, K.R., & Airne, D. (2005). The West Wing and depictions of the American presidency: Expanding the domains of framing in political communication. *Communication Quarterly*, 53, 505-522.