

## ABSTRACT

Title of Document: APPLICATION OF THE SOCIAL RELATIONS MODEL TO THE CORE CONFLICTUAL RELATIONSHIP THEME IN GROUP PSYCHOTHERAPY: EVALUATION OF THE SOCIAL MICROCOSM THEORY

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The group therapy literature is plagued with methodological and statistical pitfalls. Likewise, researchers have struggled to develop an accurate method of assessing transference. The study at hand used The Social Relations Model to circumvent common problems in group research and is proposed as a way of measuring transference in group therapy. We used the Central Relationship Theme, a derivative of the Core Conflictual Relationship Theme, as a measure of transference. Additionally, while the social microcosm theory is the cornerstone of interpersonal-process groups, few studies exist to support it. This study assessed the social microcosm theory by comparing group members' central relationship themes with other group members to their central relationship theme with a romantic partner outside of the group. The results suggest that transference is present in member to member relationships.. Mixed results were found to support the social microcosm theory, i.e., that a group member's transference themes outside of the group are repeated within the group.

APPLICATION OF THE SOCIAL RELATIONS MODEL TO THE CORE  
CONFLICTUAL RELATIONSHIP THEME IN GROUP PSYCHOTHERAPY:  
EVALUATION OF THE SOCIAL MICROCOSM THEORY

By

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## Chapter 1

### Introduction

*Given enough time, group members will begin to be themselves: they will interact with the group members as they interact with others in their social sphere, will create in the group the same interpersonal universe they have always inhabited*  
(Yalom, 1995, p. 28).

Yalom (1995) espoused that if given free reign, therapy groups will naturally evolve into a replication of a client's social universe, or what is often referred to as the *social microcosm*. Group leaders maintain an attentive eye on the social experience that each member creates within the group to better understand each member's pathology outside of the group. Yalom's *theory of interpersonal learning* states that group members' maladaptive interpersonal patterns are similarly expressed inside and outside of the therapy group. Group therapy offers members the unique opportunity to identify these patterns and to learn new and more adaptive ones. This type of learning is facilitated by interpersonal feedback, where members and leaders provide each other with honest reactions to and observations of one another's behaviors. As members come to appreciate the impact that their behaviors have on other people in the group, they may begin to try new and more adaptive behaviors in all their relationships (Yalom, 1995).

In many group therapies, interpersonal learning is considered to be a focal mechanism of change (Yalom, 1995). However, if the therapy group, for some reason, does not evolve into a social microcosm, then group members are simply learning about

idiosyncratic interpersonal behaviors within the group. In the study at hand, the popular clinical assumption that interpersonal patterns are similarly expressed in relationships within and outside of the therapy group was empirically examined using a novel statistical approach called the Social Relations Model (Kenny & Lavoie, 1984).

Sullivan's (1953) premise of *parataxic distortion* is one way of understanding how therapy groups evolve into a social microcosm. Yalom describes parataxic distortion as an interpersonal situation when one "person relates to another not on the basis of the realistic attributes of the other but on the basis of a personification existing chiefly in the former's own fantasy (Yalom, 1995, p. 19)." Theoretically, group members should perceive and react to one another through this distorted and individualized lens. The task of psychotherapy involves the development of client interpersonal relationships that are gratifying and distortion free. A similar construct to Sullivan's parataxic distortion is the Core Conflictual Relationship Theme (CCRT; Luborsky, 1977; Luborsky & Crits-Christoph, 1990). The CCRT is based on the premise that clients form maladaptive relationship patterns early in life that persist into adulthood, resulting in problematic relationships. The CCRT has three dimensions: (a) what one needs, or wishes for, in relationships, (b) how one expects others to respond to this need, and (c) how one responds to the perceived responses of others, i.e., self-responses (Luborsky, 1977). A plethora of methods to measure the CCRT have arisen in recent years. The study at hand used a self-report measure of the CCRT, called the Central Relationship Questionnaire (CRQ; Barber, Foltz, & Weinryb, 1998) to assess group members' CCRT patterns.

Regardless of the particular CCRT measure used, the theory assumes that clients possess a core *relationship template* that is transferred onto significant others. Similar to



parataxic distortion, the CCRT emphasizes that this relationship template may be generalized in all interpersonal relationships (Luborsky & Crits-Christoph, 1990), and by extension, group members' relationships with each other. The CCRT is often used as a measure of the content of transference (Luborsky, Mellon, Alexander, Van Ravenswaay, Childress, Levine, Cohen, Hole, & Ming, 1985). Although transference is commonly considered in connection with an individual therapist, group therapy experts propose that transference is a central aspect of group therapy members' experience of one another (Corey & Corey, 2002; Yalom, 1995). Similarly, Yalom (1995) maintained that other group members as well as therapists are potential targets for a given member's parataxic distortions. The CCRT, transference, and parataxic distortions are all similar ways of defining and/or measuring maladaptive interpersonal patterns. In the present study, it was proposed that the CRQ serves as a measure of a mechanism through which the therapy group evolves into a social microcosm. In other words, group members recreate similar interpersonal relationships, as their interactions with others are similarly influenced by their central relationship patterns.

The literature on individual psychotherapy lends mixed support to the premise that therapy evolves into a social microcosm through clients' expression of the CCRT. Although the therapeutic relationship in individual therapy differs from member-to-member relationships in group therapy, evaluating the social microcosm in individual therapy may still provide some insight into how it operates in group therapy. Connolly, Crits-Christoph, Demorest, Azarian, Muenz, and Chittams (1996) found that while a core conflictual relationship theme exists for clients in relationships with significant others outside of therapy, this theme may not always transfer to the therapist. Similarly,

Connolly, Crits-Christoph, Barber, and Luborsky (2000) evaluated the similarity between clients' interpersonal themes, derived from pretreatment interpersonal interviews, and their theme evident in psychotherapy narratives about the therapist. The results indicated that 33% of clients demonstrated a significant relationship between the most pervasive theme evident from the pretreatment interviews and the narratives about the therapist. Fried, Crits-Christoph, and Luborsky (1995) found that clients' narratives about the therapist matched clients' other person-CCRT, according to mean similarity ratings of the three components of the CCRT. Since the CCRT method used in these studies only allowed raters to indicate whether a theme was present or not present, as opposed to a likert-type scale, the results may have been minimized. Overall, the individual psychotherapy literature provides some evidence to suggest that the CCRT is a mechanism through which therapy evolves into a social microcosm. Moreover, it provides some evidence to suggest that central relationship themes are present in significant relationships other than the therapeutic one, suggesting that group members' perceptions of one another are in least partially distorted.

Group psychotherapy provides a unique opportunity to examine a client's interpersonal patterns across multiple people in the same context. In individual psychotherapy, it is often assumed that the therapeutic relationship evolves into a replication of other relationships in the client's life. However, in group psychotherapy, one can observe first hand how the relationship themes of members are generalized across a number of people in the same situation. Additionally, group psychotherapy may especially trigger one's core relationship issue(s), more so than individual psychotherapy. The therapy group may come to replicate the first group that the client was ever apart of-

the primary family, where transference/CCRT is believed to originate (Luborsky, 1977). Another advantage to studying the CCRT in group therapy, as opposed to individual therapy, is that the variance components or effects of the CCRT ratings may be separated, allowing us to gain a more accurate picture of group members' perceptions.

The group psychotherapy literature has begun to assess the process in which the therapy group evolves into a social microcosm. In this literature, the social microcosm has been studied through assessing certain group constructs that are similar to the CCRT. For example, Kivlighan and Angelone (1992) found that group members' perceptions of the group atmosphere were influenced by their interpersonal problems. The authors concluded that group members create a social microcosm through perceiving other members and the group as a whole in ways that support their interpersonal problems, creating a self-fulfilling prophecy. Similarly, Kivlighan, Marsh-Angelone, and Angelone (1994) found that group members project their interpersonal problems onto the group and the group leaders. The authors suggested that group members' interpersonal problems may function as a cognitive process whereby members filter their experiences of the group leader and group interactions.

In theory, clients' interpersonal problems are similar to the core conflictual relationship theme. One's interpersonal style could be an expression of one's CCRT. For example, a client who expects to be "attacked" in relationships, just as he or she was once attacked by a parent, may engage in both hostile and submissive interpersonal behaviors as an adult. Mallinckrodt and Chen (2004) suggest that a member's perception of other members' interpersonal style may be distorted by and/or an expression of transference. Interpersonal style and the CCRT are both theorized to be trait-like variables that 'filter'

the way we perceive and thus respond to others. The group studies cited above were the first to examine differences between individual group members' perception of the same rating target (i.e., group climate or group leaders) as a function of factors internal to the group member, such as interpersonal problems. The study at hand also examined differences between individual group members' perception of the same rating target (i.e., other group members) as a function of a factor internal to the group member, i.e., central relationship themes.

In summary, Kivlighan et al. (1992/1994) suggest that group members perceive the group as a whole and other group members and leaders similarly and in ways that confirm their pre-existing interpersonal problems. Likewise, the literature on the CCRT in individual therapy suggests that, to some degree, clients perceive others through a core relationship template, or schema. From this body of literature, it was reasonable to suggest that group members' perception of other members and of significant others would be influenced, in least in part, by his or her unique central relationship theme. The primary limitation to the methodology of Kivlighan et al. (1992) and Kivlighan et al. (1994) is that the perspectives of the members were treated as independent from one another. In reality, this assumption is most likely not true. For example, if Al is hostile towards Cathy, Cathy will probably be less friendly towards Al. The perspectives of the leaders, individual group members, and of members on each other, all influence one another. When these perspectives are not accounted for or are treated as independent observations, they become "noise," or error, that can mask significant results (see Marcus, 1998).

The cumulative literature on these constructs led us to hypothesize that a) group members will perceive relationships within the therapy group similarly, b) group members will reach little agreement on how they perceive the same group member, c) group members will similarly perceive relationships within and outside of the therapy group, and d) members perceive relationships within and outside of the group in ways that support their pre-existing central relationship patterns. These hypotheses dealt with interpersonal perception in a group setting, an area of psychology that has typically been difficult to accurately assess and rarely studied. Conventional statistical models do not allow researchers to control for the various effects that contribute to interpersonal perception. Additionally, conventional statistics do not provide adequate procedures for combining groups or for accounting for the dependence in observations that naturally arise in a group setting (Marcus & Kashy, 1995). The study at hand used a statistical model called the Social Relations Model to circumvent these common pitfalls.

#### *Introduction of the Social Relations Model and the CCRT*

Assessing constructs in and across groups has led to many methodological and statistical concerns. Within a group, group members influence one another, so their behaviors and perceptions are not completely independent of one another, violating the assumption of independence. In a sense, the study of group dynamics is the study of interdependence (Marcus, 1998). This presents a challenge to group researchers because the interdependence that defines group dynamics is difficult to analyze using traditional statistical models, such as analysis of variance (ANOVA). Most of the statistics used by psychologists require each observation to be independent of every other observation.

Violation of the independence assumption is likely to seriously distort the results of an ANOVA (Kenny & Judd, 1986).

Within a group, every participant has two interdependent roles: perceiver and partner. For example, a group member has transference reactions towards other group members and is the partner of other members' transference reactions. Although it has never been empirically tested, these dual roles are probably not completely independent of one another (Marcus, 1998). For instance, Al's transference involves dominating others and Cathy's transference involves being submissive in relationships, similar to Al's mother. As a result, Al is particularly dominating in his relationship with Cathy. Another way to look at interdependence in groups is to compare it to a nested design. If Al and Bob rate Cathy on how submissive she is, then Al and Bobs' ratings are nested within and dependent upon Cathy. If we wanted to study submission and dominance in groups, we would ask every group participant to rate every other group participant on dominance and submission. This is called a *round robin design*, where every person rates every other person on some variable(s). SRM uses round robin data to analyze the interdependence among group members, instead of treating it as a statistical nuisance (Marcus, 1998).

In addition to interdependence in groups, another problem for group researchers that is often unaddressed is how to combine different groups. Since no two groups are the same, it is inappropriate to average some construct across members in two different groups and compare them (Marcus & Kashy, 1995). SRM addresses this problem by accounting for group level variance when combining groups. For instance, one potential aspect of transference, according to the CCRT theory, is the wish to be nurtured.

However, this wish would look very different in a group that has a norm for nurturance versus a group that has a norm for hostility and conflict. The failure of many group studies to account for group level variance is part of a bigger problem in the group literature that has often neglected to match the unit of observation with the correct unit of analysis. For example, one can analyze on the individual, dyadic, or group level. Although research on groups should account for these methodological and statistical exceptions, few studies have successfully done so (Marcus & Kashy, 1995). SRM is unique in that it accounts for dependence in observations and the various levels of analysis that exist within a group.

SRM may be used to study interpersonal behavior and/or perception in groups (Marcus, 1998). Transference, interpersonal problems, and the CCRT all fall under the category of interpersonal perception since these types of ratings are not based on explicit behaviors but on the perception of self and others. In a study of interpersonal perception, perceiver, partner, relationship, and group effects define the various levels and sources of variance at play. For instance, the participants in the study at hand rated how much they wanted nurturance from every other group member. Suppose Bill indicates, with a rating of 6 out of 7, that he wants to be nurtured by Cathy. This may be because Bill wants to be nurtured by everyone (*perceiver effect*), or perhaps because everyone wants to be nurtured by Cathy (*partner effect*). Alternatively, Bill might want more nurturance from Cathy than from most people and more than most people want nurturance from Cathy (*relationship effect*) (Marcus, 1998).

*SRM and Transference Components.* In interpersonal perception studies, reliable perceiver variance is indicative of *assimilation* (Kenny, 1988), suggesting that perceivers

tend to see everyone in the group as being similar. Assimilation in the study at hand would indicate that members tend to view everyone as either, for example, nurturing or not. On the other hand, significant partner variance indicates that there is *consensus* among the participants. Consensus in this particular example would indicate that members generally agree who in the group is nurturing and who is not. While agreement is not necessarily an indicator of “reality,” it is more likely that Cathy, for example, actually is nurturing, if everyone in the group agrees that she is nurturing. Furthermore, group agreement does capture the reality of the group. Assimilation and consensus each capture a different aspect of transference, or central relationship themes, which include: a) *generalizing* a relationship-template across people and situations (i.e., assimilation), and b) *distorting* self and other perceptions (i.e., consensus). Similarly, Mallinckrodt and Chen (2004) interpreted perceiver variance, or assimilation, in Impact Message Inventory ratings of fellow group members as an indicator of transference. Mallinckrodt (1996) wrote that the central problem in measuring transference is the task of developing a standard against which potentially distorted views can be assessed. SRM perceiver and partner variances use the other group members as such a standard.

In addition to using perceiver and partner variances as indicators of the generalization and distortion aspects of transference, these variance components may be used to better operationalize transference. Similarly, Marcus and Buffington (2005) offer suggestions on how SRM could be used to operationalize and study various theories of countertransference (CT). Just as there are numerous definitions of countertransference, there are also many definitions and theories of transference. Transference may be defined and decomposed in terms of SRM “language.” Transference, as assessed by a measure of



the CCRT, is defined as “the central relationship pattern, script, or schema that each person follows in conducting relationships” (Luborsky et al., 1990, p.3). This definition implies that transference stems from inside the client and is generalized, like any other script or schema, across situations and people. In other words, transference patterns lie in the eye of the perceiver, or in this case, the group member.

Following this, I hypothesized that there would be significant perceiver variance in group members’ central relationship patterns. Again, significant perceiver variance suggests assimilation, and would suggest that central relationship themes are *generalized* across people and situations. On the other hand, I hypothesized that there would be minimal partner variance, or consensus, in group members’ perceptions of themselves and other members in relationships. I reasoned that there would be little consensus among group members because each member applies his or her unique *distortions* when perceiving relationships. While the CCRT theory emphasizes assimilation, it is unlikely that interpersonal patterns do not adjust at all to the unique characteristics of other group members. For this reason, I hypothesized that partner variance would account for minimal variance, rather than zero variance, in member ratings of the central relationship theme.

To summarize, there are several advantages to studying transference with an SRM approach. First, it allows researchers to operationalize the various definitions of transference in terms of measurable effects. Furthermore, SRM provides researchers a standard against which a member’s ratings can be assessed as generalized and distorted, which are two key aspects of transference and the CCRT theories. Statistically speaking, studies on transference and the CCRT that use a simple dyadic design (i.e., therapist and

client) may produce effects that are highly attenuated, as ratings will be a combination of perceiver, partner, relationship, and error. SRM, which allows for the separation of these effects, cannot be used in individual therapy, as in least three or four people in a group are needed. On the other hand, we may use SRM to study interpersonal perception variables like transference and the CCRT in group therapy (see Marcus et al., 2005).

## Chapter 2

### Review of the Literature

In 1955, Solomon Asch showed that an individual's perception of reality could be greatly altered by social pressures and opinions. He found that a person's perception of the length of a line could be dramatically altered by suggestions from the group, even when these suggestions were obviously wrong. Forty years later, Multon, Patton, and Kivlighan found that a client's perception of his or her therapist is clouded by the client's perception of his or her mother. What these two studies share is the striking demonstration of how reality is not objectively deciphered. Objects in one's life, past or present, influence the ways in which one comes to see not only the length of a line but also the character and behaviors of a person.

Freud (1912/1958) observed that his clients would come to perceive him in such a manner that did not fit with reality. He theorized that a client's perceptions of the therapeutic relationship were influenced by past experiences with his or her primary family. He labeled these distortions, *transferences*, or the parallel that quickly develops between the patient's general relationship pattern, or "template," and the relationship with the therapist. He emphasized that this template originates in relationships with early parental figures and is continually replicated throughout a person's life. Freud argued that working through these distortions, as the client comes to realize what is real and what is not in the therapeutic relationship, is at the heart of psychoanalysis (Freud, 1912).

Since Freud's discovery of transference, there have been many attempts to quantify and empirically evaluate the phenomenon in counseling and clinical research. Most measures of transference have focused on the therapist's vantage point and have

involved a series of items evaluated on a Likert Scale (see Luborsky & Graff, 1977; Multon, Patton, & Kivlighan, 1996). This type of measure surely has its place in counseling research. However, Luborsky and colleagues (1977) have developed a model of transference that: is better operationalized, is more objective, typically is derived from actual client narratives, and can assess transference in all interpersonal relationships and not just that of the therapeutic relationship. This model is referred to as the Core Conflictual Relationship Theme (CCRT), and is comprised of a client's most frequent combination of wishes, needs or intentions, responses of others, and responses of self (Luborsky, 1977). One measure of the CCRT, used in the study at hand, is called the Central relationship Questionnaire and is a self-report measure of one's central relationship patterns in significant relationships.

While Freud primarily emphasized the effect that transference has on a client's perception of the therapist, he also wrote that transference could similarly effect client perceptions of others outside of the therapeutic relationship (1912/1966). According to Freud, people have a compulsion to repeat, and accordingly they repeat relationship patterns, or "templates," with the therapist as well as with most people in the person's life (1912). In other words, transference reactions are "constantly repeated-constantly reprinted afresh- in the course of a person's life (Freud, 1912, p.100). If Freud's theory is correct, then clients in group psychotherapy should develop transference(s) not only to the therapist, but also to other group members, as each member's relationship template influences his or her interpersonal reality of the group. Furthermore, if these core relational patterns are as general, or repetitious, as Freud theorized, then clients' transferences within the group should be consistent with clients'

transferences in relationships outside of the group. This parallel is often referred to as the ‘social microcosm’ theory.

Individual and group psychotherapies are believed to act as a social microcosm of a client’s interpersonal world. Observing and analyzing how clients interact and perceive the therapist(s), and vice versa, is thought to reveal a here-and-now demonstration of the relationship dynamics that clients create throughout their lives outside of therapy (Yalom, 1995). Although the social microcosm premise is widely accepted, there is little research to directly evaluate it. In particular, to better understand how and if a social microcosm forms in a psychotherapy group, researchers must empirically evaluate what factors create this microcosm. The present study proposes that transference, as measured by the CRQ, is one such mechanism that helps to transform therapy into a mini and meaningful representation of the client’s outside interpersonal life. Across situations and interpersonal relationships, group members carry with them certain core relational themes, or templates, that similarly distort reality in most, if not all, interpersonal relationships.

### The Core Conflictual Relationship Theme

#### *History of the Development of the CCRT*

The CCRT came into being as an offshoot of another measure called the therapeutic alliance (Luborsky, 1976). Conducting research on the alliance led to the question, how does the relationship pattern in the alliance fit into the broader central pattern of relationships? In answering this question, Luborsky (1998) noticed that when making inferences about a client’s relationship pattern, he closely attended to the client’s narratives about the therapist and other people, in particular the most recurrent

interactions. Furthermore, he observed that he especially attended to three facets of client narratives: what the client wanted from the other person, how the other person reacted, and how the client reacted to the perceived behaviors of others (Luborsky, 1990). From these observations, Luborsky (1977) derived a quantitative measure to reliably assess transference in a manner close to that of the process intuitively used by clinicians, observing the most recurrent themes from client narratives.

The CCRT (Luborsky, 1977) is the core relationship pattern, script, or schema that each person follows when engaging in relationships. As further discussed below, it shares many characteristics with Freud's (1912/1966) concept of transference. Since Freud (1912/1966) first discovered transference, clinicians have intuitively used it in everyday practice in psychoanalysis and in psychodynamic therapies. In these therapies, transference refers to "the client's expression of attitudes and behaviors derived from earlier conflictual relationships with significant parental figures in the current relationship with the therapist" (Luborsky, Crits-Christoph, & Mellon, 1986, p. 40). Therapists make inferences about client transference to help guide interventions. Compared to how much it is intuitively relied upon by many clinicians, until recently, there has been a scarcity of reliable and practical quantitative measures of transference. Measures of transference generally fall into two categories: questionnaire measures and psychotherapy process measures (Luborsky et al., 1986). Luborsky and colleagues were dissatisfied with the first of these two approaches, and they developed the CCRT method as a viable alternative.

#### *Developing a Measure of Transference*

*Psychotherapy Process Measures of Transference and the CCRT.* Luborsky et al. (1986) claim that since transference was first discovered in psychotherapy sessions,

measures that derive transference from actual client narratives are more appropriate than therapist rated questionnaire methods. The Core Conflictual Relationship Theme (CCRT) method (Luborsky, 1977) is a system to help guide clinical judgments about the central relationship theme, or content of transference, of a client. In the original CCRT method, judges read the entire transcript of a session but only rate the parts of a session called the *relationship episodes* (REs). Relationship episodes are explicit client narrations about relationships. Judges read the relationship episodes and score the most common wish, response of other, and response of self to derive a client's CCRT (Luborsky et al., 1986). Good agreement has been found among separate sets of judges (average correlation of .88) (Levine & Luborsky, 1981).

#### *Strengths and Limitations of the CCRT Method and the Introduction of the CRQ*

Research on a complex and intangible construct like transference presents challenging methodological concerns for investigators when developing a reliable and valid measure. One research issue is around what will serve as data for measuring transference. While many questionnaire approaches use clinical judgment as the source of data, the CCRT uses actual client narratives that are in themselves demonstrations of transference. However, this method is time consuming since transcripts must be collected and carefully rated. Another problem with the CCRT method is that the wording of categories might vary from judge to judge. In group psychotherapy, where a single session may primarily revolve around one member, numerous sessions may be necessary to acquire enough relationship episodes per member to derive a CCRT for each person.

Since the initial development of the CCRT method, many subsequent methods derived from the original CCRT one have been effectively utilized. Because the original

CCRT method is time consuming, requires a certain number of relationship episodes, and does not have predetermined categories, many have looked toward other ways of assessing central relationship patterns. The most recent development is the Central Relationship Questionnaire (CRQ; Barber, Foltz, and Weinryb, 1998), a self-report measure of central relationship patterns. Like the CCRT, these patterns refer to a person's characteristic ways of relating with significant others in terms of his or her wishes, perceptions of others' responses, and his or her own responses to both of these. Initial results indicate that CRQ components can be differentiated into meaningful subscales. These subscales were internally consistent, stable over a year, and showed divergent and convergent validity with measures of interpersonal problems and symptomatology (Barber et al., 1998). Although the limitation of this measure is that it is self-report, it was utilized in the present study nonetheless. The CRQ is more manageable and feasible for the purpose of this study, as compared to the laborious and time consuming task of coding relationship episodes. Additionally, it was not possible, given certain time restrictions, to secure enough relationship episodes from each group member to derive a CCRT for each member in a therapy group.

#### Transference and the CCRT

Luborsky (1998) remarks that upon reviewing Freud's (1912) accounts of transference, he "expected some congruence between the observations that led Freud to the concept of transference relationship template and the CCRT results, but the degree of congruence was striking" (p.5). This led Luborsky and researchers to empirically compare Freud's nine observations of transference with the CCRT method. The following studies, unless otherwise specified, used the same sample of 8 psychotherapy



clients. Each client's CCRT was scored independently twice, once by three judges on a minimum of 10 REs taken from two sessions early in treatment, and once by three judges on 10 REs from two sessions about a year later (Luborsky et al., 1986). Each of Freud's nine clinical observations of transference is elaborated below using the CCRT method.

The first of Freud's (1912) nine observations of transference is that each client has one transference pattern, "or several such" (p.100). Freud appeared confused over exactly how many transference patterns a client could possess. The research is also in conflict over whether a single transference theme or multiple themes exist. Luborsky et al. (1986) looked at the CCRT of eight clients in the early sessions of psychotherapy and found one main theme and, oftentimes, a lesser frequent theme. Averaging across the 8 clients, the main wish was judged to be present in 80% of each client's REs and a second theme was judged to be present in 16% of the REs (Luborsky, Mellon, et al., 1985).

Freud (1912) also observed that each client had a special form of the transference pattern. In the same sample of 8 clients, the CCRT results were consistent with this observation. Some of the main wishes included to be strong, free and independent, to be close to others, and to be assertive to authority. While there was some degree of similarity between clients, examination of the wishes and responses revealed mostly distinct patterns between clients (Luborsky et al., 1985).

Freud (1912) stated that this pattern rules over the "conduct of his (or her) erotic life" (p.99). Independent judges rated the degree to which the REs contained explicit erotic narration versus nonerotic narration. A separate CCRT was derived for the nonerotic and erotic REs. A second set of judges rated the similarity between the two CCRT patterns and found a fair degree of similarity (mean similarity 4.78 out of 7). This

finding implies that the erotic REs indicate a version of the CCRT that is similar to the CCRT from the nonerotic REs (Luborsky et al., 1985). However, this study did not assess whether this erotic pattern originated in childhood, as purposed by Freud.

It was observed by Freud, that transference patterns are not completely in the client's awareness (1912, p.100). Crits-Christoph and Luborsky (1984) found that, based on clinical judgments, a client's level of awareness of the CCRT varied considerably from session to session and that there was usually at least one part of the CCRT that was judged to be subconscious. Luborsky, Crits-Christoph et al. (1985) also found preliminary evidence to confirm Freud's observation that the transference pattern is consistent over time. They compared CCRT scores from early in treatment with the same client's CCRT later in treatment. The average similarity, on a 1 to 7 scale, of early and late CCRTs for each client was 5.7 (Luborsky et al., 1985). While the CCRT appears to be relatively stable across time in psychotherapy, there is less evidence to support a consistent pattern across different people in a client's life (Barber, 2002).

Freud (1912) predicted that transference was relatively stable with some room for change. The CCRT results from the Luborsky et al. (1985) study support this premise. They examined changes, from early to late psychotherapy sessions, in the percentage of REs in which the CCRT was present. They found that the percentage of REs that reported positive responses from others increased at the end of treatment from 10 to 17 %. This result varied depending on the outcome of treatment. All other aspects of the CCRT were not significantly altered from early to late treatment.

In the Penn Psychotherapy Project, Luborsky, Crits-Christoph, and Barber (1991) also found evidence for the pervasiveness of the transference pattern. They wanted to test

the proposition that the greater the change in the transference pattern, the greater the client's benefit from psychotherapy. They collected and scored the CCRT in early and late therapy of 33 clients, an obviously larger sample than in Luborsky et al. (1985), and compared the change in the CCRT to traditional measures of change. In terms of the frequency in which themes were evident in the relationship episodes, they found that the CCRT of each case remained recognizably similar in pervasiveness in the beginning of treatment and one year later. Nevertheless, there were also meaningful changes in CCRT pervasiveness from early to late sessions. More specifically, the wishes did not change significantly but the responses did. The largest changes were: a decrease in negative responses of self, a decrease in negative responses of others, and an increase in positive responses of others. Furthermore, the change in CCRT pervasiveness correlated with change in symptoms on 3 of the 5 symptom measures (Crits-Christoph & Luborsky, 1991).

Luborsky et al. (1998) evaluated the relationship between change in the CCRT and mastery, or "emotional self-control and intellectual understanding in the context of interpersonal relationships" (Grenyer & Luborsky, 1996, p. 412). They found that most CCRTs were negative, reflecting an unsatisfied wish. They also found that there were few significant relationships between positive and negative CCRT scores and mastery. In successful therapies, there was an increase in positive CCRTs, mainly an increase in positive responses, especially the response of self. The opposite was true for unsuccessful therapies. An increase in positive CCRTs, referring to a person's fulfilled wish, related to that person's increase in mastery. Still, overall, they found that most CCRTs remained negative in content.

These results generally confirm Freud's initial hypothesis that transference, as measured by the CCRT, is relatively stable across time. The overall CCRT pattern remains fairly consistent over the course of treatment, with some changes in the magnitude and valence of the responses. While an increase in positive responses is related to a successful therapeutic outcome, even in successful treatments, most responses are negative in nature. Interestingly, the wish appears to be resistant to change even when the responses become more positive. These results are contrary to the assumption that transference is resolved in psychotherapy and support the theory that clients may learn to better manage transference reactions in therapy (Luborsky et al., 1991).

Freud's next clinical observation on transference is central to the current study and will be elaborated upon below. For now, again referring to Luborsky et al. (1985), initial evidence that the relationship with the therapist is similar to the client's general transference pattern was found. Judges blindly rated the similarity of the therapist-CCRT to the other people-CCRT for each client. For comparison purposes, they also rated the similarity of a client's therapist-CCRT with the other-people CCRTs of the seven other clients in the study. The correct pairings of therapist-CCRT with other-people CCRTs were given an average similarity rating of 6.5 on a seven-point scale, whereas incorrectly matched CCRT patterns were given a CCRT similarity rating of 4.6. As elaborated below, other studies suggest that this parallel is not as strong as suggested in Luborsky et al. (1985) (see Connolly et al., 1996). However, this is one piece of preliminary data that not only helps to validate the CCRT method as a measure of transference, but also suggests that transference is similarly expressed inside and outside of therapy.

Central to Freud's notion of transference is that it originates with early parental figures (1912). Accordingly, there should be a parallel between one's relationship pattern with the therapist and with one's parental figures. Luborsky et al. (1985) compared CCRTs scored from REs involving a memory of an interaction with early parental figures to the overall CCRT scored from all other REs. A high degree of similarity was evident (mean rating of 6.4 out of 7) between the core conflictual relationship theme evident in one's early memories with one's parents and one's overall relationship theme in the present. A major limitation of this study is that current transference patterns could have colored client memory of an early interaction with a parent, as memories were given retrospectively.

Finally, Freud's (1912) ninth and final clinical observation of transference dealt with transference expression outside versus in treatment. He wrote, "it is not a fact that transference emerges with greater intensity and lack of restraint during psychoanalysis than outside it" (p.101). This premise is central to the present study since I predicted that group members would exhibit similar overall CCRT patterns with people inside and outside of group. Van Ravenswaay, Luborsky, and Childress (1983) found preliminary data to confirm Freud's observation, using the sample from Luborsky et al. (1985). They used the Relationship Anecdotes Paradigm test (RAP; Luborsky, 1978), an interview method of deriving a CCRT. They found that the six clients interviewed had significant consistency between their CCRT, derived from narratives within actual treatment sessions, and their CCRT derived from narratives outside of treatment using the RAP.

Overall, preliminary data supporting Freud's nine clinical observations of transference exists using the CCRT method. These parallels validate the CCRT as a

measure of transference content. However, most of the research cited above, unless otherwise stated, was conducted on the same small sample. Thus, there might have been something about these few participants that would not generalize to most clients. Future research needs to replicate these findings using a larger sample at several points in time. Most of these studies assessed the CCRT early in treatment. Measuring the CCRT later in treatment may be more fruitful since the passage of time, and the therapeutic work that transpires during this time, may encourage the expression of core relationship themes.

### Repeating the CCRT: A Relationship Template

#### *The Compulsion to Repeat*

“ Transference is in itself only a piece of repetition, and . . . the repetition is a transference of the forgotten past not only on to the doctor but also onto all other aspects of the current situation” (Freud, 1914, p.151). Transference is an example of Freud’s (1914) theory that people tend to repeat certain behaviors in an unconscious attempt to meet certain needs that have a history of not being met. Experiencing frustrating relationships early in life, when others do not meet core needs, lead to repeated maladaptive relationship patterns later in life. Freud (1912) wrote that people are guided by a relationship *stereotype plate*, finding themselves in various relationships that over a lifetime seem to be replications of one another. We engage in new relationships according to what we learned to expect in old ones, carrying the same needs and wishes, expectations of others, and subsequent self-responses. According to psychoanalytic theory, the interpersonal patterns that make up the core relationship theme should repeat themselves within and across multiple relationships (Connolly et al., 2000).

While psychoanalysis refers to transference as a stereotype plate, experimental and cognitive psychologies refer to ‘operations of schema’ to describe central relationship patterns. Although these theories differ in many respects, they are similar in that they both presume that schemas shape individuals’ experiences of self and others. One way these theories differ is the extent to which these mental representations influence perceptions and experiences. From the perspective of learning theory, individuals can have multiple schemas, reflecting the specific differences between relationships or the various roles that others fulfill. On the other hand, psychoanalysis theorizes that individuals form one (or a few) main relationship pattern that remains fairly consistent across interpersonal relationships and situations (Anderson & Cole, 1990). Crits-Christoph, Demorest, Muenz, and Baranackie (1994) suggest that the degree of repetitiveness of different schemas is an indication of psychopathology severity, such that more consistency might reflect more psychopathology since the psyche is less flexible and adaptive. Similarly, a hallmark of interpersonal theories is that psychopathology arises from clients’ application of rigid interpersonal schemas with different significant others (Kiesler, 1996).

Regardless of whether core relationship themes reflect rigid or flexible schemas, most theories of psychology would agree that they influence the way we perceive relationships. The present study seeks to empirically evaluate Freud’s premise that transference is an example of the compulsion to repeat, using a measure of the CCRT in group psychotherapy. As implied by Freud, I hypothesized that relationship patterns will be repeated across relationships with group members and in a romantic relationship outside of the therapy group. Evaluating the consistency between how group members

perceive numerous members of the group and outside significant relationships will help us to understand just how rigid or flexible these schemas are.

*Cognitive Research on Relationship Schemas: How General or Specific are they?*

Andersen and Cole (1990) propose that individuals classify new people into pre-existing mental categories when a new person reminds the perceiver of the prototype of that category. For example, if a perceiver experiences a new person as nurturing, this new person may be classified into the “mother” category. To measure the similarity experienced by a perceiver between a new person and the prototype of a pre-existing mental category, the authors had participants rate significant others and new people on a list of adjectives or characteristics. As expected, Andersen and Cole (1990) found that participants listed more features in describing significant other representations than in describing any other category ( $F(3,63)=9.60, p<.0001$ ). This finding suggests that significant others are richer in associations. Andersen and Cole (1990), in a separate study, found evidence to suggest that significant other representations are not necessarily more accessible than mental representations about nonsignificant others. An alternative interpretation is that participants were able to give more associations of significant others as compared to nonsignificant others because they knew them better

In another study, Andersen and Cole (1990) found evidence to suggest that significant other mental representations lead people to make more inferences than do nonsignificant representations, stereotypes, or traits. Participants made significantly more false-positive recognition errors in remembering information about a fictitious character than any other category when this fictitious person resembled a significant other. Overall, these three studies suggest that a) relationship templates, or schemas, are distinctive and



rich in memory, and b) people misattribute characteristics of a novel person based on past experiences with significant others.

Transference involves more than misattributing cognitive features, it also involves emotional reactions that do not fit the context. Accordingly, Andersen and Baum (1994) gave participants a description of a person who was supposedly sitting next door. The description resembled either positive or negative characteristics of significant others in the participant's life, or from another subject's life. As predicted, participants misperceived the person next door (i.e., partner person) as having more representation-consistent features when the partner person resembled their own significant other as compared to someone else's. Furthermore, participants transferred more representation-consistent affect to this same partner person. The data provided a demonstration of how transference influences both informational assumptions and affective responses toward a new person. The study suggests that transference is a significant-other mental representation that has emotional consequences in everyday interpersonal situations.

Andersen et al. (1990/1994/1995) define transference in terms of an information-processing model. We misperceive others and make inferences about them when these new people activate significant other mental models, or schemas. Schemas are generally thought to be activated only when a novel stimulus is similar to it. Given this, Andersen, Glassman, Chen, and Cole (1995) wondered how similar a new person had to be to a preexisting mental model to activate "transference" reactions. They addressed this question by examining the chronic accessibility of significant other mental representations. Chronic accessibility refers to the activation readiness, or activation potential, of stored information in information processing. Chronicity acts to bias

inferences with some regularity, especially when contextual factors are present (Andersen et al., 1995).

Andersen et al. (1995) gave recognition tests about fictional characters to participants to measure the degree of similarity between the participants' perceptions of fictional characters and significant others. Participants filled in 14 sentences to describe a significant other and a nonsignificant other. Later, researchers presented the participants with descriptions of fictional characters- each of whom resembled (as indicated by participants sentence completions) the participant's own significant other, the participant's own nonsignificant other, someone else's significant other, or someone else's nonsignificant other. The results suggest that significant-other representations seem to apply to virtually any new person even when the new person does not concretely resemble the significant other. Still, they found that the effect is more likely to occur if the new person (or stimulus) is similar to the significant other. This data suggest that the activation and application of transference has chronic and transient influences. In other words, human beings are primed to perceive new people based on important past experiences with significant others. At the same time, this reaction is more intense and more likely when the new person concretely resembles past significant others.

*Concluding Comments.* This research suggests that people are primed to make informational and affective assumptions of others based on a pre-existing significant other schema. Although this line of research appears promising, several limitations must be noted. In most of these studies, participants were asked to make inferences about people they did not know; for instance, the man next door (Andersen et al., 1994). Perhaps without actually engaging in personal exchanges, participants were more likely

to project or transfer characteristics onto the partner person then they would be in actual face-to-face relationships. Also, in certain trials, the participants compiled a list of characteristics that described a significant other and then were given a separate list of characteristics describing a partner person. Perhaps participants recognized similar characteristics on the two lists, or sensed that the experimenter was looking for such results. However, this explanation seems unlikely given the large effect sizes and the consistent finding that participants overestimated false-positives. After all, participants had no reason to suspect that the experimenter was looking for false positives more so than false negatives. Lastly, Freud believed that transference originates in early traumatic childhood experiences. Since the Andersen studies did not directly address this, perhaps they assessed projection in general, more so than transference in particular.

Andersen and Colleagues suggest that transference may be understood in terms of schema and social cognitive theory. They found evidence to support Freud's theory that transference is by nature repetitious and generalizable to new people in everyday social relationships and exchanges. Since these studies indicate that transference is expressed in social exchanges, even with relatively little priming, it was reasonable to hypothesize that group members in a psychotherapy group would come to express transference with other group members. Additionally, the results obtained by Andersen and colleagues suggest that significant other representations are consistent. Thus, a group member's central relationship theme should be similar in relationships that take place outside and in group therapy.

## The Parallel between Central Relationship Themes with the Therapist and with Others

Freud (1955) first defined transference as a parallel between the therapeutic relationship and a much earlier relationship in the client's life. He noticed that soon after the therapy starts, the relationship pattern with the therapist becomes similar to the client's relationship pattern with other people. In treating Dora, Freud (1901/1953) remarked on the similarities that existed in Dora's experience of her father and of Freud, "at the beginning it was clear that I was replacing her father in imagination . . . she was even constantly comparing me with him consciously" (p.118). Fried, Crits-Christoph, and Luborsky (1992) empirically tested Freud's observation of a parallel between the therapeutic relationship and past relationships in the client's life.

They examined in-session client narratives about the therapist and compared them to the general relationship pattern of the client, using the CCRT system. The participants consisted of 35 clients in psychodynamically oriented therapies. To control for chance levels of similarity, the mismatched method of comparison was used, where judges blindly rate the similarity between wrongly matched therapist narratives and overall CCRT patterns. A significant degree of similarity between the client's relationship patterns with the therapist and with others, especially involving the client's response to others and to the therapist, was found. The mean similarity of correctly matched cases was ( $X=3.5$ ,  $SD= 1$ ), compared to mismatched cases ( $X=3.0$ ,  $SD= .6$ ).

Similar to Fried et al. (1992), Connolly, Crits-Christoph, Barber, and Luborsky (2000) found evidence to support similarity in clients' interpersonal themes with the therapist and with other people, using the CCRT system. Connolly et al. (2000) derived a CCRT concerning outside therapy relationships, using a pretreatment interpersonal

interview called the Relationship Anecdotes Paradigm Interview, or RAP. This pretreatment CCRT was compared to client narratives about the therapist told during three early and three late sessions of supportive expressive therapy for 18 clients. Connolly et al. used the QUAIN system to derive the CCRT for the therapist. The results suggested that 33% of clients demonstrated a significant relationship between the most frequent theme evident from the RAP interview and the narratives about the therapist. The results were consistent even when early and late sessions were separated. Since the CCRT was derived before treatment, the influence of the therapist's interpretations and theoretical orientation could not influence the responses of the client and consequently his or her CCRT.

Together, Fried et al. (1992) and Connolly et al. (2000) supply initial evidence to support Freud's (1912) observation that transference is a relationship template that is replicated over various people in a person's life. However, these findings must be considered in light of certain limitations. While the results were significant, the effect sizes were modest, perhaps suggesting that while there is a piece of the transference that is constantly replicated, there is also a piece that is intersubjective. Furthermore, Connolly et al. (2000) found that over half of the clients in their study did not show significant similarity between their relationship pattern with the therapist and with others. The authors suggest that this may be a result of varying levels of pathology in their sample. Furthermore, relatively fewer relationship episodes were available concerning the therapist as compared to those about other people. This may have minimized the results in these studies, as Fried et al. (1992) found that the number of narratives told about the therapist was positively related to the degree of similarity. Lastly, these studies

assessed transference at the beginning and/or end of short-term treatment. There is some evidence to suggest that transference is lowest at the beginning and end of short-term therapy and highest in the middle of treatment (Gelso et al., 1997). Accordingly, the results of these studies may have been minimized by assessing transference at its “low” points.

One reason that past studies have found modest similarity between clients’ therapist-CCRT and other person-CCRT may be that clients have multiple relationship patterns and different patterns are expressed with different people. Accordingly, Crits-Christoph, Demorest, and Connolly (1990) found evidence for multiple themes rather than a single predominant theme. They found that in the first half of treatment, the therapist was perceived differently than all others in the client’s life. However, during the second half of treatment, similarity increased between the relationship with the therapist and other client relationships. However, generalizability of this study is limited as it was a single case design.

Similarly, Connolly et al. (1996) found that while clients tended to have a main relationship pattern, this pattern generalized to the therapist for about 60% of clients. Connolly et al. (1996) also found that clients described the same therapist differently, and in line with their own CCRT pattern. Overall, the results suggest that transference to the therapist is common but not a “must,” especially early in treatment. One interpretation of this is that transference is not always replicated within the therapeutic relationship. Alternatively, early in treatment a client may have a certain investment in viewing his or her therapist in a positive light. Perhaps, it is not until the second half of treatment, when a therapeutic relationship has forged, that the client feels safe to express core and often

frightening relationship patterns (Connolly et al., 1996). The major strength of the Connolly et al. study is that it used cluster analysis, allowing us to uncover multiple patterns per client, rather than calculating the most pervasive theme with a percentage as done in prior studies. On the other hand, this study did not exclude clients that failed to relate narratives about the therapist. We do not know whether the silence of these clients indicated a lack of transference to the therapist or intense transference to the therapist.

Arachtingi and Lichtenberg (1998) studied the similarity between clients' perceptions of their therapist and their perceptions of their parents, in terms of empathy, positive regard, and genuineness. Client perceptions of these qualities were compared to therapist ratings of client transference in 62 therapy dyads. They did not find a significant relationship between how closely clients perceived their therapist and parents (in terms of the necessary and sufficient conditions) and therapist ratings of client transference. However, there are several limitations to this study that argue against interpreting these results as evidence that transference onto the therapist from parental figures does not exist. The client may experience the therapist as accepting and empathetic *and* as the negative "father or mother figure," as opposed to an either/or perception of the therapist. Arguably, this would have to occur for the client to remain in treatment. Additionally, the necessary and sufficient conditions may reflect the real relationship component of the therapeutic relationship more so than the transference one.

*The Pervasiveness of the CCRT in Relationships Outside of Therapy.* There is growing evidence that just as clients similarly perceive the therapeutic relationship and other significant relationships, they also similarly perceive various significant others, when measured by the CCRT. Crits-Christoph et al. (1990) found, in a single case study

design, an almost perfect correlation between the relationship themes evident in relationship episodes about different women in the client's life (effect size=.81). Contrary to these results, Barber, Foltz, DeRubeis, and Landis (2002) did not find evidence for consistent relationship themes. Using the RAP, investigators asked each participant for 4 or 5 relationship episodes about their mother, father, same sex friend, and romantic partner. Using ANOVA, the results suggested that there was not a consistent theme across different relationship situations with the same or different people.

Crits-Christoph, Demorest, Muenz, and Baranackie (1994) used a measure of the CCRT called the QUAIN to study the extent to which clients display similar interpersonal themes across multiple narratives, involving interactions with others. The degree of similarity was highly significant; however, the effect size was small. As found in similar studies, they found that as the number of psychotherapy sessions increased, the pervasiveness of a client's interpersonal theme also increased. Waldinger, Diguier, Guastella, Lefebvre, Allen, Luborsky, and Hauser (2002) also found evidence for stability in relationship schemas. In a longitudinal study, they conducted a RAP interview for 40 participants, once during adolescence, and once at age 25. Judges rated the CCRT at time 1 and time 2. Considerable stability in the frequency with which particular themes were expressed in the narratives of adolescents and young adulthood was found.

Overall, there seems to be huge variability in how pervasive an interpersonal theme is across relationships (Crits-Christoph et al., 1994). While the evidence is slowly building in this area, several limitations of the literature caution against too much interpretation of these studies. These studies relied upon relationship episodes from consecutive sessions. If a client discusses the same topic over a course of a few weeks, he



or she may simply not discuss similarities in relationships, not because similarities are not present but because they did not have time to be discussed. Additionally, studies that do not specifically ask clients for episodes with *significant* others (for example, Crits-Christoph et al., 1994) may not tap into transference per se but a social schema. For example, how we respond to an authority figure may be a function of transference or a socially scripted protocol. Lastly, studies in this area of research mostly involve the CCRT methodology. One problem with using client narratives as a source of transference is that clients may choose to subconsciously or consciously avoid such issues.

The literature suggests that there is in least some parallel between clients' perception of a) the therapist and people in outside therapy relationships, and b) various significant others. This relationship seems especially strong as the number of sessions and relationship episodes increase. The literature, though inconsistent, lends some support to the premise that transference patterns are repeated in relationships within group therapy, as they are in significant relationships outside of the group.

#### Group Therapy as a Social Microcosm and the Transference Content

Theory and research espouse that, in least to some degree, we perceive others through our own individualized "lens." The lens through which we see others begins to form early in life in an attempt to deal with frustrating or traumatic interpersonal experiences, and it lingers into adulthood as transference. According to theory and research, we come to see others in a similar light, as transference is replicated across relationships. Psychotherapy has often been referred to as a social microcosm of the client's interpersonal world (Yalom, 1995). With their therapist, clients reenact their maladaptive relationship patterns, core conflictual relationship theme, or transference

pattern, providing a here-and-now example of how they interact with others outside of therapy. Group therapy provides a challenge and an opportunity as the eventual recreation of the family in the group pulls on group members' core relational issues. Transference may be a mechanism through which group psychotherapy evolves into a social microcosm of members' interpersonal world.

*Transference and Group Psychotherapy.* Although transference, or any other similar construct such as the core conflictual relationship theme, has not been empirically studied within a psychotherapy group, several theoretical stances support the central role that it plays in the life of a group. Traditional psychoanalytic models view the group as an expression of the oedipal complex where the leader is the father figure and the other members are siblings. On the other hand, Stone et al. (1977) theorize that the group itself and the leader(s) are experienced as self-objects that help to maintain the members' sense of self. Group members develop different types of transferences, i.e., idealizing, merger, mirror, or twinship, in ways that maintain their sense of self. For example, if a group member feels inadequate around authority (a replication of how he or she felt around father and/or mother) then he or she may develop an idealizing transference toward the group leaders. The type of transference may vary across group members and leaders depending on the individual characteristics of the 'other,' yet the transferences are united in that they stem from the same narcissistic injury experienced in childhood (Stone & Whitman, 1977).

Epstein (2004) maintains that due to its emotional and interpersonal complexity, the psychoanalytic group setting is likely to evoke group members' transferences that would not have otherwise surfaced in individual therapy. He believes that this is most

likely to happen when some group interaction leads a member to feel negatively about himself or the group. Epstein writes that some group member or leader will fail to meet some other member's need and injure his or her sense of self. This injury is often met with a transference reaction on the part of the deflated group member. In these instances, the group serves as leverage in first evoking the reaction and then providing feedback on it. Behind the groups' powerful ability to evoke multiple transferences from each member is its similarity to the primary family. The group setting recreates the emotional experience of the member's life in the family of origin.

*Creating a Social Microcosm in Group Psychotherapy: The Mechanisms*

While the group literature has not yet examined transference, certain group studies have assessed interpersonal problems as a mechanism through which a social microcosm is created. Most of these studies start with Yalom's (1985) social microcosm theory that proposes that the interpersonal problems of group members influence their perception of the group (Kivlighan & Angelone, 1992; Yalom, 1985). Sullivan's (1953) theory of interpersonal psychiatry is the foundation of Yalom's social microcosm theory. In interpersonal therapy, the notion of a self-fulfilling prophecy explains how a social microcosm comes into being. There are three stages to the self-fulfilling prophecy. First, people make predictions about how others will respond to them based on past experiences. One can see how this is very closely related to transference, and in particular, the response of other dimension of the CCRT/CRQ. In the second phase, people respond to others on the basis of these predictions. This closely resembles the response of self dimension of the CCRT/CRQ. In the final stage, other people react to the client's behavior in ways that confirm the client's initial expectations. In theory,

interpersonal problems and transference are both cognitive “filters” through which group members perceive the group and relationships within it.

Kivlighan and Angelone (1992) examined Yalom’s concept of social microcosm by examining the relationship between group member’s interpersonal problems and their perceptions of the group atmosphere or climate. They found that different perceptions of group climate were related to types of interpersonal problems of the group members. More specifically, group members who were too dominant saw the group as promoting a submissive style of interaction. Also, too cold members saw the group as less engaged, or colder. Surprisingly, cold members saw the group as having less conflict. The nonassertive and nurturant group members saw the group as more engaged, conflictual, and anxious. Kivlighan, Marsh-Angelone, and Angelone (1994) also found that group members’ interpersonal problems serve as a filter through which members perceive the group leaders and group interactions. As theorized by Yalom (1985), Kivlighan et al. (1994) found evidence to suggest that group participants project their interpersonal problems onto the group leader. By selectively perceiving others in line with one’s own interpersonal pattern, a self-fulfilling prophecy is set into motion. Together, these results suggest that group members perceive the group differently, depending on their interpersonal problems. As noted above, interpersonal problems likely involve the transference phenomenon, as they both refer to perceptions and expectations of others based on past experiences. These differential perceptions are a likely step in creating each member’s social microcosm.

There are several limitations to this line of research. Kivlighan et al. (1992/1994) collected all data from the same source, group members. Therefore, their findings have a

monomethod bias. Also, Kivlighan et al. (1992/1994) did not use actual therapy groups in their sample but groups that were comprised of students fulfilling a course requirement. The make up of the samples raises questions about how generalizable the findings are to psychotherapy groups. Perhaps most importantly, these studies drew conclusions about what transpired in a group based on an individual level of analysis, leading to much error and unaccounted variance. Additionally, these studies did not account for dependence in observations. The perceptions of group participants are not independent of each other, violating the assumption of independence rule (Marcus, 1998).

#### *The Social Relations Model and Group Psychotherapy Research*

The Social Relations Model (SRM; Kenny, 1994) can address many of the difficulties inherent to research on group psychotherapy. It accounts for dependence in observations and for the various levels of analysis that exist in a group, unlike traditional statistics. However, research on group therapy using SRM has been sparse and sporadic (Marcus & Kashy, 1995). During the 1980s, Wright and colleagues used SRM to study a variety of interpersonal behaviors and perceptions in graduate student training groups. Wright, Ingram, and Blackmer (1985) found that the relationship effect accounted for 59% of interpersonal attraction in these groups. Meaning that, group members' feelings of interpersonal attraction are largely a function of the unique relationships that form between dyads in a group. Furthermore, they found some evidence for generalized reciprocity, or the tendency for people to report feeling close to those group members who reported feeling close to the group. There was even evidence for dyadic reciprocity for attraction ( $r = .74$ ). Meaning that, if Al is especially attracted to Cathy, it is likely that Cathy feels especially attracted to Al. Wright and Ingraham (1985) also found significant

relationship variance and high levels of dyadic reciprocity for both speaking in groups and self-disclosure.

Continuing this line of research, Wright and Ingraham (1986) found that the relationship accounted for about 50 % of the variance for feelings of both affiliation and control toward other group members and that there was dyadic reciprocity for affiliation. Finally, Ingraham and Wright (1987) found that reports of how anxious group members felt while interacting with other group members was largely a function of the relationship. Although, they did not find evidence for dyadic reciprocity for anxiety (e.g., just because Al is especially anxious when he has to interact with Cathy does not mean that Cathy is especially anxious when interacting with Al). Wright and colleagues pioneered the use of SRM within groups. However, they used graduate school training groups in their sample, rather than actual therapy groups. Their studies highlighted the importance of dyadic relationships in our understanding of interpersonal behavior and perception in therapy groups.

More recently, Marcus and Holahan (1994) used SRM to study interpersonal perception in actual therapy groups. They found evidence of both consensus (i.e., significant partner variance) and assimilation (i.e., significant perceiver variance) for ratings of dominant, hostile, submissive, and friendly. Self-reported assertiveness was positively correlated with the partner effects for dominant and negatively correlated with the partner effects for submissive, suggesting that group members' self-perceptions were consistent with the way that they were perceived in the group. There was also significant dyadic reciprocity for hostility. A positive correlation between the relationship effects for

dominant and submissive indicated that if, for example, Al saw Cathy as especially dominant, then Cathy was likely to see Al as especially submissive.

Marcus et al. (1994) and Wright and Ingraham (1986) found conflicting results pertaining to the interpersonal circle. For example, Marcus et al. found perceiver and partner effects, whereas Wright et al. did not. Also, unlike Wright et al., Marcus et al. found an interpersonal dyadic correlation along the control dimension. However, the different methodologies used in these two studies make it difficult to identify the source of these discrepancies. The Marcus et al. study administered the questionnaire once, while the Wright et al. study used a repeated measures design. Both studies used different samples as well, actual therapy groups vs. training groups, respectively. Perhaps the most interesting difference between the two studies is the length of time subjects were acquainted. Wright collected data after the eighth session, whereas Marcus collected data after the second session. Since there is some evidence that perceiver, partner, and relationship effects vary over time (Kenny & La Voie, 1984; Kenny & Malloy, 1988), perhaps the results in these studies are confounded by level of acquaintance.

Interpersonal style and the core conflictual relationship theme are both types of interpersonal perception that are likely to influence each other, and both theories predict that interpersonal perception is largely a function of the perceiver. In SRM language, both theories predict assimilation (i.e., significant perceiver effects), i.e., interpersonal perception is largely in the eye of the beholder. However, the studies using SRM and interpersonal perception cited above have found more evidence for relationship effects than perceiver effects. There are several explanations for this. One reason is that relationship variance is always significant unless error is statistically separated from the

relationship effect. The Marcus et al. study did not separate error from the relationship component which exaggerates the relationship variance.

An alternative explanation highlights where interpersonal and psychodynamic theories of interpersonal perception diverge. While Kiesler's (1983) interpersonal circle model predicts that interpersonal perception and behavior are largely a function of the perceiver, it also predicts that people will compliment one another. For example, if one person in a relationship is dominant, the other will be more submissive. In SRM language, Kiesler's model predicts perceiver and relationship variance, and in fact, Marcus et al. found significant perceiver and relationship variance in their study of the interpersonal circle. On the other hand, psychodynamic theories of interpersonal perception state that people carry a stable template or schema, and information about others is assimilated into that schema (i.e., perceiver variance). Perhaps there is more evidence for significant perceiver variance in psychodynamic measures of interpersonal perception, such as a measure of the CCRT.

Unlike the studies cited above, Mallinckrodt and Chen (2004) found significant perceiver and partner variance in interpersonal perception scores. They had members in 12 training groups report pre-test memories of emotional bonds with parents, and adult attachment avoidance and anxiety. Group members provided Impact Message Inventory (a measure of interpersonal style) ratings of fellow group members at midpoint and termination. They proposed that the perceiver variance for these ratings was an indicator of transference, and it significantly correlated with negative memories of parents and attachment avoidance. Significant partner variance was also found at termination in group members' ratings of dominance or affiliation in a given member, and was associated with



negative memories of parents and attachment anxiety. This study is relevant to the one at hand in two key ways. First, as in the study at hand, it proposed that perceiver variance of some interpersonal perception variable was an indicator of transference. Furthermore, the perceiver variance in their study correlated with attachment and negative parental memories, another indicator of transference. Second, they found significant perceiver variance in a measure of interpersonal, as was predicted in the study at hand.

## Chapter 3

### Statement of the Problem

Freud experienced a peculiar parallel between his relationships with clients and the clients' relationships with other people. This relational experience gave rise to Freud's theory of a relationship template, or what he referred to as *transference* (1955). For the client, "there is a transfer of attitudes and behavior from earlier relationships with personally important people to the later relationship with the therapist as well as others" (Fried, Crits-Christoph, & Luborsky, 1998, p.165). Although Freud focused on the projection of the client's transference onto the therapist, he also acknowledged that transference could take place inside or outside of therapy (Freud, 1912/1966). Accordingly, Van Ravenswaay, Luborsky, and Childress (1983) found consistency between clients' narratives about relationships outside of therapy and their relationship narratives about the therapist. A key aspect of transference is that the content of the therapeutic relationship parallels other relationships in the client's life, and yet few studies have directly assessed this proposition so basic to psychodynamic therapies.

There has been a lack of research on the content of transference partly because conventional statistics do not adequately test relational constructs like transference. On the other hand, the Social Relations Model (SRM; Kenny, 1994) is a statistical procedure that accounts for the unique attributes of relational variables. For example, SRM accounts for the different levels of analysis that arise in dyads or groups. In SRM language, psychodynamic theories like transference and the core conflictual relationship theme (CCRT; Luborsky, 1977) predict that interpersonal perception is in the eye of the beholder (i.e., the perceiver), or the individual level of analysis. However, there are

multiple levels that arise in dyads and groups that may also contribute to how a client perceives his or her therapist, or to how a group member perceives other members in a therapy group. More specifically, if AI perceives his therapist as intimidating, this may be because: (a) AI feels that most people are intimidating, (b) most clients find this therapist intimidating, (c) even though most people do not find this therapist intimidating and AI is not usually intimidated by others, there is something unique about their relationship that leads AI to feel intimidated by his therapist, or (d) AI's therapist was just having a bad day and took it out on AI, i.e., random error. Through accounting for these various levels of analysis, SRM allows researchers to gain a more accurate picture of the extent to which transference is a function of the perceiver, or in this case, the client or group member (see Marcus & Buffington, 2005).

Social psychology literature provides some evidence to suggest that transference is a function of the perceiver in everyday social relationships. Using Social Cognitive Theory, Andersen and colleagues have examined the extent to which mental representations of significant others influence perceptions of new people. Andersen and Cole (1990) found that a participant was more likely to incorrectly remember fictional characters if the characters possessed similar features to a participant's significant other. In other words, the mental representations that we possess of our significant others influence our perception of new people. Moreover, some evidence suggests that significant-other mental representations can be applied to new people even when they do not resemble the significant other (Andersen, Glassman, Chen, & Cole, 1995). Assimilation of new people into one's pre-existing significant-other template goes beyond one's cognitive perceptions and extends to one's affective responses as well

(Andersen & Baum, 1994). The social psychology literature supports Freud's implied assumption that transference is an individual level construct, as interpersonal perception is influenced by one's unique mental representations, or schemas. Since Andersen and colleagues found that perceptions of new people in everyday situations are influenced by individual differences within the perceiver, it was reasonable to hypothesize that group members' perceptions of other members are similarly influenced by individual differences related to transference.

If transference is a function of the perceiver, then group members and individual therapy clients should perceive various relationships similarly. Luborsky and colleagues have begun to test this commonly accepted assumption, using the core conflictual relationship theme (CCRT) as a measure of the content of transference. The CCRT is comprised of three dimensions: wishes, needs, or intentions toward others, perceived responses of others, and responses of the self (Luborsky et al., 1986). The underlying premise of the CCRT, and measures derived from it such as the CRQ, is that people hold core relationship theme(s) that are expressed in all significant interpersonal relationships (Luborsky, 1976). Luborsky, Crits-Christoph, Mellon, Alexander, Cohen, Childress, Levine, and Hole (1985) found quantitative confirmation of a parallel between clients' other people-CCRT and the therapist-CCRT, based on client narratives in individual psychotherapy sessions. Similarly, Fried, Crits-Christoph, and Luborsky (1998) found a significant parallel between clients' other people-CCRT and therapist-Relationship Episodes, which are the narratives used to formulate the CCRT. These studies support the proposition that clients have a transference pattern that is generalized inside and outside

of therapy, when measured by the CCRT. The present study expanded upon these studies by examining the pervasiveness of relational patterns in group psychotherapy.

It is a common clinical assumption that therapy groups evolve into a *social microcosm* of all the other relationships in a group member's life. Yalom (1995) theorized that maladaptive interpersonal problems first bring clients into group therapy where these same problems repeat themselves within the group. His concept of *interpersonal learning in the social microcosm of the therapy group* espouses that identifying and examining these repeated maladaptive interpersonal patterns within the group is a major change mechanism. According to the theory, as group members receive feedback on the effect of their behaviors and their self-other perceptions, they may try new more adaptive behaviors in relationships. Empirically testing whether or not clients actually create a social microcosm in group treatment is essential since replicating and then changing maladaptive relationship themes within the group is theoretically a major mechanism of change in process-oriented groups.

In addition to interpersonal theory, the corrective recapitulation of the family theory argues that group members reenact family dynamics in the therapy. According to this theory, a potentially therapeutic aspect of group treatment is how the group responds to an individual's reenactment. If members and/or leaders respond differently than other people have in a member's life, then in return the member will also respond differently to other group members/leaders (Yalom, 1995). In order for corrective recapitulation or interpersonal learning to occur in group therapy, group members must transfer "outside" relationship behaviors, expectations, and perceptions into the group. The present study

empirically tested the assumption that group members express a similar relationship pattern across group members and in other significant relationships outside of the group.

Few studies have examined transference in group psychotherapy and/or have utilized an SRM approach to the study of psychotherapy groups. However, several studies in the group literature have examined the effect of transference-related variables on group process. Kivlighan, Marsh-Angelone, and Angelone (1994) found that group participants tended to project their interpersonal problems onto the group leader and the group as a whole. The results suggest that clients come to therapy with a cognitive “filter” through which they interpret group leaders and group interactions. Similarly, Kivlighan and Angelone (1992) examined the concept of a social microcosm by looking at the relationship between group members’ interpersonal problems and their perceptions of group climate. According to interpersonal theory, clients bring their maladaptive interpersonal patterns into therapy and will perceive others in ways that maintain their interpersonal problems. The results from Kivlighan et al. (1992) support this theory, as they found that differences in perception of group climate depended on individual interpersonal problems. This research supports the premise that differences in perception of the same target (i.e., group climate or group leaders) are caused, in least in part, from differences within the perceiver or group member, including individual differences related to transference.

Although SRM has been underutilized in group research (Kivlighan, Coleman, & Anderson, 2000; Marcus & Holahan, 1994), a few studies have used it to examine interpersonal perception variables similar to transference and the central relationship theme in groups. Wright and Ingraham (1986) had graduate students, participating in

training groups, complete four of the 90 items from Kielser's Impact Message Inventory (IMI) at three different times. Significant relationship variance was observed for the dimensions of affiliation and control, but there was not significant perceiver or target variance. More recently, Marcus and Holahan (1984) studied members of time-limited therapy groups, who rated one another using the entire IMI, to produce measures of perceived dominance, hostility, submissiveness, and friendliness. The SRM analysis showed significant perceiver and target variance for all four dimensions.

Lastly, Mallinckrodt and Chen (2004) had a sample of graduate student training groups complete the IMI on each other at midpoint and termination. They found significant perceiver variance for IMI scores at termination but not at midpoint. They interpreted the perceiver variance as an indicator of transference, and found that it correlated with members' negative memories of parents and attachment anxiety. In other words, they found that a group member's perception of other members' interpersonal style was partially influenced by his or her transference, as captured by the perceiver variance. They also found significant partner variance for dominance and affiliation at termination, indicating that at termination, members agreed somewhat on the interpersonal style of a particular member. Similar to Mallinckrodt et al., the study at hand also proposed that perceiver variance could be interpreted as an index of transference. However, unlike the Mallinckrodt et al. study, the sample of this study consisted of actual therapy groups and used a measure of the CCRT to produce round robin ratings. The Mallinckrodt et al. study is important to the one at hand because it found evidence to suggest that interpersonal perception among group members is, in least

partially, due to the perceiver/member (i.e., high perceiver variance), and that this perceiver variance may be interpreted as transference.

Overall, the group research provides some evidence to suggest that group members' interpersonal perception is largely a function of the perceiver. New people are *assimilated* into the perceiver's/group member's pre-existing idea of what other people are like, and thus different relationships are seen as very similar to the perceiver. In this study, I suggested that a) significant perceiver variance, or assimilation, is an indicator of transference, and b) that transference is a mechanism through which the social microcosm develops in group therapy. The study at hand empirically examined the extent to which a social microcosm forms in psychotherapy groups in two ways. First, the extent to which a group member's perception of other members was a function of that group member/perceiver was examined. Second, the similarity between a group member's perception of other members and his or her perception of a significant-other outside of the group was examined.

Group therapy provides a clear window into a member's interpersonal world. Measures of the CCRT provide quantitative methods to assess what we see through this window. Group therapy provides a powerful framework for examining members' transference patterns across multiple relationships in the same setting, or social milieu. In individual psychotherapy, clinicians must rely on clients' "stories," or narratives, about their significant relationships to decipher clients' relational themes. However, group psychotherapy brings the "outside-in," through examining clients' relationships with other group members. In other words, a therapy group is literally transformed into a social microcosm, while individual therapy may come to replicate a piece of this



microcosm. According to the social microcosm theory, group members' will express similar maladaptive relational patterns across group members, and these same patterns will be expressed in significant relationships outside of therapy. Similarly, the CCRT theory predicts that maladaptive relationship themes serve as a relationship template that is transferred onto significant others in a client's life. This study used the Social Relations Model, as opposed to conventional statistical techniques, to more accurately test these common clinical assumptions.

### *Hypotheses and The Social Relations Model*

Each wish, response of other, and self-response is comprised of several *effects*: perceiver, partner, relationship, group, and error. The meaning of these effects is reviewed below using the example of the wish to be nurtured. However, any wish, response of other, and self response category could be used instead. In this example, group member Al reports a relatively high wish to be nurtured by group member Cathy (i.e., Al's rating or judgment). In a group, there are a number of factors, or effects, contributing to Al's rating of Cathy.

- *Perceiver effect*: Does Al tend to have a wish to be nurtured by everyone in the group? In other words, does Al generally express the wish to be nurtured across people in a similar situation?
- *Partner Effect*: This effect assesses the tendency for all members to agree in their ratings of a particular partner. There could be something about Cathy that triggers the need to be nurtured in others, and thus everyone in the group may indicate that they want to be nurtured by Cathy.

- *Relationship (dyadic) Effect:* Al may wish to be nurtured by Cathy more so than he wants to be nurtured by others in the group and more so than other members typically want to be nurtured by Cathy. The relationship effect measures the unique level of Al's wish to be nurtured by Cathy, over and above Al's perceiver effect and Cathy's partner effect.
- *Group Effect:* Does the group as a whole have a wish to be nurtured? Perhaps a norm of craving nurturance has developed in Al and Cathy's group. In this case, this norm would be reflected in a higher constant than would be found in a group whose members did not crave nurturance from one another.
- *Error:* In any study there is some random error. If Al rates multiple people on his wish to be nurtured, we could assess how much of Al's wish to be nurtured is due to random fluctuation and how much is due to his unique relationship with Cathy.

## Hypotheses

**Hypothesis 1:** A significant amount of the variance in judgments will be attributed to the perceiver effect (i.e., significant assimilation). The perceiver variance will account for a substantial amount of variance, relative to the other effects.

1A: A significant and relatively substantial amount of the variance in wishes will be attributed to the perceiver effect.

*Example: Al gives Cathy a high rating on the wish to be nurtured by her. This is largely explained by the fact that Al wishes to be nurtured by people in general more so than others in the group.*

1B: A significant and relatively substantial amount of the variance in expected responses from others will be attributed to the perceiver effect.

*Example: Al expects that Cathy will reject him. This is largely explained by the fact that Al expects everyone to reject him more so than others in the group expect.*

1C: A significant and relatively substantial amount of the variance in responses of self will be attributed to the perceiver effect.

*Example: Al reports that he very often withdraws from Cathy. This is largely explained by the fact that Al withdraws from people in general more so than other group members do.*

**Hypothesis 2:** The partner effect will account for minimal variance in ratings, relative to other effects. Overall, the partner variance will be nonsignificant. In other words, group members typically do not reach a *consensus*, or agreement, on the variables being rated.

2A: The partner effect will account for minimal variance in ratings of wishes, relative to other effects.

*Example: Group members do not generally agree on how much nurturance they want from Cathy.*

2B: The partner effect will account for minimal variance in ratings of responses of others, relative to other effects.

*Example: Group members do not generally agree on the extent to which Al is dominating.*

2C: The partner effect will account for minimal variance in ratings of self-responses, relative to other effects.

*Example: Group members do not report that they act similarly around the same group members; for example, Cathy is especially caring of Al, while other group members do not generally care for Al.*

**Hypothesis 3:** A group member's perceiver and partner effects will significantly correlate in ways that confirm that member's central relationship pattern

*Example: Cathy has a high perceiver effect for the wish for conflict, meaning that she typically craves conflict in her relationships with other group members. The other group members generally agree that Cathy tries to control them. This suggests that Cathy is controlling in relationships in an effort to receive the conflict she wants from others.*

**Hypothesis 4:** There will be a positive and significant relationship between the CRQ scores for variable X (self-report of CCRT outside of therapy) and the perceiver effect for variable X. In other words, personality variable (CRQ scores) X will significantly correlate with the perceiver effect for variable X.

4A: There will be a positive and significant relationship between self-reported wishes outside of therapy and the perceiver effect for wishes in therapy.

*Example: On the CRQ, Al reports that he has a wish to be nurtured by his romantic partner. Al also indicates that he has a strong desire to be nurtured by other group members.*

4B: There will be a positive and significant relationship between self-reported expected responses of others outside of therapy and the perceiver effect for expected responses from others in therapy.

*Example: On the CRQ, Al reports that he expects his romantic partner to reject him or her. Al also indicates that he expects other group members to reject him or her.*

4C: There will be a positive and significant relationship between self-reported responses of self outside of therapy and the perceiver effect for responses of self in therapy.

*Example: On the CQR, Al reports that he usually withdraws from his significant other. Al also indicates that he oftentimes finds himself withdrawing within the group.*

**Hypothesis 5:** The CRQ scores will correlate with the perceiver effects in ways that confirm a member's central relationship pattern.

*Example (CRQ-perceiver Correlation): Al wants independence from his romantic partner (i.e., CRQ score for the Wish- "Independence"). Al generally feels that other group members control him (i.e., Al's perceiver effect). Al may have a wish or need for independence because he assumes people will try and control him much like his father did.*

**Hypothesis 5a:** The CRQ scores will correlate with the partner effects in ways that confirm a member's central relationship pattern.

*Example (CRQ-Partner Correlation): Al expects his romantic partner to control him (i.e. CRQ score for the response of other- "control me"). Other people in the group generally agree that they dominate Al (i.e., Al's partner effect). Al subconsciously relates to others in ways that will elicit his feared response, that is, that other people will control him.*

## Chapter 4

### Method

#### *Design*

The design of this study is a descriptive field study. Heppner, Kivlighan, and Wampold (1999) characterize these studies as “investigations that do not exercise experimental control (randomization, manipulation of variables) and are conducted in a real life setting” (p.48). Due to the nature of the design, the present study is high in external validity since participants were directly recruited from the population of interest. On the other hand, this study has lower internal validity due to the lack of manipulation of the variables. Thus, one can not draw cause and effect conclusions among the variables under investigation. The basic design of the present study is quantitative and descriptive. The primary purposes of this study were to assess a) the tendency for group members to repeat central relationship themes with other members, and b) the similarity between group members’ central relationship themes in relationships outside of group therapy and in relationships within group therapy.

#### *Participants*

Group leaders and members were recruited from 11 weekly process-oriented, “Yalom-type” groups, of varying sizes. Although round robin ratings from group leaders were collected, I ultimately decided to delete these ratings (i.e., leader ratings of members and member ratings of leaders) from the analyses to control for role in the group. Previous SRM studies have used groups in which all members occupy the same role, or groups in which each member occupies a different role; for example, in family

assessment studies, each group has a mother, father, and child. Therapy groups, with one or two leaders and a number of members, do not exactly fit into either of these two types of previously studied groups. Because of the lack of research on “mixed-groups,” I decided to focus this study solely on group members (D. Kenny, personal communication, September 6, 2006).

Marcus and Kashy (1995) suggest using approximately 6 groups of 4-5 people when utilizing a round robin design. After group leader data were deleted, the sample consisted of 11 groups consisting of 55 total members. Group size varied from 3-7 members. Since significant dyadic reciprocity was not found, groups of 3 could be used in the analyses. Eleven therapy groups declined to participate in the study. Of the participating groups, four group members, each from a different group, did not participate in the study. Ratings of these four members (by other group members) were deleted from the analyses, as consistent with SRM procedure. In SRM, if person X's data are deleted or missing, then, other peoples' ratings of X must also be deleted

Three of the participating groups were run by a University Health Center at a U.S. state university and were interpersonal process groups. The remaining 8 groups were offered in private practices and were mixed adult long-term general interpersonal-process therapy groups. While in conventional statistics it is unwise to combine groups from different settings, SRM accounts for group level variance so groups can be safely combined. Structured groups were not used, nor did the researcher place any restrictions or structure on group sessions. Group members had participated in the group for an average of 47 months at the time of data collection and the groups, as a whole, had been running for an average of 50 months. The average age for group members was ( $M=34$

years,  $SD= 15$ ). Twenty of the group members were male and 41 were female. The participants identified as primarily Caucasian. Only 4 group members identified with a race other than Caucasian. Two members were African-American, 1 was Asian-American, and 1 member identified as “other.”

### *Measures*

*The Central Relationship Questionnaire (CRQ; Barber, Foltz, and Weinyrb, 1998).* The CRQ is a self-report instrument based on the core conflictual relationship theme (CCRT) method. These measures were developed within a psychoanalytic framework and assess an individual’s central relationship patterns, or characteristic patterns of relating to others. The CRQ is a viable alternative to the CCRT method, which remains a cumbersome and costly method, given that it requires transcribed data and independent judges. Although the CRQ can target any significant relationship, respondents are typically instructed to focus on their most recent romantic relationship when answering the items. Participants are asked to answer the items in response to a relationship when at its worst. “Worst” ratings have been found to yield more reliable results than “better,” or “typical,” ratings, which generate socially desirable answers (Barber et al., 1998). The CCRT and the CRQ appear to correlate with each other, but more research is needed on that topic (Luborsky, 2000).

Some information on how group members were instructed to complete the CRQ in this study is necessary since some modifications to the original instructions were made. Respondents are typically instructed to focus on a recent romantic relationship when answering the items on the CRQ (Barber et al., 1998). Similarly, in the study at hand, participants were instructed to focus on a current romantic relationship. However, if a



participant was not currently in a romantic relationship, then he or she was instructed to focus on a past romantic relationship. Only four of the participants completed the CRQ based on a past romantic relationship. Group members indicated that they completed the CRQ based on mostly long-term relationships ( $M=86$  months,  $SD=100$ ). Members were instructed to define “romantic partner” as they saw fit. If a participant never had a romantic partner, then he or she was instructed to rate the items on a person that he or she has had romantic feelings for but was never involved with. However, this situation never arose in this sample. The original directions were altered in two ways. First, by allowing participants to rate the items based on a romantic relationship that ended more than 6 months ago, and second, by allowing them to respond based on someone he or she has had romantic feelings for (although this situation never arose).

The CRQ items were initially based on previously established standard categories from the CCRT method. These standard categories fall under one of three main subscales or components of the CCRT: what one wishes for or wants in relationships (*wishes*), how one perceives others to respond to him or her (*responses of others*), and how one typically responds to others (*responses of self*). Research assistants and clinicians began by generated items that were thought to be synonymous with these categories. Items that were rated as clearly representative of the standard categories by three of four judges were kept for further analyses. A total of 355 items were administered to 197 college students and internal consistency for each category was assessed. Items that correlated less than .4 with their subscales were deleted. This procedure was repeated until internally consistent subscales were obtained (Barber et al., 1998).

Then, an exploratory factor analysis was used to evaluate the structure of each CRQ component. Although certain subscales among the three components (wishes, responses of others, and responses of self) should be correlated, the three components are theoretically distinct and thus were analyzed separately. Ratings of all CRQ items, from 411 participants, were entered into a principle component analysis, using a varimax rotation. An item was retained if it loaded at least .5 on a factor and loaded .15 higher on its designated factor than on any other factor. An item could be eliminated if it failed to correlate more than .4 with the total subscale.

A factor analysis of the 65 wish items yielded seven interpretable factors which together accounted for 62.1 % of the variance. Using the 49 items that met the inclusion criteria listed above, the following seven wish subscales were formed: to be supported, to be independent, to be recognized, to be in conflict, to be trusted, to be sexual, and not to be abandoned. Next, the factor analysis of 51 responses of other items produced seven factors, accounting for 63.7 % of the variance in ratings. The responses of other subscales were constructed from 39 qualifying items and include the following: hurts me, loves me, is independent, controls me, is out of control, is anxious, and is sexual. Lastly, the factor analysis of 64 responses of self items yielded 8 factors, accounting for 61.4% of the variance. From the 51 items that were included the following subscales emerged: feel valued, care for others, feel anxious, feel disliked, avoid conflict, am independent, am sexual, am domineering. Intercorrelations among subscales of the CRQ components predicted each other in expected ways; positively toned subscales positively correlated with each other and negatively tones subscales positively correlated with each other.

Adequate reliability was achieved for each of the subscales. Chronbach's alpha coefficients ranged from .78 to .95 for the seven Wish subscales, .82 to .95 for the seven Responses of others subscales, and .71 to .94 for the Responses of self subscales. The CRQ also showed good test-retest reliability. All CRQ subscale scores from Time 1 correlated significantly with subscale scores provided a year later (Barber et al., 1998). Weinryb et al. (2000) also found adequate reliability for the CRQ in a sample of Swedish students, as cronbach's alpha ranged from .75 to .95 for the Wish subscales, .72 to .96 for the Responses of other subscales, and .66 to .96 for the Responses of self subscales, suggesting acceptable internal consistency. Together, Barber et al. and Weinryb et al. provide evidence for adequate reliability of the CRQ across cultures. In the study at hand, adequate reliability for the CRQ subscales were found as assessed by cronbach's alpha, ranging from .75-.94 for the Wish subscales, .69-.90 for the Response of Self subscales, and .62-.92 for the Responses of Other subscales.

Barber et al. and Weinryb et al. provide evidence for the convergent and divergent validity of the CRQ. More specifically, they found that the CRQ is related to the Inventory of Interpersonal Problems and measures of symptomatology in theoretically predicted ways. The Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, and Baer, 1998) measures the presence and severity of various types of interpersonal problems and can be conceived as a measure of interpersonal distress. It correlated in the predicted directions with all the CRQ subscales. That is, positively toned CRQ subscales were inversely correlated with the number of interpersonal problems, whereas the negatively tones CRQ subscales correlated in a positive fashion with the overall level of interpersonal problems (Barber et al., 1998; Weinryb et al., 2000).

Weinryb et al. (2000) addressed the issue of discriminant validity by comparing the CRQ scores in a sample of Swedish outpatients, relative to Swedish students. As predicted, they found that the outpatients endorsed significantly higher levels of the negatively toned CRQ subscales and significantly lower levels of the positively toned CRQ subscales, as well as the response of self dimension Am Domineering, than the student group. It is worth noting that the outpatient group consisted of therapy groups, suggesting that the CRQ is a valid measure for not only individual therapy, but also group therapies.

*Factors.* Two different factor analyses were performed in the study at hand. First, a second order factor analysis was performed on the first order factors from the CRQ. Second, a factor analysis was run for the rated items on the round robin measure. These two factor analyses will be discussed separately, beginning with the second-order factor analysis of the CRQ data. To make data interpretation easier and to reduce the chance of a Type I error, the 19 factors on the CRQ were reduced to 4 factors in the study at hand. To accomplish this, three separate principal component factor analyses with a Varimax rotation were run. These three factor analyses of the CRQ factor scores are second order factor analyses. One second order factor analysis was run for the wish factors, one for the responses of others factors, and one for the responses of self factors. I chose to run three separate second order factor analyses, one for each of the three a priori constructs (i.e., wishes, responses of others, and responses of self), to adhere to the conceptual model of the CCRT. Similarly, the CRQ items were initially based on these three previously established standard categories from the CCRT method.

In the second order factor analyses, a factor was kept if it loaded in least .50 on a factor and in least .20 higher than on any other factor. Since previous studies on the CRQ have separated the scales into positively toned and negatively toned scales, I attempted to label the second order factors, Negative and Positive, wherever applicable, in an effort to be consistent with past studies. Two second order components were extracted for the Wishes, and were labeled 'Positive Wishes' and 'Negative Wishes.' The Positive Wish second-order factor consisted of 5 items: support, recognition, trust, conflict (negatively), and not to be abandoned, and it explained 49.84 % of the total variance. I reversed scored the Conflict factor since it loaded negatively. The reliability of the Positive Wish second-order factor, as measured by Cronbach's alpha, is .82. Since the Negative Wish second-order factor consisted of only one item, Independence, it was dropped from further analyses.

Two second order components were also extracted from the Responses of Others factors. However, because only one item, Is Independent, loaded on one of these two factors, it was dropped from the analyses. The item, Out of Control, did not load on either factor and was also dropped from the analyses. The remaining second-order factor was labeled, 'Negative Responses of Others.' It consisted of 4 factors: Hurt Me, Love Me (negatively), Control Me, and Is Distant, and it explained 79.89 % of the total variance. I reverse scored the Love Me factor since it loaded negatively on the second order factor. The reliability of the Negative Responses of Others factor, as measured by Cronbach's alpha, is .84, with Control Me deleted.

Lastly, two second order components were extracted from the Responses of Self factors, and were labeled 'Anxious Rejected Responses of Self' and 'Dominant Hostile

Responses of Self.' The Anxious Rejected Responses of Self second-order factor consisted of 5 items: Feel Valued (negatively), Care for Other (negatively), Feel Disliked, Am Independent (negatively), and Feel Anxious. It explained 20.57% of the total variance, and the reliability with Care for Other deleted, was .80. The factors that loaded negatively were reversed scored. The Dominant Hostile Responses of Self second-order factor consisted of two first-order factors: Am Dominating and Avoid Conflict (negative). Avoid Conflict was reverse scored since it loaded negatively. Dominant Hostile accounted for 18 % of the total variance and had a reliability of .18. To summarize, the second order factor analysis left us with four second-order factors: *Positive Wishes* (Support, Recognition, Conflict (negative), Trust, Not to be Abandoned), *Negative Responses of Others* (Hurt Me, Love Me (negative), Is Distant), *Anxious Rejected Responses of Self* (Feel Valued (negative), Feels Disliked, Am Independent (negative), and Feel Anxious), and *Dominant Hostile Responses of Self* (Avoid Conflict (negative), Am Dominant).

*Round Robin Measure (Marcus & Kashy, 1995).* In a round robin measure, every participant in a group rates every other group participant on a set of variables. In the present study, group members rated each other on the first order subscales taken from the Central Relationship Questionnaire described above (CRQ; Barber, Foltz, and Weinryb, 1998) on a scale from 1-5. Accordingly, group members rated every other group member on the 7 wish dimensions, 7 responses of other dimensions, and 8 responses of self CRQ factors that were found by Barber et al. For example, each group member rated every other group member on the extent to which he or she wants *support* (a Wish subscale/item) from every other person in the group, and so on. In total, there were 22

“items” that members rated. However, a maximum of 20 dyadic variables can be used in a social relations analysis. To compensate for the model, I deleted three items: the wish to Be Sexual, the response of other Is Sexual, and the response of self Am Sexual. I chose to delete these three items on a statistical basis because they contained the least variability. The round robin measure is included in Appendix A.

*Factor Analysis.* To make data interpretation easier and to reduce the chance of a Type I error, I reduced the remaining 19 dyadic variables into 6 factors. To accomplish this, I ran three separate principal component factor analyses with a Varimax rotation. One factor analysis was run for the Wish items, one for the Responses of Others items, and one for the Responses of Self items. An item was kept if it loaded in least .50 on a factor and in least .20 higher than on any other factor.

Two components were extracted for the Wish items, and I labeled these components ‘Positive Wishes’ and ‘Negative Wishes.’ The Positive Wish factor consisted of 4 items: support, recognition, trust, and not to be abandoned, and it explained 67.15 % of the total variance. The reliability of the Positive Wish factor, as measured by Cronbach’s alpha, was .80. The Negative Wish factor consisted of two items: Independence and Conflict, and it explained 32.84 % of the total variance. The reliability of the Negative Wish factor was .40.

Two components were extracted for the Responses of Other items, and I labeled these components ‘Dominant Hostile Responses of Others’ and ‘Clingy Anxious Responses of Others.’ Two items did not load on any factor, Love Me and Out of Control, and they were deleted from the analyses. The Clingy Anxious Responses of Others factor consisted of 2 items: Is Independent (negatively) and Is Anxious, and it

explained 27.50 % of the total variance. Is Independent was reverse scored since it loaded negatively on the factor. The reliability of the Clingy Anxious Responses of Others factor, as measured by Cronbach's alpha, was .31. The Dominant Hostile Responses of Others factor consisted of two items: Hurt Me and Control Me, and it explained 40.43 % of the total variance. The reliability of the Dominant Hostile Responses of Others factor was .60.

Two components were extracted for the Responses of Self items, and I labeled these components 'Positive Responses of Self' and 'Negative Responses of self.' Two items did not load on any factor: Am Independent and Am Domineering and were deleted from the analyses. The Positive Responses of Self factor consisted of 2 items: Feel Valued and Care for Others, and it explained 49.34 % of the total variance. Cronbach's alpha for the Positive Responses of Self factor was .72. The Negative Responses of Self factor consisted of three items: Feel Anxious, Feel Disliked, and Avoid Conflict, and it explained 39.55 % of the total variance. Cronbach's alpha for the Negative Responses of Self factor was .53. To summarize, the factor analysis left us with 6 factors: *Positive Wishes* (Support, Recognition, Trust, Not to be Abandoned), *Negative Wishes* (Independence, Conflict), *Dominant Hostile Responses of Others* (Hurt Me, Control Me), *Clingy Anxious Responses of Others* (Is Independent (negative), Is Anxious), *Negative Responses of Self* (Feel Anxious, Feel Disliked, Avoid Conflict), and *Positive Responses of Self* (Feel Valued, Care for Others).

#### *Procedure*

The researcher contacted group leaders by phone to obtain permission to recruit participants from their therapy group. The researcher began by contacting group leaders



involved in a group therapy association and asked each for one additional referral to contact. Group leaders were told the general purpose of the study and what would be expected of participants. Specifically, group leaders were told that the researcher wanted to examine members' relationships with each other and their relationship with a romantic partner outside of the group. Group leaders were first asked if their groups were general interpersonal process groups that followed a "Yalom-Type" model and that this was a requirement for participation. Additionally, group members in the sample attended at least 7 session of group therapy to allow time for the transference to develop (See Gelso et al., 1997).

If the group leader(s) agreed to participate and his or her group fit the criteria for participation, the researcher mailed a set of questionnaires for each leader and member in the group to that group leader. Along with the questionnaires, the researcher mailed a detailed protocol, included in Appendix B, to the leader(s) to follow when administering the questionnaires to the other leaders and members in the group. A set of questionnaires included: informed consent form, a letter explaining the purpose of the study, general directions, demographic form, and the round robin measure. For group members only, the CRQ was also included in the packet of measures. Concerning the round robin measure, each person in the group was assigned an identification number in order to keep track of who was rating whom. The demographic form is included in Appendix C and the letter addressed to participants is included in Appendix D. The group leaders were provided with a script, included in Appendix E, to read to the group, stating that participation is voluntary and not a part of the therapy.

Group leaders were told to follow the protocol given to them when reviewing the instructions and administering the questionnaires to the rest of the group. The group leader(s) administered the questionnaires and reviewed the instructions with the rest of the group immediately following the next group session in which all members were present. After the leader reviewed the instructions and administered the questionnaires to the group, group participants completed the questionnaires at home over the course of the following week. In this case, upon completion, group participants returned the questionnaires to the researcher through the mail. However, three of the groups reviewed the instructions and then completed the questionnaires immediately after a group session in the group room. In this case, the questionnaires were sealed in an envelope and placed in a drop box for the researcher to later collect.

### *Data Analysis*

#### The Social Relations Model

Each wish, response of other, and self-response is comprised of several *effects*: perceiver, partner, relationship, group, and error. The meaning of these effects is reviewed below using the example of the wish to be nurtured. However, any wish, response of other, and self response category could be used in its place. In this example, group member Al reports a relatively high wish to be nurtured by group member Cathy (i.e., Al's rating or judgment). In a group, there are a number of factors, or effects, contributing to Al's rating of Cathy.

- *Perceiver effect*: Does Al tend to have a wish to be nurtured by everyone in the group? In other words, does Al generally express the wish to be nurtured across people in a similar situation?

- *Partner Effect:* This effect assesses the tendency for all members to agree in their ratings of a particular partner. There could be something about Cathy that triggers the need to be nurtured in others, and thus everyone in the group may indicate that they want to be nurtured by Cathy.
- *Relationship (dyadic) Effect:* Al may wish to be nurtured by Cathy more so than he wants to be nurtured by others in the group and more so than other members typically want to be nurtured by Cathy. The relationship effect measures the unique level of Al's wish to be nurtured by Cathy, over and above Al's perceiver effect and Cathy's partner effect.
- *Group Effect:* Does the group as a whole have a wish to be nurtured? Perhaps a norm of craving nurturance has developed in Al and Cathy's group. In this case, this norm would be reflected in a higher constant than would be found in a group where members did not crave nurturance from one another.
- *Error:* In any study there is some random error. If Al rates multiple people on his wish to be nurtured, one could assess how much of Al's wish to be nurtured is due to random fluctuation and how much is due to his unique relationship with Cathy.

### Hypotheses

**Hypothesis 1:** A significant amount of the variance in judgments will be attributed to the perceiver effect (i.e., significant assimilation). The perceiver variance will account for a substantial amount of variance, relative to the other effects.

1A: A significant and relatively substantial amount of the variance in wishes will be attributed to the perceiver effect.

*Example: Al gives Cathy a high rating on the wish to be nurtured by her. This is largely explained by the fact that Al wishes to be nurtured by people in general more so than others in the group.*

1B: A significant and relatively substantial amount of the variance in expected responses from others will be attributed to the perceiver effect.

*Example: Al expects that Cathy will reject him. This is largely explained by the fact that Al expects everyone to reject him more so than others in the group expect.*

1C: A significant and relatively substantial amount of the variance in responses of self will be attributed to the perceiver effect.

*Example: Al reports that he very often withdraws from Cathy. This is largely explained by the fact that Al withdraws from people in general more so than other group members do.*

Rationale: In SRM, if a significant amount of variance in some rating is attributed to the perceiver effect, then it is suggested that these perceptions, or ratings, are in the eye of the beholder. More specifically, it is hypothesized that a member's wishes, perceptions of others, and perceptions of their own responses to others, are largely attributed to one's unique and general way of perceiving the world.

Analysis: Using WINSOREMO, I tested whether the percentage of relative variance accounted for by the perceiver effect in judgments of Wishes, Responses of others, and Responses of Self were statistically greater than zero. Then, I made descriptive observations regarding the magnitude of the perceiver variance relative to other sources of variance.

**Hypothesis 2:** The partner effect will account for minimal variance in ratings, relative to other effects. Overall, the partner effects will not be significant. In other words, group members typically do not reach a *consensus*, or agreement, on the variables being rated.

2A: The partner effect will account for minimal variance in ratings of wishes, relative to other effects.

*Example: Group members do not generally agree on how much nurturance they want from Cathy.*

2B: The partner effect will account for minimal variance in ratings of responses of others, relative to other effects.

*Example: Group members do not generally agree on the extent to which Al is dominating.*

2C: The partner effect will account for minimal variance in ratings of self-responses, relative to other effects.

*Example: Group members do not report that they act similarly around the same group members; for example, Cathy is especially caring of Al, while other group members do not generally care for Al.*

Rationale: Because each member theoretically perceives others through his or her unique transference “lens,” it is hypothesized that there will be little agreement on how the same group member is perceived by others. In SRM, the notion of *consensus* asks the question, *do multiple perceivers of the same partner agree about the standing of that partner on a particular trait?* Low partner variability implies low consensus or agreement, suggesting that the perceivers’ ratings have little to do with the actual partner.

Analysis: Using WINSOREMO, I tested whether the percentage of variance accounted for by the relative partner variance in judgments of Wishes, Responses of Others, and Responses of Self were statistically greater than zero. Then, I made descriptive observations regarding the magnitude of the partner effect relative to other sources of variance.

**Hypothesis 3:** The perceiver and partner effects will significantly correlate in ways that confirm a member's central relationship pattern

*Example: Cathy has a high perceiver effect for the wish for conflict, meaning that she typically craves conflict in her relationships with other group participants. The other group participants generally agree that Cathy tries to control them. This suggests that Cathy is controlling in relationships in an effort to receive the conflict she wants from others.*

Rationale: Interpersonal theory states that one's behaviors in relationships will lead to a confirmation of one's own interpersonal problems, i.e., a self-fulfilling prophecy. Similarly, group members may subconsciously behave in ways that perpetuate their central relationship patterns.

Analysis: The perceiver and partner variances were correlated with one another using a Pearson Product Moment Correlation that was adjusted for dyadic reciprocity.

**Hypothesis 4:** There will be a positive and significant relationship between the CRQ scores for variable X (self-report of CCRT outside of therapy) and the perceiver effect for

variable X. In other words, personality variable (CRQ scores) X will significantly correlate with the perceiver effect for variable X.

4A: There will be a positive and significant relationship between self-reported wishes outside of therapy and the perceiver effect for wishes in therapy.

*Example: On the CQR, Al reports that he has a wish to be nurtured by his romantic partner. Al also indicates that he has a strong desire to be nurtured by other group members.*

4B: There will be a positive and significant relationship between self-reported expected responses of others outside of therapy and the perceiver effect for expected responses from others in therapy.

*Example: On the CQR, Al reports that he expects his romantic partner to reject him or her. Al also indicates that he expects other group members to reject him or her.*

4C: There will be a positive and significant relationship between self-reported responses of self outside of therapy and the perceiver effect for responses of self in therapy.

*Example: On the CQR, Al reports that he usually withdraws from his significant other. Al also indicates that he oftentimes finds himself withdrawing within the group.*

Rationale: If central relationship themes are generalized across relationships, then how a member perceives a romantic partner should be congruent with how that member generally perceives other members. The Social Microcosm Theory predicts that group members will repeat the same maladaptive relationship patterns within the group that they express in other significant relationships.

Analysis: In SRM, self-report data is referred to as *personality variables*, while data that is collected in a round robin design is referred to as *dyadic variables*. The personality variables were correlated with the perceiver variance in the dyadic variables. These personality-perceiver correlations are a Pearson product moment correlation with some adjustments.

**Hypothesis 5:** The CRQ scores will correlate with the perceiver effects in ways that confirm a member's central relationship pattern.

*Example (CRQ- perceiver Correlation): Al wants independence from his romantic partner (i.e., CRQ score for the Wish- "Independence"). Al generally feels that other group members control him (i.e., Al's perceiver effect). Al may have a wish or need for independence because he assumes people will control him, much like his father did.*

Rationale: Several studies suggest that members act and perceive others in ways that confirm their pre-existing interpersonal problems. Since interpersonal problems and central relationship patterns are both thought to be trait like variables that manifest in relationships, it is reasonable to hypothesize that group members perceive others and themselves in ways that confirm their pre-existing relational pattern(s).

**Hypothesis 5a:** The CRQ scores will correlate with the partner effects in ways that confirm a member's central relationship pattern.

*Example (CRQ-Partner Correlation): Al expects his romantic partner to control him (i.e. CRQ score for the response of other- "control me"). Other people in the group generally agree that they dominate Al (i.e., Al's partner effect). Al subconsciously relates to others in ways that will elicit his feared response, that is, that other people will control him.*



Rationale: Interpersonal theory states that one's behaviors in relationships will lead to a confirmation of one's own interpersonal problems, i.e., a self-fulfilling prophecy.

Similarly, group members may subconsciously behave in ways that perpetuate their central relationship patterns. Looking at the above example, Al most likely behaves passively in relationships, leading to other people controlling or dominating him, which of course confirms Al's pre-existing fear that others will control him.

Analysis: Personality-perceiver and Personality-partner correlations were calculated, using an adjusted Pearson product moment correlation

#### *Mathematical Specifications of the Social Relations Model*

Although a complete explanation of the statistics involved in the social relations model is beyond the scope of this paper, this section reviews the most relevant statistics to the study at hand. The statistical procedures outlined below make this model unique in three main ways. First, an individual's slope, mean, and standard deviation are derived.

Second, unlike traditional statistics, SRM accounts for dependence in observations. In this way, SRM is similar to other multilevel statistical procedures, such as Hierarchical Linear Modeling (HLM), that account for dependence in observations. More specifically, if group member A and B rate member C, then the ratings of A and B are nested within C, or dependent on C. HLM and SRM are statistical techniques that account for the dependence in observations that arises from a nested design. While SRM is similar to other multilevel designs like HLM, it is actually based on a two-way random effects ANOVA, where the perceiver and partner effects are the random variables. However, while ANOVA is interested in mean scores, SRM focuses on proportion of variances in scores, which is the third and final unique feature of the model (Kenny & La Voie, 1984).

*Component Effect Estimates.* In SRM, there are four components to any score: perceiver, partner, relationship, and error. The first step in computing the perceiver, partner, and relationship variances is to compute effect estimates from the means. Extreme scores among the means for the components form the basis of an assessment in SRM, in contrast to raw scores. It is important to note that these components are independent of one another, although we may look at their interaction through assessing the relationship component.

It is helpful to organize the raw data into a two-way analysis of variance (ANOVA) table where the rows are the perceivers and the columns are the partners, as indicated in Table 1.

Table 1

*Round Robin Design*

Perceiver	Partner				Row Mean (RM)
	Group Member 1	Group Member 2	Group Member 3	Group Member 4	
Group Member 1	---	$X_{m1m2}$	$X_{m1m3}$	$X_{m1m4}$	RM, Member 1
Group Member 2	$X_{m2m1}$	---	$X_{m2m3}$	$X_{m2m4}$	RM, Member 2
Group Member 3	$X_{m3m1}$	$X_{m3m2}$	---	$X_{m3m4}$	RM, Member 3
Group Member 4	$X_{m4m1}$	$X_{m4m2}$	$X_{m4m3}$	---	RM, Member 4
Column Mean (CM)	CM, Member 1	CM, Member 2	CM, Member 3	CM, Member 4	Grand Mean

*Note.* The round-robin group design. Within each cell, the X represents the observed score, and the subscript indicates the relationship.

In this case, there are four perceivers and each of these four persons/perceivers also is a partner for the ratings of the other three group participants. A design in which

every group participant rates every other group participant is called a *round robin design*. In this type of design, which is used in the study at hand, the first step in computing an effect estimate for any of the components is to calculate the row and perceiver mean for each row and column. A row mean represents the average of that person's ratings of the other three group participants (i.e., as a perceiver). Similarly, for each group participant there is a column mean, representing the average rating of a person by the other group members (i.e., as a partner). Finally, there is a grand mean, which represents the average rating in the group. Because it is a function of the sum of all the relationships within the group, the grand mean corresponds to the whole group functioning.

We can view Table 1 as a 4 X 4 ANOVA design with main effects and interaction effects, just like a typical ANOVA. The perceiver and partner effects can be viewed as main effects and the relationship components can be viewed as interaction effects of a particular perceiver and partner. In table 1, there are 4 perceiver main effects, 4 partner main effects, and 12 relationship effects. In calculating a perceiver effect, we are interested in whether a particular row differs from the grand mean. In calculating a partner effect, we are interested in whether a particular column differs from the grand mean. Lastly, when calculating a relationship effect, we are interested in whether a specific cell of the matrix differs from row means, the column means, and the grand means.

Before proceeding to the effect estimate equations, it is important to consider the issue of missing data in a round robin design. A crucial feature of table 1 is that there are empty cells located where an individual's row and column intersect, unlike a balanced two-way ANOVA. These cells along the diagonal are empty because in a round robin

design, group participants do not rate themselves. This missing data introduces what is called a “missing partner” bias to the data. With missing partner bias, if group member A indicates that everyone dominates him (i.e., a high perceiver effect for RO To Be Dominated), then group member A’s partner effect for domination would be very small because A did not rate him or herself. Consequently, the row and column means cannot be interpreted in their raw form as perceiver and partner effects. Instead, they must be weighted in a manner that adjusts for the missing partner effects.

The most crucial adjustment to the raw scores, however, is that the missing self-data is estimated in the effect estimate equations. Let us again consider the perceiver effect for A on domination. If we want to know the extent to which A perceives everyone as dominating, then logically we average A’s row means for domination, since these scores indicate how much, on average, A believes other people dominate him. It also makes logical sense that if we want to know how extreme A’s raw scores are that we would subtract the grand mean from his row mean. However, perhaps less apparent is why we would want to consider A’s column, or partner mean, when wondering about A’s general tendency to perceive others as dominating. However, to calculate A’s perceiver effect we use his or her column means to estimate A’s missing self-data. Since A did not rate the degree to which he dominates himself, we use the degree to which other people rate A as dominating as an estimate for the missing self-data. While the use of an estimate is not ideal for any statistical model, it is needed to correct for the missing partner bias (Cook & Kenny, 2004).

An alternative to an estimation procedure is to have group members rate themselves; however, this begets other complicated problems. It is well documented in

the literature that self-other ratings are not only phenomenological different but quantitatively different as well (Kenny et al., 1984). If we were to include self-ratings and compare them to the “other-ratings,” it would be like comparing apples and oranges. Additionally, in the study at hand, asking group members to rate how much transference they have for themselves does not make much sense. To summarize, as seen in the equation below, the perceiver effect is derived from the average of one’s perceptions of others, how one is perceived by others, and the difference from the group/grand mean.

Perceiver effect  $_I = \text{row mean}_I (n-1)^2 / [n(n-2)] + \text{column mean}_I (n-1)/[n(n-2)] -$

group mean  $(n-1)/(n-2)$ , where  $n$  is the number of group participants providing data and  $I$  indicates a group member.

Perceiver effects reflect deviations around the group/grand mean and thus sum to zero. A perceiver effect for each variable is computed (Cook et al., 2004).

The same procedure is applied to the formula for the partner effects. However, unlike the perceiver effect, this formula is based on the column mean for each person in the same way the perceiver effect was based on the row mean, and the equation is:

Partner effect  $_I = \text{column mean}_I (n-1)^2 / [n(n-2)] + \text{row mean}_I (n-1)/[n(n-2)] -$

group mean  $(n-1)/(n-2)$ .

Like perceiver effects, partner effects reflect deviations around the group/grand mean and thus sum to zero. A partner effect for each variable is computed (Cook et al., 2004).

The next component to consider is the dyadic, or relationship effect. Remember that the relationship component is a perceiver-partner interaction effect. For example, suppose A has a high relationship effect for B on dominance. This means that A sees B as more dominating than he sees other people in the group, and more so than others

typically rate B as dominating. There is something unique about the relationship between A and B that makes A feel particularly dominated by B. Note that the relationship components are directional, meaning that, in the above example, B may or may not feel particularly dominated by A. In the formula for the relationship effect, the effects of the group mean, the perceivers, and partners are removed from the relationship score. What remains is the unique effect for a particular relationship.

Relationship effect<sub>ij</sub> =  $X_{ij} - \text{perceiver effect}_i - \text{partner effect}_j - \text{group mean}$  (Cook et al., 2004).

*Variance Components: Relationship Variance.* Now that we have our perceiver, partner, and relationship effect estimates, we will use these estimates to compute the proportion of variance in scores due to these components. This time, let us start with the computations for the relationship component. As shown in table 1, in a group of 4 there are 12 relationship effects. In this way, a group of 4 can actually be viewed as a set of 12 dyads, group member 1 and group member 2, group member 1 and group member 3, and so forth. Accordingly, we calculate 12 effect estimates for the relationship components. These 12 estimates are used to compute the relationship variance.

To estimate the relationship variance, we also need a Mean Square between and a Mean Square within. The relationship variance is equal to the  $MS_b + MS_w / 2$ . Below are the equations for the mean squares, which as one can see are derived from the 12 relationship effect estimates.

$MS_b = 2\Sigma(.5(g_{ij} + g_{ji}))^2 / ((n-1)(n-2)/2) - 1$ , where  $g_{ij}$  represents  $i$ 's rating of partner  $j$ .

$$MS_w = \Sigma (g_{ij} - g_{ji})^2 / (n-1)(n-2)$$

As elaborated upon in the following section, in addition to illuminating how variables are influenced by unique relationships, the relationship variance is statistically important to obtaining an accurate perceiver and partner variance (Cook et al., 2004; Kenny et al., 1984).

*Variance Components: Perceiver and Partner.* Earlier it was discussed how the means of each row and column in table 1 must first be computed. The measure of perceiver variance is the variance of the row means with some adjustments. Likewise, the measure of partner variance is the variance of the column means with some adjustments. There are several problems that arise from using means to derive variance components. The first problem arises from the information that is naturally lost when many scores are averaged into one. More specifically, group member A and group member B may have the same average perceiver effect for say, domination, for completely different reasons. Group member A may rate all the other members as moderately domineering, while B rates half of the group members as very domineering and the other half as not domineering at all. In this instance, A and B would both have a moderate average perceiver effect for dominance; however, this same score means something different for A and B. SRM deals with this problem by subtracting out the relationship component from the perceiver and partner variance equations. Extreme scores that skew means, in SRM, are considered to be a product of unique relationships and are partialled out of the perceiver and partner equations. This way, outliers do not change the perceiver and partner variances.

The other problem that arises from using means to derive variance components is that the variance will depend on the number of people in the group, over which the means

are averaged. For example, the perceiver variance depends on the number of partners, or on how many people the perceiver is rating. The greater the number of participants, the smaller the variance will be. If there were an infinite amount of group members in the group, the variance would be zero. Thus group size biases both the perceiver and partner variance estimates. The solution in SRM is to estimate the perceiver and partner variances as if there were many perceivers and partners. This is accomplished by taking the perceiver or partner variance and subtracting a correction term that is based on the number of perceivers or partners and the relationship variance. This correction component produces a more conservative estimate of variance. Subsequently, the perceiver and partner variances are theoretical estimates. Since these variances are theoretical they can be negative. Negative variances are usually reported as 0 to adhere to convention. The equations for perceiver and partner variances are:

$$\text{Perceiver Variance} = A - (\text{MS}_b + \text{MS}_w / 2) (n-1)/n(n-2) - (\text{MS}_b - \text{MS}_w / 2)/n(n-2),$$

where A = sum of perceiver effect estimates squared/n-1

$$\text{Partner Variance} = B - (\text{MS}_b + \text{MS}_w / 2) (n-1)/n(n-2) - (\text{MS}_b - \text{MS}_w / 2)/n(n-2),$$

where B = sum of all partner effect estimates squared/n-1

In SRM, relative variances are reported. For example, relative perceiver variance is equal to the perceiver variance divided by the sum of all the variances in the model (Cook et al., 2004; Kenny et al., 1984).

*A Note about significance tests.* A one-sample *t* test is used to determine whether the means of the variance estimates are significantly different than 0. If group size varies, as it does in the study at hand, estimates are weighted by n-1. That is, the resulting mean and the variances are weighted estimates (Lashley & Bond, 1997).



*Combining Groups.* Since analyzing each group separately would lead to little power and generalizability of results, I chose to analyze the data on groups combined. While combining groups is unwise in conventional statistics because every group is unique in its own way, SRM partials out group level effects to safely combine groups. SRM uses a Bayes estimation technique to estimate the best fit model for the combined group. A statistical package called WINSOREMO is needed for this analysis since it involves estimating thousands of pairwise comparisons. Suppose we start off with 9 groups, each with their own means, effect estimates, variance components, etc. WINSOREMO computes thousands of pairwise correlations within and between these 9 groups to decipher the best possible fit for a model in which all the groups are combined.

*Correlations.* A number of the hypotheses in the study at hand dealt with not only variance components, but also correlations. Variances are used to compute any basic correlation. As elaborated upon above, in SRM, actual variances are not used and instead theoretical ones are derived. Using the theoretical variances to compute the correlations in SRM is said to “*correct for attenuation.*” Ordinary correlations in SRM would be smaller than they should be since participants interact with a finite amount of people. The correlations are derived, or mathematically adjusted in SRM. For example, a perceiver-partner correlation is not a simple correlation because dyadic reciprocity is adjusted from it. Because correlations are derived they can be larger or smaller than 1. However, to adhere to convention, +1 and -1 are reported. One should also note that if a particular component has less than 10 % of variance in the model, it cannot be used in a correlation. SRM computes the following correlations on the individual level of analysis: actor-actor, actor-partner, partner-actor, and partner-partner. SRM also computes the following

dyadic level correlations: relationship-intrapersonal and relationship-interpersonal (Kenny, 1994).

*A note about significance tests.* If the reliability of a particular variable is relatively low, then correlating it with another variable would lead to an inflated correlation size. In this case, WINSOREMO will use a more conservative significance test for that particular correlation. This is why a robust correlation may not always be significant (Lashley et al., 1997).

*Personality Measures.* A standard self-report measure is referred to as a personality measure in SRM. For example, age and intelligence are personality measures. In the study at hand, the central relationship questionnaire is a personality measure since it is a standard self-report measure. For a personality measure, standard tests of significance of the covariances are possible. First, the perceiver and partner effects are computed for some variable,  $X$ . Then, an ordinary Pearson product-moment correlation can be computed between these estimates and the personality variable,  $Y$ , partialing out group effects. Basically, correlations are computed within each group and then pooled. This correlation can be tested for statistical significance in the usual way, with degrees of freedom of  $N-G-1$ , where  $N$  is the number of people and  $G$  the number of groups.

## Chapter 5

### Results

Kenny's (1993) FORTRAN computer program WINSOREMO, which performs social relations analyses on data collected from round robin designs, was used for all data analysis. The formulas, and their derivations, that form the basis for this program may be found in Warner et al., 1979, and Kenny, 1981. The results are based on eleven groups ( $N=11$ ) with varying numbers of participants per group. The eleven groups were combined in all of the analyses since performing analyses on individual groups greatly reduces power. The perceiver-partner, personality-perceiver, and personality-partner correlations were the only analyses performed on the individual level of analysis, in which  $N= 55$ .

*Preliminary Analyses.* I had to make some decisions regarding how to present the data. One option was to present the results on each individual item on the round robin measure or factor from the CRQ. The strength of this approach is that more specific information would be obtained on each wish, response of other, and response of self item and factor. The limitation of this approach is that with 20 self-report factors (including length of time in group) and 19 dyadic variables or items, interpretation of the results would be confusing and overwhelming to the reader. Also, because WINSOREMO automatically computes every possible correlation, the chance of a TYPE I error would increase.

Another option would be to combine all the wishes, then all the responses of others, and then all the responses of self items on the round robin and factors from the CRQ, leaving us with a total of six constructs or categories (three from the round robin

and three from the CRQ). The strength of this option is that it is consistent with the CCRT theory, which states that transference is comprised of those three standard categories. Also, reducing the data to only three constructs (Wishes, ROs, and RSs) would make data interpretation simpler and greatly reduce the chance of a TYPE I error. However, the limitation to this approach is that specific information about each wish, response of other, and response of self within the different categories would be lost and only very general conclusions could be drawn. For example, positively toned and negatively toned items would be “mushed” together, if this option was chosen. This is problematic because there is some evidence that negative and positive transference patterns operate differently in therapy (Gelso, Kivlighan, Wine, Jones, & Friedman, 1997).

Finally, the last option is to run three factor analyses, one for the wishes, one for the responses of others, and one for the responses of self. The strengths of this option are 1) it reduces the data, making interpretation easier, and 2) reduces the chance of a TYPE I error. Also, while some of the specificity would surely be lost, as compared to analyzing on the individual item or factor level, not as much specific information is lost as would be the case if all the variables in a category were “mushed” together (as in option number 2). This option is also still in line with the CCRT theory that proposes three standard categories (i.e., wishes, responses of others, and responses of self). For these reasons, this later option was chosen and the results of the factor analyses were presented in the measures section.

*Descriptives.* The means for the second order CRQ factors are presented in Table 2 and are compared to the means found in Barber et al. (1998). Due to the second order

factor analysis performed, the present study used different variables than in Barber et al. Thus, the means from the two studies could not be directly compared. A second order factor, in the study at hand, was computed by adding the first order factors that loaded together in Barber et al. In order to compare the means of this study to the Barber et al. study, the appropriate means of each Barber et al. factor were added. For example, one of the second order factors in the present study was Dominant Hostile RS and was comprised of the first order factors: Avoid Conflict (negative) and Am Dominant. In this case, the means for the factors, Am Dominant and Avoid Conflict, from the Barber et al. study, were added to derive the ‘Dominant Hostile RS- Barber et al. (1998) mean,’ reported in the table. Standard deviations could not be compared due to the different factors in each of the two studies. After these computations were made, the means from the two studies were almost equivalent in every instance. Although the means for the round robin data are presented in Table 2, it is not appropriate to compare them to past literature because past literature has not treated each CRQ factor as a single item, as opposed to the Round Robin Measure in the study at hand that used each factor as a single item.

Table 2 *Means and Standard Deviations of Central Relationship Questionnaire (CRQ)*

*Second Order Factors from the Present Study and Barber, Foltz, and Weinryb (1998)*

CRQ Factors	Mean Present Study	Mean Barber et al., 1998
Positive Wishes	28.3	24.9
Negative RO	10.9	13.6
Anxious Rejected RS	15.2	15.6
Dominant Hostile RS	6.2	6.7

*Note.* The Barber et al. (1998) Means were derived by adding the means of the factors from the Barber study that comprised the second order factors in the present study.

*Reliability.* The internal consistency for each of the derived Wishes (W), Responses of Others (RO), and Responses of Self (RS) factor was reported in the measures section. As can be seen, some of these alphas are quite low by all conventional standards. However, I chose to retain these factors for several reasons. First and most importantly, second-order factor analyses typically yield lower reliabilities, and thus the standard for evaluating acceptable alphas changes. Secondly, one would not expect the internal consistency to be high in all cases. Items on a factor may not “hang” together because they may reflect completely different transference patterns. If a group member has one main transference pattern, it would make sense that he or she rates the items on a scale very differently. For example, the wish for independence and the wish for conflict loaded on the same factor. While these items are similar in that they both have negative connotations, they do not necessarily go hand in hand, as a group member may have a wish for conflict *and* dependency or independence *without* conflict.

Another reason why I argue that lower reliabilities are acceptable in the study at hand is because of the uniqueness of the SRM model. Cronbach’s alpha is a measure of intra-rater error. This kind of error, in multilevel models like SRM, always goes into the dyadic level of analysis, or, in our case, the relationship component. Since we are primarily interested in the perceiver and partner effects, it is not of much concern to the study at hand that the relationship component will be inflated by random error. Furthermore, for the most part, the reliabilities for the perceiver effects are excellent. Overall, the reliabilities for the partner effects are adequate for research purposes. The reliabilities for the perceiver and partner effects can be viewed in Table 3. These reliability scores are not traditional Cronbach alpha’s but a rate of consistency. For

example, low partner reliabilities were found for variables that were minimally accounted for by partner variance, as low partner variance suggests a lack of consistency in ratings of the same target. One final important and unique feature of SRM is that significance tests in WINSOREMO are adjusted for low perceiver and partner reliabilities, as a more stringent significance test is used for analyses involving an effect with a relatively low reliability.

Table 3

*Perceiver and Partner Effect Reliabilities for Wishes, Responses of Others, and Responses of Self within the Therapy Group*

	Perceiver Effect Reliabilities	Partner Effect Reliabilities
Negative Wishes	.81	.00
Positive Wishes	.72	.54
Dominant Hostile Responses of Others	.50	.50
Clingy Anxious Responses of Others	.90	.13
Negative Responses of Self	.90	.50
Positive Responses of Self	.90	.52

*Variance Partitioning: Hypothesis 1*

A primary hypothesis of this investigation was that relative perceiver variance would significantly and substantially account for group members' ratings of their central

relational patterns (Ws, ROs, and RS) within the therapy group. Significant perceiver variance suggests that transference patterns (or central relationship themes) are generalized across all relationships in the group, *regardless of the other person in the relationship (i.e., the partner) or the unique relationship (i.e., the dyad)*. To address this hypothesis, one must examine the relative variance partitioning of the perceiver and partner components of the model. It is important to compare the relative perceiver variances to the relative partner variances because it was hypothesized that members' interpersonal perceptions, in least in terms of their Ws, ROs, and RS, are mostly a function of the perceiver (i.e., high perceiver variance). However, an alternative hypothesis is that members' interpersonal perceptions are largely accounted for by the partner; in other words, partner variance accounts for substantially more variance in scores than perceiver variance).

WINSOREMO does not include a statistical test to evaluate whether one variance component accounts for significantly more variance than another component. Following this, in order to test the hypothesis that the perceiver effect would account for substantially more variance than the partner effect, some 'marker' needed to be created to assess whether one variance component was 'substantially' bigger than another. To calculate this 'marker,' I first took the difference between the perceiver and partner variance components for a particular variable, and second, assessed whether this difference was a small, medium, or large effect.. I used the standards set forth by Cohen (1988) to evaluate whether an effect size was small (.2), medium (.5), or large (.8).

The relative variance partitioning for the two wish, responses of other, and responses of self factors, as well as the perceiver and partner difference scores, are



presented in Table 4. The third column in Table 4 provides the variance accounted for by the relationship effects plus random error. In WINSOREMO, the relationship effect is never tested for significance because it will always be significant unless it is separated from error. In the study at hand, relationship variance could not be separated from error because the procedure in WINSOREMO for separating error yielded significant unstable variance.

Table 4

*Relative Variance Partitioning, Means, and Standard Deviations for Wishes (W), Responses of Other (RO), and Responses of Self (RS)*

W, RO, or RO	Means	SD	Perceiver	Partner	Effect Size Difference	Relationship-Error
Negative W	4.2	1.6	.53*	.00	.5	.47
Positive W	15.9	3.4	.35*	.16*	.2	.50
Dominant Hostile RO	2.8	1.2	.16	.17	.0	.67
Clingy Anxious RO	5.6	1.6	.63*	.02	.6	.35
Negative RS	6.4	2.5	.62*	.07	.6	.31
Positive RS	8.1	1.8	.60*	.09*	.5	.32
<i>M</i>	7.2		.48	.09	.4	.44

*Note.* The values in the Relationship-Error column represent the variance accounted for by the relationship effects combined with the error variance.  $N=11$  groups,  $*p<.05$ .

*Wishes.* As hypothesized, there was significant perceiver variance for Negative and Positive Wishes. Perceiver variance accounted for 35% of the total variance for Positive Wishes and 53% for Negative Wishes. Furthermore, as compared to the partner

variances, the perceiver variances for the wishes were substantial. Although no significance tests for contrasting these variance components are available, on the basis of the data in Table 4, a few descriptive observations may be made. The pattern of the variance partitioning shows that the perceiver variances for the Wishes are greater in magnitude than the partner variances in both instances. The perceiver variance for Positive Wishes accounts for over 2 times as much variance as the partner variance. The difference between the two components was .5, which is a medium effect. The perceiver variance for Negative Wishes accounts for over 5 times as much variance as the partner variance. The difference between the two components was .2, which is a small effect.

*Responses of Others.* The hypothesis that there would be significant and substantial perceiver variances for the Responses of Other factors was partially supported. Perceiver variance accounted for 16% of the variance for the Dominant Hostile Responses of Others factor and was not significant. Furthermore, as compared to the partner effect, which accounted for 17% of the total variance for the Dominant Hostile factor, the perceiver variance was not more substantial, as was predicted. Instead, perceiver and partner effects were basically equal for this factor, with most variance being accounted for by relationship variance plus error. The difference between the two components was .0, and thus there was no effect. On the other hand, perceiver variance accounted for 63% of the total variance in the Clingy Anxious Responses of Others factor and was significant. As predicted, the perceiver variance for this factor was significant and greater in magnitude than the relative partner variance, which only accounted for 2% of the total variance. The difference between the two components was .6, which is a medium effect.

*Responses of Self.* As hypothesized, there were significant and substantial perceiver variances for the two Responses of Self factors. Perceiver variance accounted for 62% of the total variance for Negative Responses of Self and 60% of the variance for Positive Responses of Self. Also as hypothesized, as compared to the partner variances, the perceiver variances for the two Responses of Self factors were substantial. The perceiver variance for Negative Responses of Self accounted for almost 9 times as much variance as the partner effect. The difference between the two components was .6, which is a medium effect. Likewise, the perceiver variance for Positive Responses of Self accounted for almost 7 times as much variance as the partner effect. The difference between the two components was .5, which is a medium effect.

*Variance Partitioning: Hypothesis 2*

I hypothesized that the partner variances would be small in magnitude. Small partner variance means that group members do not generally agree on how they rate other group members. For example, Cathy, Jim, and Sandy disagree on how clingy and anxious they perceive their fellow group member Al to be, leading to small partner variance. In other words, since I hypothesized that a group member's perception of others in the group would be uniquely influenced by his or her central relationship theme, then, each group member should have a somewhat different perception of every other group member (i.e., low partner variance). It is important to note that even a small percentage of partner variance will be significant in WINSOREMO. Whereas 10% of perceiver variance will most likely not be significant, 10% of partner variance will most likely be significant. As a result, it is often more helpful to look at the overall pattern of results

than just if some partner component is significant or not (Marcus et al., 1994). The relative partner variances can be viewed in Table 4.

*Wishes.* The partner variance for Positive Wishes was significant and accounted for 16% of the variance. On the other hand, the partner variance for Negative Wishes was not significant and accounted for 0% of the total variance. In both cases, the partner variances were relatively small in comparison to the perceiver variances. These results, overall, are consistent with the hypothesis that there will be some partner variance, but it will be small in magnitude as compared to the perceiver variance.

*Responses of Others.* As hypothesized, the partner variances for the two Responses of Others factors were small and nonsignificant. The partner variance for the Dominant Hostile factor accounted for 17 % of the overall variance. While this is a small percentage, as consistent with the hypothesis, it is also about equal to the perceiver variance for Dominant Hostile, contrary to expectations. On the other hand, partner variance accounted for only 2% of the variance in Clingy Anxious Responses of Others and was nonsignificant, as was predicted. Also as predicted, the partner variance for Clingy Anxious was small in magnitude as compared to the perceiver variance (63%).

*Responses of Self.* As predicted, the partner variances for the two Responses of Self factors were small in magnitude as compared to the perceiver variances. Partner variance accounted for 7% of the total variance in Negative Responses of Self and was nonsignificant. The partner variance for Negative Responses of Self was minimal when compared to the perceiver variance, which accounted for 62% of the variance. The partner variance for Positive Responses of Self accounted for 9% of the variance and was

significant. Consistent with expectations, it was minimal when compared to the perceiver variance which accounted for 60% of the overall variance.

*Perceiver and Partner Correlations: Hypothesis 3*

I hypothesized that group members' behaviors in the group would eventually lead to a confirmation of their central relationship pattern, or a self-fulfilling prophecy. This hypothesis was tested with a perceiver-partner correlation. Perceiver-Partner correlations allow us to compare how the central relationship theme of group member X relates to the other members' perceptions of X. One indication that a self-fulfilling prophecy is taking place in a group is if the members' perception of a particular member is congruent with that member's central relationship pattern. For example, suppose Cathy, Al, and Jon perceive Jan as Hostile (i.e., high partner effect for hostility for Jan), and Jan tends to perceive the other member's as Rejecting (i.e., Jan has a high perceiver effect for Rejection (RO)). In this case, Jan may be subconsciously eliciting rejection from other members by acting hostile towards them. Since there is little research in this area, an exploratory approach was taken and specific hypotheses, concerning which perceiver and partner effects would significantly relate, were not made. Contrary to expectations, only 2 significant perceiver-partner correlations were found, one of which needed to be dropped because the partner effect accounted for less than 10 % of the overall variance. The remaining significant correlation was between the perceiver effect for Clingy Anxious RO and the partner effect for Positive Wishes,  $t=-2.77$ ,  $r= -.64$ . This means that the more Al perceives other members as generally clingy and anxious (regardless of the other member or their unique relationship), the less likely it is that other members want positive things from Al.

*Personality and Perceiver Correlations: Hypothesis 4*

I hypothesized that there would be a positive and significant relationship between the CRQ scores for variable X and the perceiver effect for variable X within the therapy group. In other words, I predicted that the same central relationship pattern that a group member expressed with his/her partner would be expressed with other group members (no matter who the other group member is or the unique relationship they share). This hypothesis was important to assess the extent to which the same relationship pattern emerges within relationships that exist outside and inside of the group. This hypothesis was tested with a personality/self-data-perceiver correlation statistic. In SRM, a self-report measure is called a personality variable, and thus I refer to the CRQ scores as “personality data” or “personality variables.”

The personality variable-perceiver variance correlations are not simple Pearson product moment correlations because they are disattenuated to take into account reliability of the variance components. If the reliability of a component is low, then a correlation involving that component will be inflated. WINSOREMO conservatively computes significance tests on the uncorrected correlations, which is why apparently robust coefficients may not always be statistically significant. Furthermore, because the variance components that are correlated are estimates, if the true correlation between two components were near one, then about half the time the estimated correlation would be greater than one (Malloy & Kenny, 1986).

This hypothesis was somewhat difficult to test since, overall, different factors were found for the personality measure and the round robin measure. For example, two different negatively toned Responses of Self factors were found for the personality

measure (Anxious Rejecting and Dominant Hostile), while a Negative and a Positive Responses of Self factor was found for the round robin data. Even the one factor that was titled the same on the personality and round robin measures, "Positive Wishes," each consisted of a slightly different composition of items. Because of this limitation, the original hypothesis that members would have the *identical* relationship theme inside and outside of the group could not be tested. Instead, the extent to which members displayed *similar* relationship themes inside and outside of the group was examined.

Contrary to expectations, only three significant personality-perceiver correlations were found, which were judged to represent similar relational themes: Negative Responses of Other - Clingy Anxious Responses of Other,  $t=2.11$ ,  $r= .33$ , Anxious Rejected Responses of Self - Positive Responses of Self,  $t= -2.09$ ,  $r= -.32$ , and Dominant Hostile Responses of Self – Positive Responses of Self,  $t= 2.02$ ,  $r= .31$ . The first correlation means that the more AI perceives his romantic partner as responding negatively to him, the more likely he is to perceive group members as clingy and anxious (no matter the group member or their unique relationship). The second correlation means that the more AI feels anxious and rejected in his romantic relationship, the less likely he is to feel positively in his relationships with other group members (no matter the group member or their unique relationship). Finally, the third correlation means that the more AI is dominant and hostile in his romantic relationship, the more likely he is to feel positively in his relationships with other group members (no matter the group member or their unique relationship). It should be noted that the length of time a group member had participated in the group at the time of data collection, did not significantly correlate with that member's perceiver or partner effects for wishes, perceived responses of others, or

self-responses, within the group. In WINSOREMO, length of time in treatment cannot be directly controlled for. The next best option was to see if duration of treatment significantly correlated with the effect components.

*Personality and Perceiver/Partner Correlations: Hypothesis 5 and 5a*

The final hypothesis predicted that a member's CRQ scores (i.e., personality variables) would correlate with his or her perceiver and partner effects in ways that would confirm his or her central relationship pattern. In other words, while a group member may express a different relationship pattern with his or her romantic partner than with his or her fellow group members, these patterns should somehow confirm each other. Due to the novelty of this research question, I did not make specific hypotheses but adopted an exploratory approach. Two of the significant personality- perceiver correlations were judged to indicate that members were creating a self-fulfilling prophecy of their central relationship patterns.

Again, a personality-perceiver correlation is the relationship between a member's self-reported CRT with his/her romantic partner and his or her CRT within the group. These correlations are: Negative RO – Negative RS,  $t = 2.44$ ,  $r = .38$ , and Negative RO – Positive RS,  $t = -4.0$ ,  $r = -.55$ . In plain English, the former correlation means that to the extent that group member A1 perceives his romantic partner as responding negatively to him, the more likely he is to respond negatively to other group members. The later correlation means that to the extent that A1 perceives his romantic partner as responding negatively to him, the less likely A1 is to respond positively to other group members. Contrary to expectations, the personality-partner correlations were nonsignificant. The significant personality-perceiver correlations are presented in Table 5.



Table 5

*Significant Personality-Perceiver Correlations*

Personality			
Variable	Clingy Anxious RO	Negative RS	Positive RS
Negative RO	.33	.38	-.55
Anxious Rejecting RS			-.32
Dominant Hostile RS			.31

*Note.*  $N=54$ ,  $df=43$ .  $t > 2.7$ ,  $p < .05$ .

## Chapter 6

### Discussion

The purpose of this study was to assess the extent to which the therapy group evolves into a social microcosm of members' interpersonal relationships using the Social Relations Model. I hypothesized that transference, as measured by the Central Relationship Questionnaire, is a mechanism through which group members' relationships come to parallel their relationships outside of the therapy group. The social microcosm theory has two main components: 1) group members carry the very same maladaptive relationship patterns that have repeatedly arisen in other significant relationships into the group, and 2) these maladaptive relationship patterns are expressed, in some way, across other members in the group. Accordingly, some of the hypotheses involved the generalization of relationship patterns within the therapy group (i.e., across members), while others examined the parallel between "in-group" relationships and "outside-group" relationships.

#### *Generalization of Central Relationship Themes within the Therapy Group*

*Perceiver and Partner Variances.* In SRM, significant perceiver variance suggests that the rated variables are trait-like (i.e., a trait of the perceiver/rater) and do not fluctuate much across partners or relationships (Kenny & La Voie, 1984). Consistent with expectations, the three components (Ws, ROs, RS) of group members' central relationship themes were largely accounted for by perceiver variance, relative to other variance components. This was the case in every instance, except for the Dominant Hostile RO category. This suggests that maladaptive relationship themes are relatively stable, generalizing across members in a therapy group, as indicative of a trait-like

variable. For example, in an imaginary group, Al indicates that he perceives Cathy as clingy and anxious. The results suggest that this is largely due to the fact that Al perceives everyone as clingy and anxious, *no matter whom the “partner” is in the relationship or the unique relationship itself* (i.e., high perceiver variance). In addition to indicating that the other members in the group look alike to a group member, significant perceiver variance suggests that perceivers, or group members in our case, differ from one another on what they perceive (Mallinckrodt et al., 2004). For instance, while Al perceives all other group members as generally clingy and anxious, Cathy generally perceives others in the same group as dominant and hostile.

Interpersonal perception studies typically find that perceiver variance accounts for about 17% of total score variance (Kenny & Lavoie, 1984). However, in the study at hand, perceiver variance accounted for, on average, 48 % of the total variance in scores. Thus, more perceiver variance was found than is typical of the literature. One explanation for this is that the central relationship theme taps into a component of interpersonal perception that is truly in the “eye of the beholder.” Perhaps Central Relationship Themes especially capture that aspect of interpersonal perception that has more to do with the person perceiving, than with the attributes of the one being perceived. The majority of SRM studies that most closely resemble the one at hand have looked at interpersonal style in group therapy. Perceiver variance may account for less variance in ratings of interpersonal style than in central relationship themes because, according to interpersonal theory, perception is a function of the individual perceiving and the unique relationship. On the other hand, the central relationship theme, stemming from psychodynamic theory, is proposed to be largely a function of the perceiver. Thus, perceiver variance may have

accounted for more variance than is typical in the literature due to the variables being rated (central relationship theme variables vs. interpersonal style variables).

An alternative explanation as to why perceiver variance was larger than is typically found is that perhaps the group members in our sample had more severe pathology. This is suggested by the fact that most of the groups in our sample were long-term therapy groups in private practice. More pathology may lead to more rigid ways of perceiving the self and others, leading to more perceiver variance. Still, a third explanation is that central relationship themes are actually expressed more as therapy progresses. This is suggested by Graff and Luborsky (1977), who found that transference increases over time in therapy. Overall, the significant and substantial perceiver variance found in this study is consistent with past studies that have found that group members perceive the same target (i.e., group member, group as a whole, and/or group leaders) differently from one another, as a function of some internal factor, or individual difference variable (Kivlighan et al., 1992/1994; Mallinckrodt et al., 2004). In the study at hand, that internal factor, or individual difference variable, was hypothesized to be the central relationship theme.

Interventions in group therapy often focus on what are presumed to be generalized maladaptive relationship patterns that members reenact with one another in the “here and now.” The logic behind such interventions is that if group members replicate and then learn from their maladaptive relationship patterns within the group, then they may begin to change these harmful patterns in relationships outside of the group (Yalom, 1995). The results lend some support for such interventions, as the significant and substantial perceiver variances suggest that group members perceive and interact with each other

based on internal factors. Furthermore, it is reasonable to suggest that if members' central relationship themes are generalized across members and relationships within the group, then they may also be replicated across other significant relationships in a member's life.

Out of the 6 possible factors, one factor- Dominant Hostile RO- did not have significant perceiver variance. This is consistent with the Mallinckrodt et al. study that found less perceiver variance in member ratings of Hostile and Dominant Interpersonal Styles, than in ratings of Friendly and Submissive Styles. The authors suggested that the relative strengths of the perceiver variances were due to differences in base rates in how often a given member behavior occurred. Perhaps Dominant and Hostile behaviors occurred relatively infrequently in the groups for the study at hand, as they are less socially acceptable than friendly behaviors. Group members may agree that a particular member is dominant and hostile after only one or two examples, given that such behaviors are infrequent compared to other more friendly behaviors. This is evidenced by the fact that the partner variance is relatively high for Dominant Hostile ROs and perceiver variance relatively low, as compared to others rated categories.

Another explanation for this unexpected result is that Dominant Hostile scores were contaminated more by error than were the other categories. This is suggested by the fact that the relationship plus error component accounted for most of the variance in Dominant Hostile scores (67%). When compared to the other relationship components, 67% is substantially higher and may be indicative of error. On the other hand, members' perceptions of others in the group as Dominating and Hostile may actually be largely a function of the relationship (i.e., the relationship component reflects truth not error). This is consistent with Wright and Ingraham's (1986) study, which found significant

relationship variance for group members' perceptions of Control and non significant perceiver and partner variance for Control, one if the items that comprised the Dominant Hostile factor in this study. For example, Cathy, being rather submissive in relationships, may experience Al as especially controlling, as compared to Bob, whom being controlling himself, is less affected by Al's controlling behaviors.

*The Meaning of Perceiver Variance.* In SRM, significant perceiver variance is referred to as *assimilation* and suggests that different partners (or group members) look the same to a perceiver. It seems fairly obvious that people differ in the standards that they set for themselves when evaluating others. The key issues are whether these differences have psychological meaning, and, if so, what the exact meaning is. I have suggested that the meaning of assimilation in this study is transference, as group participants assimilate new interpersonal relationships into their pre-existing "transference schema." Similarly, Marcus et al. suggest that they found more perceiver variance in their study of interpersonal style, than is typical of the literature, because group therapy "pulls" for assimilation, or transference. However, other meanings of assimilation are possible.

Perhaps assimilation is an artifact of response bias, meaning that group members tended to use either the low or high end of the rating scales, and it therefore has no psychological meaning. One possible reason why more perceiver variance was found in this study, than is typical of other interpersonal perception studies, is that the rated-variables used in the study at hand were more subjective, possibly leading to more response bias (see Kenny, 1994). The issue of response bias is not unique to SRM studies and is a common problem in psychotherapy studies that use the client, therapist, or rater

perspective (Hill, O'Grady, & Price, 1988). An alternative interpretation of assimilation is that it suggests a local stereotype. For example, perhaps significant assimilation was found for Clingy Anxious RO because group members share the stereotype that only crazy people enter group therapy. With these alternatives in mind, it is proposed that significant perceiver variance in the study at hand is psychologically meaningful and is an indicator of transference perceptions.

### *Operationalizing Transference*

Although all psychodynamic theories agree that transference exists, they disagree on what exactly transference is a function of (i.e., the perceiver, partner, or relationship). Researchers can more accurately test divergent theories of transference using SRM because it separates the different sources of variance. As proposed by Freud and Luborsky and Crits-Christoph (1990), the significant perceiver variances found suggest that transference (central relationship themes) is largely influenced by one's template or relationship-schema. The relatively minimal partner variances found suggest that member's transference distortions are only minimally influenced by the 'reality' of the target, in most cases. Overall, the results support the notion that transference is a pre-existing prototype or scheme that shapes subsequent relationships, in least when assessed by a measure of central relationship themes in the group therapy context.

While the results suggest that transference is largely a function of the individual *transferring*, it may also be a function of the relationship. If relationship variance largely accounts for Al's perception that his therapist is attacking, this would mean that Al finds his therapist to be more attacking than he finds most people and more than most people find his therapist to be. The extent to which relationship variance accounted for

transference reactions in the study at hand could not be assessed, as relationship variances were not separated from random error. Although the relationship component could not be assessed in its present form, there was some evidence to suggest that it partially reflects “truth.” First, although the relationship variances were inflated by error, they were not substantially bigger than the perceiver variances in most cases. Additionally, since it is unlikely that all the relationship variance is due to error, it is reasonable to suggest that transference, as measured by the CRQ, is a function of the perceiver and the relationship to some degree. The data provide some initial evidence that there is both an individual and dyadic component to the phenomenon of transference that would have been missed by conventional statistics. However, future research is needed in this area to separate relationship variance from random error for a more accurate picture of transference.

There are several possible interpretations of the relationship component of the central relationship theme scores. Intersubjective theories of transference propose that transference is largely, if not entirely a function of the relationship, as it is co-created between two participants in a relationship. Following this, one interpretation of the relationship component is that it is an indicator of the part of the transference that is co-created. An alternative explanation is that the relationship variances are reflective of a group member’s ability to make nuanced judgments in relationships, based on the “reality” of that relationship. In either case, using SRM to operationalize and assess transference, will allow researchers to better understand this key component of the therapeutic relationship, through decomposing its’ component parts and accounting for therapist and partner effects. The major drawback to adopting an SRM approach to the study of transference is that it is a nomothetic technique (Marcus et al., 2005), meaning



that it does not provide information about how specific individuals view each other. It does, however, describe how judgments are made on different traits in different contexts (see Marcus et al., 1984).

*Maladaptive Relationship Themes: Generalization and Inappropriateness*

The theories of transference and the central relationship theme consist of two main features: generalization and inappropriateness. The significant and substantial perceiver variances found in group members' ratings of their wishes, perceived responses of others, and responses of self, suggest that these components are generalized across people and relationships, in least within the therapy group. The counterargument to generalized relationship themes is that specific situations and people "pull" for, or trigger, certain behaviors or relationship patterns from others. However, the relatively low partner variances found in this study do not provide evidence for this later argument, and instead, suggest that group members generalize their unique perceptions across people and relationships.

In addition to supporting the generalization component of transference, the relatively minimal partner variances also provide evidence for the inappropriate component as well. Mallinckrodt (1996) writes that the most daunting task of transference measurement is developing objective and empirical procedures for assessing which client perceptions are *inappropriate* or distorted and, on the other hand, which are *real*. One index of "reality" is agreement between raters. In a round robin assessment, group members serve as raters of every other group member. While agreement does not necessarily mean that the ratings are valid, or "right," it does indicate that the ratings are not purely idiosyncratic constructions of a particular member/rater (Kenny et al., 1984).

Agreement is surely an imperfect measure of reality. However, it is reasonable to assume that the less idiosyncratic a judgment is, the more likely it is to approach reality. For example, the more that the members in a group agree that AI is Dominant-Hostile, the more likely it is that AI actually is Dominant and Hostile in his interactions with other members. In SRM, partner variance is an indicator of agreement, or *consensus*. The relatively minimal partner variances found in this study, indicate that group members did not agree on: what they wanted from a particular group member, how a particular group member tended to respond to them, or how they then responded to that group member. This suggests that a member's central relationship themes are not largely accounted for by the "reality" of a relationship or of the partner in it. Instead, the lack of agreement among the group members sampled, suggests that group members perceived one another based on idiosyncratic and distorted interpersonal perceptions.

While consensus in interpersonal perception studies is usually not very impressive (Kenny & La Voie, 1984), consensus in the study at hand, for the most part, was even lower than convention. For example, Mallinckrodt et al. found an average of 31% partner variance, in their study of transference, while an average of 9% partner variance was found in the study at hand. Perhaps less agreement in ratings was found here than in Mallinckrodt et al. because of differences in the samples and measures used. The present study used a sample of mostly long-term therapy groups, while the Mallinckrodt study used short-term training groups. Perhaps the therapy milieu and long-term acquaintance "pulls" for more transference reactions, or assimilation, and less consensus. In fact, Graff and Luborsky (1977) found that transference increases over the course of therapy. Also, while a derivation of the Central Relationship Questionnaire (the round robin measure)

was used in the study at hand, Mallinckrodt et al. used a measure of interpersonal style. Perhaps the measure used in the study at hand more directly tapped into transference distortions.

Only two partner variances were significant, accounting for ratings in Positive Wishes and Positive Responses of Self. While these partner variances were significant, they were also relatively minimal as compared to the perceiver variances, especially for Positive RS, again pointing to the relative importance of the perceiver in these types of judgments. Nevertheless, the data suggest that members reached some agreement on who in the group they wanted trust, support, closeness, and recognition from (i.e., Positive Wishes), as well as who in the group made them feel valued and who in the group they tended to take care of (i.e., Positive Responses of Self).

One can see that the only variables that had significant partner variances were positively toned. One explanation for this is that there may have been more variability in members' ratings of positively toned variables than negatively toned ones. It may feel threatening for members to admit "negative" wishes or "negative" responses of self, leading to less variability in these ratings. Little variability in judgments of the same perceiver is interpreted as high perceiver variance, not partner variance. An alternative explanation is that perhaps central relationship themes that are "positive" in content are more flexible than "negative" ones. Positively toned transference patterns may adjust more than negatively toned ones to the particular partner of a relationship. Perhaps it feels less threatening to change a positive perception or reaction than a negative one in relationships with other group members.

*Perceiver-Partner Correlations.* A significant and negative relationship between the perceiver effect for Clingy Anxious ROs and the partner effect for Positive Wishes was found. This means that, to the degree that Al perceives people in the group as generally Clingy and Anxious, others in the group are less likely to want Positive things from him, including trust, support, closeness (i.e., wish not to be abandoned), and recognition. I had hypothesized that the perceiver-partner correlations would be indicative of a self-fulfilling prophecy. However, the Clingy-Anxious – Positive Wishes relationship suggests distortion more than a self-fulfilling prophecy. Using Al as an example again, he perceives that other members are overly dependent and anxious. Yet, other members generally agree that they do not typically possess wishes related to dependency in their relationship with Al. Specifically, they generally do not want support, trust, closeness, or recognition from him, all of which, in the extreme, could be perceived as overly dependent and even anxious wishes and consequent behaviors. Thus, Al's perception of other members is contradictory to what other members report they want from Al.

It is unclear why more perceiver-partner correlations were not significant. Perhaps, these correlations are more indicative of distortions than self-fulfilling prophecies, as was expected. Perceiver and partner variances may have been generally nonsignificant because there were not predictable relationships between self and other perceptions on the rated dimensions. For example, if Al's perception of others as generally Dominant is distorted (i.e., high perceiver variance), then it may or may not be true that others agree that Al acts in ways that elicit dominance (i.e., high partner variance). In other words, if Al perceives others as Dominant, regardless of reality, it

does not matter much if he actually does things to elicit Dominant behaviors from others or not. An alternative explanation is that there was not enough variability in partner effects with which to correlate.

*Parallel of Relationship Themes in Relationships Inside and Outside of the Therapy Group: Personality and Perceiver Correlations*

In the study at hand, personality-perceiver correlations are an index of the relationship between a member's self-reported relationship themes with a romantic partner and that member's relationship themes with other group members (accounting for partner and relationship variance).

The extent to which members expressed identical relationship patterns, inside and outside of the group, could not be assessed because slightly different factors were derived for the measure of outside-relationship themes and for inside-relationship themes. However, several correlations suggested that members held similar relationship themes with a romantic partner, outside of the group, and with other group members. Specifically, the personality variable Negative ROs positively correlated with the perceiver effect for Clingy Anxious ROs. This means that, to the degree that AI perceives that his romantic partner responds negatively to him, the more likely he is to perceive other group members as Clingy and Anxious. This suggests that AI perceives people in general, outside and inside the group, as responding "negatively" to him, in some way.

Similarly, the data also suggested a significant and negative personality-perceiver correlation for Anxious-Rejected RS and Positive RS. In other words, the more AI feels anxious and rejected in his relationship with his romantic partner, the less likely he is to respond "positively" to other group members. Recall that the Positive RS factor is

comprised of the following items: “I feel valued” and “I care for others,” the opposite of which could be interpreted as feeling rejected. This correlation suggests that AI responds “negatively” in relationships within and outside of the group, by feeling devalued and disliked by others.

Finally, the personality variable Dominant Hostile RS, comprised of Avoid Conflict (negatively) and Am Dominant scores, positively correlated with the perceiver effect for Positive RS, comprised of Feel Valued and Care for Others scores. At first, this correlation did not appear to suggest similar relationship themes with a romantic partner and with the group. However, perhaps the Dominant Hostile factor was misinterpreted in this instance. One may approach conflict in a hostile manner, or, one may address conflict in a friendly manner. Thus, perhaps addressing conflict and perceiving oneself as dominant in relationships is, in least at times, more indicative of a Dominant Friendly interpersonal style than a Dominant Hostile one. Following this, perhaps the correlation suggests that to the degree in which AI is the Dominant Friendly partner in his romantic relationship, the more likely he is to feel valued by other group members and to care for them. AI may respond similarly in relationships inside and outside of the group in the sense that he derives a sense of self-worth through being the one to “step-up” and take care of others. One may imagine the group member who adopts the “little leader” role in the group, confronting the other members on their feelings and problems much like a leader would.

Contrary to expectations, only a few significant personality-perceiver correlations were found to suggest that members display a similar central relationship theme in outside- and inside- group relationships. This was surprising given that such a parallel is

central to the social microcosm theory. There are several possible explanations. One possible explanation is that group members lack insight into their relationship patterns. Using SRM to derive a member's central relationship theme is a relatively more objective index of transference than the self-reported CRQ method. Following this, group member responses on the CRQ may have been biased due to a lack of insight.

An alternative explanation is that a Type II error occurred, which attenuated the correlations and concealed significant results. The CRQ, like any self-report measure of an interpersonal variable, yields scores that are a mixture of perceiver, partner, and relationship variance. When variance components are not accounted for they become error, masking significant results. Alternatively, if one were to separate the variance components of the CRQ scores (although this would not be statistically possible), perhaps the perceiver variance for a member's relationship theme with his or her romantic partner would significantly correlate with that member's perceiver variance for his or her relationship theme with other group members.

Another possible explanation is that, since data was collected during roughly the middle phase of group therapy, perhaps members' transference patterns were already somewhat resolved prior to data collection. However, the fact that the amount of time a member participated in group did not significantly correlate with any of the perceiver variances is not consistent with this explanation. However, since central relationship themes were only assessed at one point in time, we do not know how or if they changed over the course of treatment for the participants. The literature suggests that central relationship themes change somewhat over time in individual therapy. Specifically, while

the responses of others and self become somewhat more positive over the course of treatment, the wishes remain the same (Luborsky et al., 1988).

*Confirmatory Relationship Patterns*

I hypothesized that the personality and perceiver variables would significantly relate in such a way to suggest that group members created a self-fulfilling prophecy, confirming their central relationship patterns. Two significant personality and perceiver correlations were found to suggest a self-fulfilling prophecy. The items that comprise a given factor will be included in the parentheses that follow for clarification. The personality variable Negative RO (Hurt Me, Love Me (negatively), Is Distant) positively correlated with the perceiver effect for Negative RS (Anxious, Avoid Conflict, Feel Disliked). Again, using AI as an imaginary group member, this correlation suggests that to the degree in which AI perceives his romantic partner as responding negatively to him, he is likely to respond negatively to other group members. AI may enter relationships feeling anxious, disliked, and passive. He may subconsciously elicit behaviors from others that confirm these feelings, leading to others hurting him, not loving him, and remaining distant from him.

The personality variable Negative RO (Hurt Me, Love Me (negatively), Is Distant) negatively correlated with the perceiver effect for Positive RS (Feel Valued, Care for Others). This suggests that the degree to which AI perceives his romantic partner as responding negatively to him, he is less likely to respond positively to other group members. This correlation is similar to the Negative RO-Negative RS correlation discussed above in that both correlations suggest that AI's perception of how his partner responds to him relates to how he responds to other group members. AI may enter



relationships expecting the other person to devalue him and not care for him. He may subconsciously behave in ways that elicit negative responses from others, confirming his assumption that others will respond negatively to him.

Overall, 6 personality – perceiver correlations were found to be significant, including those that were interpreted to suggest a social microcosm and a self-fulfilling prophecy. Within these 6 correlations, only 3 of the perceiver effects significantly correlated with some personality variable: Clingy Anxious RO, Negative RS, and Positive RS. These three perceiver effects had the highest effect reliabilities and accounted for the most variance in scores out of all the possible perceiver effects. While the remaining perceiver effects were sizable and significant, and the remaining reliabilities were good-excellent, perhaps a sizable variance component (or reliability) is needed to reach significance, when testing a personality-perceiver correlation. Contrary to expectations, none of the personality-partner correlations were found to be significant. One possible reason as to why significant personality-partner correlations were not found is that there was not enough partner variability with which the personality variables could correlate. In fact, only half of the partner effects accounted for more than 10% of the total variability in scores, and in SRM it is impossible for partner effects that account for less than 10% of variance to significantly correlate with anything (Kenny, 1994).

*Strengths and Limitations.* Before discussing the strengths of the study at hand, some limitations are reviewed. First, the same rater, or group member, rated both measures. This may have led to a monomethod bias and inflated results. Another limitation of this study is the use of a self-report measure (i.e., the CRQ) to assess central relationship themes in romantic relationships. Group members may lack insight into their

relationship patterns and provide biased data. A measure of the Core Conflictual Relationship Theme, which uses raters and standard categories, would have provided a more objective assessment. At the same time, since self-report measures are often used in counseling research, it is important to know whether or not, and under what circumstances, they correlate with perceiver effects.

There is relatively little research on the CRQ, which is a fairly new CCRT measure. While there is some theoretical and empirical support that different CCRT methods assess transference content, the CRQ itself is a relatively new measure of the CCRT that needs further investigation. It is reasonable to hypothesize that the CRQ taps into the content of transference, if not a direct indicator of it. The sample in this study consisted of primarily long-term psychodynamic process groups, run by leaders in or contacted through a group psychotherapy association. Since this sample was very specific in this way, it is unknown whether the results would generalize to different samples of therapy groups. Also, as elaborated upon above, perceiver variance may have multiple meanings, although it is argued in the study at hand that it is an indicator of transference. Lastly, since I did not exercise control over this study, cause and effect relationships cannot be inferred.

The study at hand has a number of strengths. Recently, there has been a plethora of calls to apply the Social Relations Model to the clinical setting, especially in the context of group therapy (e.g., Kivlighan et al., 1994; Mallinckrodt et al., 2004; Marcus et al., 1994/2005). This study is a rare attempt to apply SRM to a clinical setting and the only study known to the authors to apply it to “real-life” on-going therapy groups. In this way, the study at hand opens the door for future research to utilize an SRM approach to

the study of group therapy. Future research questions that arise out of the present study include: do the relative perceiver and partner components for central relationship themes change over the course of group therapy, how much does the relationship component account for in member ratings of central relationships themes when it is separated from error, and are there differences in a member's central relationship theme with group leaders in contrast to other members? Central relationship themes are similar to other variables, such as interpersonal style and attachment. Future research could investigate whether these client variables moderate members' transference, or central relationship patterns. Future research may also investigate if personality-perceiver correlations suggest a social microcosm of maladaptive relationship themes in therapy groups when a more objective measure of outside- therapy relationship patterns is used.

This study used a novel statistical model to test the social microcosm theory. Empirically evaluating the social microcosm theory is an important, and yet relatively unexamined area of group research. A fundamental premise to interpersonal-process groups is that members carry in with them maladaptive relationship patterns, and hopefully leave the group with more satisfying and distortion free ways of relating to others. The present study lends some support to the social microcosm and merits future research in this area. More specifically, there was more evidence found for generalized and distorted relationship themes within the group, than for generalized themes between outside and inside therapy relationships. Similarly, the literature on transference has called for new ways of measuring the construct, especially the distortion aspect of it (Mallinckrodt, 1996). I have argued that the variance components derived from the SRM model may be used as indicators of the distortion and generalization components of

transference. Overall, the study at hand provided initial evidence that group members perceive other members through an individualized and distorted “lens,” and that, in certain circumstances, romantic relationships are also perceived through this “relationship lens.”

## Appendix A

Directions: Rate the following on a scale from 1-5, from not present to strongly present.

How much do you want \_\_\_\_\_ from the following people?

	Group member X	Group member Y	Group member Z	Group Leader R
Support				
Independence				
Recognition				
Conflict				
Trust				
To be sexualized				
Not to be abandoned				

To what extent do each of the following people typically respond to you in these ways?

	Group member X	Group member Y	Group member Z	Group Leader R
Hurt me				
Love me				
Is independent				

Controls me				
Is out of control				
Is anxious				
Is sexual				

How do you typically respond to each individual?

	Group member X	Group member Y	Group member Z	Group Leader R
Feel valued				
Care for other				
Feel anxious				
Feel Disliked				
Avoid conflict				
Am Independent				
Am sexual				
Am Domineering				

## Appendix B

### Protocol Sent to Group Leaders

Dear X,

I very much appreciate your support for this piece of research. I hope the experience is valuable in some way for you and your group. Below are directions for you to follow in administering and collecting the questionnaires. As always, please let me know if you have any questions or concerns.

Directions:

- 1) Enclosed you will find 6 separate yellow envelopes. Two are marked Leader and, of course, these are for you and your co-leader. Please administer the other packets to the group members, in any order. Each group member and leader receives 1 packet.
- 2) Please read the “script for group leader” found in your packet out loud.
- 3) Ask the members and leaders to read the “letter to participant” and the “informed consent form” found at the beginning of the packet.
- 4) Please ask them to sign the informed consent form if they wish to participate, and to fill out the demographic measure.
- 5) Please bring the “Directions” Sheet to the attention of the group members. Instruct them to please read number 3 of the directions and to then complete the CRQ (the first measure found in the packet). Then, members should read number 4 on the direction’s sheet and then complete the round robin measure (the last 2 pages of the packet).

- 6) As the leader, your packet will contain one questionnaire to complete and the members' packets will contain two questionnaires to complete.
- Please note that if this should take too long then the questionnaires may be completed after the next group session, although I do not expect the measures to take longer than 30 minutes to complete. As a last resort, these measures may be completed at home (**after the directions are reviewed as a group**) and returned in a drop box one week later (or as soon as possible)
- 7) The only slightly tricky part is the Round Robin measure. Detailed directions for this measure are found on the "Directions" page. *Please make sure that members know whom the initials (on the ID Numbers sheet) are referring to. Also, please explicitly state to the group that one column in the round robin should be left blank: that is- the column that refers to the member/leader filling it out. For example, you will leave the column titled "Group Leader- JK" empty.*

I think the procedure is pretty straightforward. However, members may have questions regarding how to fill out the round robin measure. As included on the direction page in the packets, the idea is to use the stickies with the initials on them while filling out the measure. Discard the stickies when done. Lastly, place the appropriate ID Number (**from the ID Numbers Sheet- found in each packet**) on the top of the column where the sticky once was.



## Appendix C

## Demographics

- 1) How long have you been in this group? \_\_\_\_\_
  - 2) For leaders only: How long has this group been running? \_\_\_\_\_
  - 3) Age \_\_\_\_\_
  - 4) Please circle one: Male/ Female/ Transgendered
- 3) Race:
- African- American \_\_\_\_\_ Asian \_\_\_\_\_
- Hispanic \_\_\_\_\_ Caucasian \_\_\_\_\_ Other (please specify) \_\_\_\_\_

## Appendix D

### Letter to Participants

Dear Participant,

Thank you for taking the time to consider participating in our study! As indicated on the consent form, included in this packet, your participation is completely voluntary and you may withdraw from this research at any time. In deciding whether or not you would like to participate, we want you to know what this study is all about and why we are asking you these particular questions.

To varying degrees, therapy groups explore the interpersonal relationships of group members. It is commonly believed that through understanding relationships that form within the group (member to member, or sometimes member to leader), that we may better help members form more satisfying relationships outside of the group.

This study explores this basic assumption by asking you for information about your interpersonal relationships. All people have a pattern of needs and expectations in their relationships with other people. The questionnaires in this research will ask you about what you typically want from others, how others typically respond to you, and how you respond to them. We will ask you to report this information when considering other group members and leaders, and when considering a past or present romantic partner.

You define romantic partner in whatever way feels right to you.

Although this study is not designed to help you personally, we hope that this study helps therapy groups in general. This research will allow us to better understand how group member relationships outside of therapy relate to group member relationships inside of therapy.

## Appendix E

### Script for Group Leader

Directions: The Group Leader should read this statement to the group members upon first receiving the measures.

“This research is not a part of the therapy in which you are participating, and you do not have to participate if you do not want to.”

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