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Baucom, Katherine Jane Williams

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Observed Communication in Distressed Couples' Interactions

A dissertation submitted in partial satisfaction
of the requirements for the degree Doctor of Philosophy
in Psychology

by

Katherine Jane Williams Baucom

2012

ABSTRACT OF THE DISSERTATION

Observed Communication in Distressed Couples' Interactions

by

Katherine Jane Williams Baucom

Doctor of Philosophy in Psychology

University of California, Los Angeles, 2012

Professor Andrew Christensen, Chair

Behavioral perspectives of relationship distress suggest that communication and relationship outcomes are tightly linked in couples. The series of studies in this dissertation examine observed communication in 10-min videotaped interactions at each of three time points (i.e., pre-therapy, post-therapy, 2-year follow-up) from a sample of 134 distressed couples assigned to either Traditional Behavioral Couple Therapy (TBCT; Jacobson & Margolin, 1979) or Integrative Behavioral Couple Therapy (IBCT; Jacobson & Christensen, 1998) in a randomized clinical trial. Although both treatments assume communication to be an integral aspect of relationship functioning, they are distinguished by IBCT's incorporation of acceptance techniques and use of contingency-shaped change strategies, and TBCT's explicit change focus using rule-governed methods. In Paper 1 we examined changes in individual partner communication rated by trained coders. We found continued improvements in communication following treatment termination, with IBCT couples demonstrating greater improvements from

post-therapy to 2-year follow-up relative to TBCT couples. We also found limited evidence of associations between communication and relationship outcomes at 2- and 5-year follow-up. Finally, we replicated an odd finding that increased positivity is associated with poorer outcomes but clarified this finding by demonstrating that counterintuitive links between positivity and relationship satisfaction disappear after controlling for withdrawal. In Paper 2 we examined the extent to which “naïve” (untrained) raters could make useful judgments of couples’ interactions. We compared naïve ratings of both overall relationship quality and dyadic interaction patterns to the trained ratings from Paper 1. Not only were naïve and trained ratings closely linked, but naïve ratings were also strongly and consistently associated with relationship satisfaction. Naïve ratings uniquely predicted relationship outcomes, and at times were *better* predictors of outcomes than trained ratings. In Paper 3 we investigated whether changes in naïve ratings over time depended on treatment condition. Consistent with the underlying theories of change in the respective treatments, TBCT couples improved more from pre-therapy to post-therapy, but IBCT couples improved more from post-therapy to 2-year follow-up. Taken together, the findings in this dissertation support communication improvements in couples following therapy termination, and the utility of innovative methods of communication assessment.

The dissertation of Katherine Jane Williams Baucom is approved.

Benjamin R. Karney

Theodore F. Robles

Megan M. Sweeney

Andrew Christensen, Committee Chair

University of California, Los Angeles

2012

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contributed to these manuscripts. Co-authors on Paper 1 include Mia Sevier, Kathleen Eldridge, Brian Doss, and Andrew Christensen. This paper has been published and therefore the published abstract is included, with permission from the American Psychological Association. The full citation and link to the journal's table of contents are included with the abstract.

Brian Baucom and Andrew Christensen are co-authors on Paper 2. This paper is in press for publication and therefore the published abstract is included, with permission from the American Psychological Association. The full citation and link to the journal's table of contents are included with the abstract.

Brian Baucom and Andrew Christensen are also co-authors on Paper 3, which is in preparation for submission to a journal for publication consideration.

For the past 5 years I have received never-ending protection and love from Austin and Dakota, and I have learned a great deal about behavioral principles through their shaping of me. They are a constant reminder of the importance of living life to the fullest, loving and being loved, and the idea that sometimes you just gotta bark.

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VITA

- 2002 – 2005
Research Assistant
Department of Psychology
New College of Florida
- 2004
Research Assistant
Department of Psychology
University of Texas at Austin
- 2005
B.A., Psychology
New College of Florida
Sarasota, FL
- 2005 – 2011
Graduate Student Researcher
Department of Psychology
University of California, Los Angeles
- 2006 – 2011
Individual and Couple Therapist
Psychology Clinic
University of California, Los Angeles
- 2006 – 2011
Teaching Assistant
Department of Psychology
University of California, Los Angeles
- 2006
Steve Duck New Scholar Award
International Association for Relationship Research
- 2006
M.A., Clinical Psychology
University of California, Los Angeles
Los Angeles, CA
- 2009 – 2012
NIH Predoctoral Fellowship, NICHD
Department of Psychology
University of California, Los Angeles
- 2010
Tamar Diana Wilson Grant
Chicano Studies Research Center
University of California, Los Angeles
- 2010
Randy Gerson Memorial Grant
American Psychological Foundation
- 2011
Virginia Roswell Dissertation Award
Association for Behavioral and Cognitive Therapies

2011 – 2012

Psychology Intern
Department of Psychiatry
University of California, San Diego
San Diego Veterans Affairs

PUBLICATIONS

- Baucom, K.J.W., Baucom, B.R., & Christensen, A. (in press). Do the naïve know best? The predictive power of naïve ratings of couple interactions. *Psychological Assessment*.
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GENERAL INTRODUCTION

Since the 1970s researchers have examined the communication of couples to determine whether there are differences between distressed and nondistressed couples, whether certain patterns of communication are particularly troublesome in relationships, and whether and how behavior is associated with relationship satisfaction and predictive of relationship outcomes (e.g., divorce). Behaviorally oriented relationship researchers have examined the ways couples interact with the idea that couples with low relationship satisfaction have both a performance and a skills deficit in communication behavior. Observed and self-reported communication is often strongly linked with a variety of relational and individual outcomes and discriminative of level of relationship distress (Bradbury & Karney, 2004). In addition to partners in distressed relationships generally using more negative and less positive communication towards one another relative to their nondistressed counterparts, distressed couples more frequently engage in dysfunctional interaction patterns thought to be both a cause and a consequence of their distress (Fincham & Beach, 1999; Weiss & Heyman, 1997). For example, both demand/withdraw (where one partner nags or pressures for change and the other withdraws or changes the topic; Christensen, 1987) and negative reciprocity (where one partner's negative behavior increase the likelihood that the other partner will respond negatively) have been recognized as more common in both distressed community couples and distressed treatment-seeking couples relative to satisfied couples. Despite these and other similar findings, reviews of basic and clinical literature on couples reveal that, despite efforts, there is still much to be learned about the links between observed communication and relationship outcomes (e.g., Heyman, 2001).

A review of observational research in the context of treatment outcome studies in particular offers a confusing picture of how communication – and changes therein – might be linked with relationship outcomes; some studies have found predicted associations between

communication change and changes in relationship satisfaction, others have found counterintuitive results, and still others have not found significant associations between these dimensions (Snyder, Castellani, & Whisman, 2006). This inconsistency in findings may be a result of limitations to observational rating systems, as outlined in Paper 2 of this dissertation. Additionally, recent developments in statistical methods allow for a more sensitive examination of the links between communication and treatment outcome, but these techniques have only recently been used in research.

The series of studies in this dissertation proposal extend research on observed communication in couples in a number of ways. We examine long-lasting changes in communication over the course of therapy and follow up in the largest clinical trial of couple therapy to date; we use communication ratings made by untrained observers and compared these with trained coders' ratings; and we examine differences in communication between two types of behavioral couple therapy. All papers use observational and treatment outcome data from a randomized clinical trial of Integrative Behavioral Couple Therapy (IBCT; Jacobson & Christensen, 1998) and Traditional Behavioral Couple Therapy (TBCT; Jacobson & Margolin, 1979) in which 134 couples participated. Although both treatments are behaviorally based and therefore communication is assumed to play an important role, they are distinguished by IBCT's incorporation of acceptance techniques and TBCT's explicit change focus.

In Paper 1 we examine changes in observed communication from post-therapy to 2-year follow up assessment. This is the first treatment outcome study that we know of to examine long-lasting changes in observed communication at a time point after treatment termination. We hypothesize that observed communication will continue to change from termination through 2-year follow-up, and that changes will depend in part on the type of behavioral couple therapy that partners received. Additionally, we think these changes are associated with important

relationship outcomes (i.e., relationship stability and clinically significant change in relationship satisfaction).

In Paper 2 we examine the utility of an innovative approach to communication assessment: ratings by untrained (“naïve”) observers. Specifically, we examine well-researched dyadic interaction patterns relevant to clinical practice to determine whether naïve ratings are associated with concurrent relationship satisfaction and trained ratings, as well as whether changes in naïve ratings coincide with changes in these other relationship variables. Finally, we examine whether naïve ratings evidence unique power to predict concurrent relationship satisfaction and divorce at 5-year follow-up when compared with trained ratings.

Finally, in Paper 3 we build on the previous two studies in an examination of treatment differences in trajectories of change in naïve ratings of communication over time. Specifically, we examine whether TBCT produces quicker but fleeting changes in communication compared with IBCT, and whether IBCT produces later and longer-lasting changes relative to TBCT. This prediction is based on theoretical and practical differences between these two treatments: TBCT focuses strictly on change and uses rule-governed methods to create improvements in communication, whereas IBCT incorporates a focus on acceptance and uses contingency-shaped methods to change communication in distressed couples.

This dissertation examines trajectories of change in observed communication following two types of behavioral couple therapy, clarifies associations between observed communication and relationship outcomes, and contributes to the growing validity of naïve observational ratings of couples’ communication. These studies extend existing research on communication in couples and contribute to the budding area of research on alternative methods of behavior assessment.

Paper 1

Observed Communication in Couples Two Years after Integrative and Traditional Behavioral Couple Therapy: Outcome and Link with 5-year Follow-up

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Full text of this paper is available through the journal's website:

<http://psycnet.apa.org/journals/ccp/>. No further reproduction or distribution is permitted without written permission from the American Psychological Association.

Abstract

Objective: To examine changes in observed communication after therapy termination in distressed couples from a randomized clinical trial.

Method: A total of 134 distressed couples were randomly assigned to either traditional behavioral couple therapy (TBCT; Jacobson & Margolin, 1979) or integrative behavioral couple therapy (IBCT; Jacobson & Christensen, 1998). Videotaped samples of each couple's interactions were coded from pre-therapy, post-therapy, and 2-year follow-up assessments. At these three time points, each partner chose 1 current relationship problem to discuss. Relationship satisfaction was assessed at 2-year follow-up, and clinically significant treatment response and marital status were assessed 5 years after treatment.

Results: Observed negativity and withdrawal decreased from therapy termination through the 2-year follow-up as expected, but problem solving did not change, and observed positivity *decreased*. IBCT produced superior changes from post-therapy to the 2-year follow-up assessment compared with TBCT. Post-therapy levels and changes in communication over follow-up were associated with wife satisfaction at 2-year follow-up; only post-therapy to 2-year follow-up changes in communication were associated with husband satisfaction at 2-year follow-up. Post-therapy levels of problem solving and changes in wives' positivity from pre-therapy to post-therapy were associated with 5-year relationship outcomes. We found some counterintuitive results with positivity, but they were no longer significant after controlling for withdrawal.

Conclusion: We found support for improvements in observed communication following treatment termination, with IBCT demonstrating greater maintenance of communication improvement over follow-up. We found limited evidence of associations between communication and relationship outcomes at 5-year follow-up.

Paper 2

Do the Naïve Know Best? The Predictive Power of Naïve Ratings of Couple Interactions

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Baucom, K.J.W., Baucom, B.R., & Christensen, A. (2012). Do the naïve know best? The predictive power of naïve ratings of couple interactions. *Psychological Assessment*. Advance online publication. doi:10.1037/a0028680

Full text of this paper will soon be available through the journal's website:

<http://psycnet.apa.org/journals/pas/index/.aspx>. No further reproduction or distribution is permitted without written permission from the American Psychological Association.

Abstract

We examined the utility of naïve ratings of communication patterns and relationship quality in a large sample of distressed couples. Untrained raters assessed 10-min videotaped interactions from 134 distressed couples who participated in both problem solving and social support discussions at each of three time points (pre-therapy, post-therapy, and 2-year follow-up) during a randomized clinical trial of behavioral couple therapy. Teams of naïve raters observed a particular type of discussion from the three time points at one sitting in a random order and rated dyadic interaction patterns (negative reciprocity, positive reciprocity, wife demand/husband withdraw, husband demand/wife withdraw, and mutual avoidance) and the overall relationship quality of couples. These naïve ratings were strongly and consistently associated with both levels of, and changes in, trained observational codes and self-reported relationship satisfaction. Naïve ratings of couples accounted for similar – and at times superior – amounts of variance in both concurrent relationship satisfaction and divorce at 5-year follow-up when compared with trained ratings. These findings offer compelling support for the use of naïve raters in research with couples, and also suggest important future directions that are applicable to both research and practice with distressed couples.

Paper 3

Changes in Naive Ratings of Communication over the Course of Integrative and Traditional
Behavioral Couple Therapy and Follow-up

Abstract

We examined changes in dyadic communication in couples from pre-therapy through a 2-year follow-up assessment, as well as links between communication and relationship satisfaction at 2-year follow-up. Interactions of 134 distressed couples who were randomly assigned to either Traditional Behavioral Couple Therapy (TBCT; Jacobson & Margolin, 1979) or Integrative Behavioral Couple Therapy (IBCT; Jacobson & Christensen, 1998) were rated in 10-min videotaped relationship problem and personal problem discussions. Teams of untrained raters assessed each couple on 4 destructive (negative reciprocity, husband demand/wife withdraw, wife demand/husband withdraw, and mutual avoidance) and 2 constructive (positive reciprocity, vulnerability/empathy) communication patterns, as well as overall relationship quality, at each of 3 time points (pre-therapy, post-therapy, 2-year follow-up). TBCT couples demonstrated greater improvements in communication from pre-therapy to post-therapy and superior communication at post-therapy relative to IBCT couples. However, IBCT couples showed greater improvements in communication from post-therapy to 2-year follow-up relative to TBCT. We found limited support for associations between relationship satisfaction at 2-year follow-up and levels of, and changes in, communication. These findings lend additional support to theoretical and practical differences between these two therapies, limited links between communication and relationship satisfaction, and the utility of untrained raters in the assessment of couple functioning.

Studies of couple therapy have found improvements in observed communication from pre-therapy to post-therapy (Snyder, Castellani, & Whisman, 2006), but the extent to which changes continue or are maintained following treatment termination has not been examined. Furthermore, the focus in previous studies has been upon individual partner behavior, such as spouse negative behavior, rather than on communication patterns, such as negative reciprocity. Traditional Behavioral Couple Therapy (TBCT; Jacobson & Margolin, 1979) and Integrative Behavioral Couple Therapy (IBCT; Jacobson & Christensen, 1998) have different ways of bringing about improvements in communication, including improvements in patterns of communication. TBCT provides rules and guidelines to teaches couples specific, positive communication strategies (“rule governed strategy”) while IBCT shapes new communication by exploring partners’ emotional reactions to each other’s communication (“contingency-shaped strategy”). As a result, TBCT may produce more rapid changes in communication while IBCT may produce more enduring changes in communication. In this study we compare levels of, and changes in, untrained ratings of dyadic interaction patterns through 2 years after treatment termination in a large sample of distressed couples who underwent either TBCT or IBCT.

Based on social learning theory (Bandura, 1977), the traditional behavioral perspective is that distressed couples lack the necessary skills to solve their problems, and that when they interact about problems they use too much negative behavior and not enough positive behavior. As such, TBCT focuses on increasing positive behaviors and decreasing negative behaviors through the use of three main components: behavioral exchange, communication training, and problem solving training. In behavioral exchange, partners identify behaviors of the other that are positively reinforcing, and work to increase the instances of such behaviors. Behavioral exchange is typically used early in therapy to produce quick (though often short-lived) increases in relationship satisfaction that enables couples to engage in more difficult work on their

relationship. In communication training, partners are taught ways in which they can more effectively communicate with each other by use of both speaker skills (e.g., “I” statements rather than blaming “you” statements) and listener skills (e.g., summarizing the speaker’s message). Finally, in problem solving training, couples learn to communicate differently about areas of disagreement, with the goal being that they come up with mutually agreed upon solutions to the problems.

While initially behavioral researchers argued that a lack of positive behavior and a preponderance of negative behavior created distress in relationships, more recently researchers have theorized that the root of relationship distress is more complicated. Jacobson and Christensen (1998) argued that distress is actually caused not just by a lack of skills but by the polarization process that often occurs as a result of individual differences between partners. The therapy they developed, IBCT, was designed to target the couples that did not significantly improve from TBCT or that relapsed soon after treatment ended. In IBCT there is an added emphasis on emotional reactions to one’s partner and in particular on emotional acceptance in addition to a focus on change in problem behavior. Three strategies for promoting emotional acceptance - empathic joining, unified detachment, and tolerance building - are the main focus of intervention but used in addition to TBCT techniques. In empathic joining, therapists work to elicit “soft emotions” such as hurt, rather than “hard emotions” such as anger. The goal of empathic joining is to help the couple experience intimacy around their problems, which can lead to both acceptance and behavior change. In unified detachment, the therapist helps partners to take a more objective, nonjudgmental view of their problems as distant from themselves and their relationship. Finally, therapists use tolerance building to increase partners’ acceptance of one another, aiming to reduce the conflict that is associated with specific behaviors often by putting that behavior in context (e.g., “it is frustrating that your partner is often late getting home

from work, but that dedication is also something that you appreciate in her, when it is applied to your family”).

Consistent with theoretical and practical differences between these two behavior therapies, research on changes in observed communication supports TBCT’s immediate impact and IBCT’s later but longer-lasting impact on observed communication. Sevier, Eldridge, Jones, Doss, and Christensen (2008) found TBCT produced greater improvement in communication from pre-therapy to post-therapy, as well as superior communication at post-therapy, in the current sample of distressed couples. However, Baucom, Sevier, Eldridge, Doss, and Christensen (2011) found the opposite pattern of results in husband positivity and wife negativity from post-therapy to 2-year follow-up: relative to TBCT, IBCT produced greater improvement in communication, although there were no treatment differences in levels of communication at 2-year follow-up. We expect a similar pattern of findings in our examination of dyadic interaction patterns assessed by naïve raters¹ in the current paper.

Despite the behavioral perspective that improvements in partners’ communication bring about improvements in relationship satisfaction (Jacobson & Margolin, 1979), the evidence to support this notion is limited (Snyder et al., 2006). It is possible that a focus on individual partner communication, rather than dyadic communication, accounts for the limited support of these links in both the current sample (Baucom et al., 2011) and others (e.g., Halford et al., 1993). Thus, we further examine whether the aforementioned couple-level communication is associated with both husband and wife relationship satisfaction at 2-year follow-up.

This study makes four important contributions to the existing literature. First, we focus on dyadic interaction patterns rather than discrete behavior of each partner. Much of the research on communication as an outcome of behavioral couple therapies has focused on individual partners as the unit of measurement, with the general idea that how positive or negative partners

are to one another impacts relationship functioning. While this is certainly consistent with behavioral theory and much has been learned through this approach, it in a sense ignores the defining feature of a relationship: interdependence (Thibaut & Kelley, 1959). Second, we utilize naïve ratings of relationship functioning. Whereas traditional observational systems capture subtle aspects of, and changes in, relationship functioning with much success, recent research suggests that untrained raters are able to use intuitive knowledge about relationships to reliably rate couple and family interactions in a way that provides similar (e.g., Lorber, 2006; Waldinger, Schulz, Hauser, Allen, & Crowell, 2004) – and at times even superior (e.g., Baucom, Baucom, & Christensen, in press) information to that gleaned from highly trained coding systems. Third, we test for differences between two behavioral couple therapies in trajectories of change in these measures over the course of both therapy (i.e., pre-therapy to post-therapy) and follow-up (i.e., post-therapy to 2-year follow-up) as previously outlined. Finally, we examine the extent to which levels of, and changes in, dyadic communication are associated with relationship satisfaction at 2-year follow-up.

Hypotheses

Hypothesis 1. We predict that couples will generally improve their communication over the course of time (i.e., display more relationship quality, positive reciprocity, and vulnerability/empathy; and less negative reciprocity, demand/withdraw, and mutual avoidance), but that these improvements will depend on treatment type. Specifically, we think TBCT couples will make greater improvements in communication from pre-therapy to post-therapy, and will display better communication at post-therapy relative to IBCT couples. However, from post-therapy to 2-year follow-up we expect that IBCT couples will make greater improvements relative to TBCT couples.

Hypothesis 2. We expect dyadic communication to be associated with individual partner relationship satisfaction at 2-year follow-up. Specifically, we predict that greater aforementioned improvements in communication will be associated with greater relationship satisfaction in both husbands and wives at 2-year follow-up.

Method

Participants

Participants were 134 seriously and chronically distressed couples from a randomized clinical trial; all scored in the distressed range of relationship functioning at three different assessment points prior to beginning treatment. Couples were predominantly Caucasian, middle-class, well-educated couples who had been married an average of 10.0 years ($SD = 7.6$). See Christensen, Atkins, Berns, Wheeler, Baucom, et al. (2004) for additional details of the sample.

Measures

Dyadic interaction patterns. The Naïve Observational Rating System (NORS; Christensen, 2006) is a 15-item global observational rating system that we developed to capture communication during couples' interactions. Seven items were included in this paper. Relationship quality was coded on a 100-point scale (higher scores representing greater quality of the relationship). The following six dyadic interaction patterns were rated on a Likert scale of 1 (*low*) to 10 (*high*): negative reciprocity, positive reciprocity, wife demand/husband withdraw (WD/HW), husband demand/wife withdraw (HD/WW), mutual avoidance, and vulnerability/empathy. Table 1 presents additional information on these items, and Table 2 presents descriptive statistics.

We selected as raters undergraduate who seemed reasonably socially skilled but who had no previous coursework or research experience that specifically related to relationships. They were uninformed as to the purpose of the larger research study as well as our hypotheses. While

the order of observational segments from the three time points was randomized, each rater observed each of these three segments for a given couples' interaction type and rated them in one sitting (e.g., a rater observed three of couple 451's relationship problem interactions in the order of post therapy first, follow-up second, and pre-therapy third at one sitting). The relationship problem interactions and personal problem interactions were separately rated by two independent teams of raters. See Baucom et al. (in press) for a more detailed description of the rating procedures.

Relationship satisfaction. The Dyadic Adjustment Scale (DAS; Spanier, 1976) was used to measure relationship satisfaction across a number of time points in the larger study. At 2-year follow-up husbands ($N = 99$) and wives ($N = 101$) completed the DAS. Cronbach's alphas were high for both husbands' and wives' scores (.92 and .94, respectively). Average DAS scores were 97.76 ($SD = 16.50$) for husbands, and 95.51 ($SD = 18.06$) for wives at 2-year follow-up.

Procedure

Based on the combination of two pre-treatment self-report measures of relationship satisfaction, couples were classified as either moderately or severely distressed. Within distress stratification levels, couples were randomly assigned to either TBCT (68 couples) or IBCT (66 couples). Couples received an average of 22.9 ($SD = 5.35$) sessions of either TBCT or IBCT. At each of three time points (pre-therapy, post-therapy², and 2-year follow-up), couples completed 10-minute videotaped discussions: two relationship problem (i.e., problem solving) discussions followed by two personal problem (i.e., social support) discussions. Each spouse picked a topic for each type of discussion; the order of these discussions was then counterbalanced across couples. Relationship problem discussions included 133 couples at pretreatment, 117 couples at 26-week assessment, and 84 couples at 2-year follow up. The personal problem discussions included 96 couples at pretreatment, 87 couples at 26-week assessment, and 76 couples at 2-year

follow up. Because the Washington site did not initially include personal problem discussions, there were fewer of these interactions available for analysis. See Figure 2 for a flow chart of observational assessments and reasons for missing data.

Results

Only relationship quality and vulnerability/empathy were normally distributed; we used natural log transformations for the other five variables. There were no significant differences between TBCT and IBCT at pre-therapy ($ps > .10$). We ran separate models predicting each communication variable and modeled separate slopes for changes from pre-therapy to post-therapy and changes from post-therapy to 2-year follow-up since the spacing between time points was different and there was also a qualitative difference between these two periods of time (i.e., in the first period couples went through therapy). In Hypothesis 1 models we included therapy type to test for treatment differences, and also included distress stratification (and its interaction with therapy type) at Level 2. We also included type of interaction and who chose the topic as Level-1 covariates.³

To test our second hypothesis we added Level-2 predictors for husband and wife relationship satisfaction at 2-year follow-up to previously described models of communication change. We centered relationship satisfaction separately for husbands and wives, and controlled for the type of interaction and who chose the topic at Level 1, as well as therapy type and pre-therapy distress stratification at Level 2.⁴

Hypothesis 1 Results

Table 3 presents results of these models, and Figure 3 displays trajectories of change in communication by therapy type. Consistent with hypotheses and published results examining individual partner behavior (Baucom et al., 2011; Sevier et al., 2008), TBCT couples made greater improvements from pre-therapy to post-therapy than did IBCT couples. Whereas TBCT

couples' relationship quality significantly increased over this time period ($\chi^2 = 9.85, p < .01$), IBCT couples' relationship quality did not significantly change ($\chi^2 = 0.22, n.s.$). TBCT couples' negative reciprocity and HD/WW significantly decreased ($\chi^2 = 44.38, p < .001$ and $\chi^2 = 7.26, p < .01$, respectively), and positive reciprocity and vulnerability/empathy significantly increased ($\chi^2 = 13.65, p < .001$ and $\chi^2 = 23.68, p < .001$, respectively); however in IBCT couples there were no significant changes in negative reciprocity ($\chi^2 = 1.08, n.s.$), HD/WW ($\chi^2 = 0.00, n.s.$), positive reciprocity ($\chi^2 = 0.32, n.s.$), or vulnerability/empathy ($\chi^2 = 0.24, n.s.$). Changes in WD/HW depended on both treatment type and stratification: this pattern only significantly decreased from pre-therapy to post-therapy in moderately distressed TBCT couples ($\chi^2 = 15.31, p < .001$). There were not significant decreases in WD/HW in severely distressed TBCT couples ($\chi^2 = 1.43, n.s.$) or in IBCT couples ($\chi^2 = 1.06, n.s.$ in severely, and $\chi^2 = 2.18, n.s.$, in moderately distressed IBCT couples). Mutual avoidance did not significantly change over this time period regardless of treatment type.

We also found strong support for hypothesized differences between TBCT and IBCT couples in communication levels at post-therapy. At post-therapy TBCT couples' relationship quality was rated higher than that of IBCT couples ($p < .05$), and TBCT couples used less negative reciprocity ($p < .01$) and more positive reciprocity ($p < .01$) and vulnerability/empathy ($p < .01$) than did IBCT couples. Therapy differences in levels of WD/HW at post-therapy depended on stratification. Moderately distressed IBCT couples displayed significantly more WD/HW than did moderately distressed TBCT couples ($\chi^2 = 1253.09, p < .001$), but there were not significant treatment differences in severely distressed couples ($\chi^2 = 0.08, n.s.$). Within TBCT, severely distressed couples used significantly more WD/HW at post-therapy than did moderately distressed couples ($\chi^2 = 11.96, p < .001$) but there were not significant differences

between levels of distress in IBCT ($\chi^2 = 0.00, n.s.$). There were no significant differences between TBCT and IBCT couples in HD/WW or mutual avoidance at post-therapy.

Also consistent with our hypothesis and previous findings, we found the reverse pattern of treatment effects from post-therapy to 2-year follow-up as we did from pre-therapy to post-therapy. Whereas IBCT couples' relationship quality significantly increased over this time period ($\chi^2 = 8.14, p < .01$), TBCT couples' relationship quality significantly *decreased* ($\chi^2 = 6.48, p < .05$). Similarly, IBCT couples' negative reciprocity significantly *decreased* ($\chi^2 = 5.92, p < .05$), and positive reciprocity and vulnerability/empathy significantly increased ($\chi^2 = 7.55, p < .01$ and $\chi^2 = 8.10, p < .01$, respectively); however TBCT couples' negative reciprocity significantly *increased* ($\chi^2 = 10.95, p < .01$), and positive reciprocity and vulnerability/empathy significantly *decreased* ($\chi^2 = 4.20, p < .05$ and $\chi^2 = 5.87, p < .05$, respectively). Changes in both WD/HW and HD/WW from post-therapy to 2-year follow-up depended on treatment type and stratification (described below). Mutual avoidance did not significantly change over this time period regardless of treatment type.

Changes in WD/HW from post-therapy to 2-year follow-up were only significant in moderately distressed TBCT couples ($\chi^2 = 9.84, p < .01$), such that they significantly *increased* over this time period, contrary to our hypothesis. There were no significant changes in WD/HW in severely distressed TBCT couples ($\chi^2 = 0.85, n.s.$) or in IBCT couples ($\chi^2 = 0.72, n.s.$ in severely, and $\chi^2 = 1.33, n.s.$, in moderately distressed couples). Changes in HD/WW were only significant in severely distressed IBCT couples ($\chi^2 = 7.05, p < .01$), such that they significantly *decreased* over this time period. There were no significant changes in HD/WW in moderately distressed IBCT couples ($\chi^2 = 1.36, n.s.$) or in TBCT couples ($\chi^2 = 1.82, n.s.$ in severely, and $\chi^2 = 2.69, n.s.$, in moderately distressed couples).

Despite differences between IBCT and TBCT couples in the timing of changes in these patterns, there were no significant differences between treatments in levels of communication patterns at 2-year follow-up.

Hypothesis 2 Results

We also found limited support for hypothesized associations between communication and relationship satisfaction at 2-year follow-up. Table 4 presents these results in full. Increases in rated relationship quality from pre-therapy to post-therapy were associated with greater wife relationship satisfaction at 2-year follow-up ($p < .05$). Similarly, higher post-therapy levels of rated relationship quality ($p < .001$), positive reciprocity ($p < .001$), and vulnerability/empathy ($p < .01$), as well as lower post-therapy levels of negative reciprocity ($p < .05$), were associated with greater wife relationship satisfaction at 2-year follow-up. There were no significant associations between changes in communication from post-therapy to 2-year follow-up and relationship satisfaction.

Discussion

The first aim of this study was to examine whether naïve ratings of relationship quality and dyadic interaction patterns changed over the course of therapy and follow-up, and if these changes depended on treatment type. We found strong support for hypothesized changes and their interactions with treatment. As hypothesized, TBCT couples showed immediate improvements in communication that were superior to those produced by IBCT, but IBCT couples displayed later and longer-lasting improvements. These findings are consistent with previous examinations of individual partner changes in communication over this time period using trained ratings (Baucom et al., 2011; Sevier et al., 2008), but differences between treatments were more pronounced and more consistent in the current examination.

We interpret these findings to represent differential effects of the respective change strategies in TBCT and IBCT. In TBCT partners are instructed to do positive things for one another (behavior exchange), interact with one another in a specific manner that is thought to be most effective (communication training), and use a series of steps to solve problems that arise (problem solving training). Although these interventions improve communication in the short-term (i.e., from pre-therapy to post-therapy), as research has demonstrated with trained ratings of individual behavior (e.g., D.H. Baucom, Sayers, & Sher, 1990; Sevier et al., 2008) and our current data demonstrate with dyadic interaction patterns, our findings suggest a similar relapse effect on observed communication to that on relationship satisfaction following TBCT (Snyder, Castellani, & Whisman, 2006). While IBCT utilizes these strategies to some extent, it is distinct from TBCT in its focus on acceptance through three strategies: empathic joining, unified detachment, and tolerance building. Voicing soft rather than hard emotions (in empathic joining) is likely difficult for a partner in the short-term since it puts them in a vulnerable position, but is likely more easily received by the other partner relative to hard emotions such as judgment or criticism. This intervention, in combination with a nonjudgmental view of a couple's problematic interaction pattern as an "it" (unified detachment) and contextual consideration of the behavior of one's partner that really irks him or her (tolerance building), target problematic relationship functioning through a focus on specific examples of interaction patterns that exemplify broader themes in the relationship. Through these strategies, communication is not altered directly by instructions about how to communicate but indirectly by eliciting emotional reactions from each, by encouraging dyadic analysis by both, and by encouraging a more contextual consideration of each partner's behavior. Despite this less explicit focus on specific behaviors, IBCT produced improvements in communication following treatment termination. We think this illustrates the differential impact of the change strategies used in the respective therapies. Whereas TBCT

therapists use the aforementioned interventions to instruct partners how to interact with one another more effectively (rule-governed change), IBCCT therapists work to create naturally occurring changes in communication with a focus on the functional impact of one partner's behavior on the other (contingency-shaped change).

We found substantially less support for our second aim, in which we examined associations between communication and relationship satisfaction. With the exception of associations between greater wife relationship satisfaction and improvements in rated relationship quality from pre-therapy to post-therapy, we did not find support for links between partner satisfaction and changes in dyadic communication. However, we did find support for predicted links between wife's relationship satisfaction at 2-year follow-up and post-therapy levels of rated relationship quality, positive reciprocity, negative reciprocity, and vulnerability/empathy. Of note, there were no significant associations between husband satisfaction and communication levels or changes in communication, adding additional support to the notion that wives are "barometers" of distressed relationships (Floyd & Markman, 1983).

One alternative explanation is that communication at 2-year follow-up represents regression to the mean, where communication that initially increased would tend to decrease, and vice versa. To rule out this explanation we ran a series of hypothesis tests in HLM to determine whether couples' communication was significantly different at 2-year follow-up relative to pre-therapy. All communication ratings significantly changed from pre-therapy to 2-year follow-up in the direction we would expect with the exception of only marginally significant decreases in WD/HW ($p = .07$), and no significant change in mutual avoidance.⁵ These findings, in combination with meta-analytic findings that neither communication nor relationship satisfaction of treatment-seeking distressed couples on waitlists naturally improves over time (D. H.

Baucom, Hahlweg, & Juschel, 2003), provide support against the explanation that changes in the present study are due to regression to the mean.

It is important to consider these findings in the context of previously published work from the current treatment outcome study. While a previous examination of 5-year trajectories of change in relationship satisfaction demonstrated that IBCT couples' relationship satisfaction was significantly higher than that of TBCT couples between post-therapy and 2-year follow-up, trajectories of satisfaction from 2-year to 5-year follow-up were not significantly different between treatments (Christensen, Atkins, Baucom, & Yi, 2010). Similarly, IBCT produced superior improvements in husbands' positivity and wives' negativity from post-therapy to 2-year follow-up in a previous observational study, but there were no significant differences between treatments in partners' withdrawal or problem solving (Baucom et al., 2011). Thus, while there is existing support for IBCT's statistical superiority in producing desired changes in communication and satisfaction, our findings offer the most compelling support for the differential impact of these two treatments on relationship functioning. We think these more consistent findings with regard to treatment differences are in part due to our examination of dyadic communication *patterns* as opposed to individual partner behavior. Although previous research on couples' communication has examined interaction patterns, these examinations have typically been in the form of self-report (e.g., Heavey, Larson, Zumtobel, & Christensen, 1996) or microanalytic coding of interactions (e.g., Margolin & Wampold, 1981). Despite frequent use in research with couples, self-report measures of communication are colored by a partner's overall view of the relationship and attributions for the other's behavior (Weiss, 1980), and therefore more objective information can be gained from an observer perspective (Heyman, 2001). Microanalytic observational systems are restricted by low base rates of both the initial and consequential behavior, as well as by how soon after the initial behavior the consequential

behavior must occur in the course of an interaction; typically researchers use sequential analysis to examine the likelihood of one partner responding with a given behavior (i.e., consequential behavior) to the other's initial behavior in the following segment of interaction, but often this short timeframe is unable to capture the actual sequence when it is in fact present (i.e., partner A's sarcasm might follow a seemingly sweet smile in response to partner B's criticism). We think our ratings of the overall extent to which a consequential behavior by one partner followed an initial behavior of the other (e.g., one partner's negativity following the other's negativity in negative reciprocity) offers a unique perspective on the interaction that most observational systems have been unable to directly capture. That said, it is important to note that findings of hypothesized treatment differences were not solely in interaction patterns, but also in naïve ratings of relationship quality, suggesting that the allowance of intuitive judgments by naïve raters provides us with additional unique information beyond that gleaned from interaction pattern ratings. Consistent with this, we previously found that naïve ratings in general, and relationship quality in particular, were strongly associated with both trained ratings and relationship satisfaction in this sample, and accounted for similar variance in relationship outcomes 5 years after treatment termination to that accounted for by trained ratings (Baucom et al., in press).

Another factor that may have contributed to our results is the manner in which naïve raters made judgments about communication. Within each type of interaction naïve ratings for a given couple from all three time points were completed in one sitting. For example, a naïve rater might observe communication patterns in pre-therapy, 2-year follow-up, and post-therapy husband topic relationship problem discussions for couple 105 before rating a different couple. In contrast, a trained rater might observe husband's communication in the pre-therapy husband topic relationship problem discussion for couple 105 and then move on to another couple.

Although both methods included randomization of time points to reduce the likelihood of rater bias, the opportunity to examine a type of interaction at all three time points for a given couple may have allowed naïve raters to make finer distinctions in communication at each time point, thus optimizing the intuitive ability of naïve raters.

These results should be considered in the context of some limitations. While we examined changes over the course of therapy and follow-up, we did not consider long-term treatment outcomes beyond communication and relationship satisfaction since they were beyond the scope of this manuscript (i.e., divorce and clinically significant response to treatment). It is likely that trajectories of change in communication would differ between couples who responded well to treatment and those who did not; although we would still expect treatment differences within these two groups. Another important limitation is that many of the couples who had poor outcomes of treatment did not participate in the observational assessment at 2-year follow-up. Thus, our results are more representative of those couples who were still together at 2-year follow-up. We think these data, which we consider to be *missing not at random* or *nonignorable* (Schafer & Graham, 2002), likely produced more generous estimates of improvements in communication patterns than we would find if the couples with the lowest relationship functioning (i.e., those who divorced) had complete data.

Despite these limitations, we think this examination of communication across three time points in a large sample of couples undergoing behavioral couple therapy has contributed to relationship research in a number of ways. First, it demonstrates the utility of measuring communication at the level of the couple. Although researchers have long stressed the importance of considering the interdependence present in relationships (Thibaut & Kelley, 1959), traditional observational coding systems do not typically examine couple-level communication. Our results suggest that this is an important area for future research and

development in observational assessment of couples. Second, this study adds to the burgeoning area of research on the utility of untrained ratings of behavior (e.g., Waldinger et al., 2004). Third, it builds on our previous investigation of communication changes following treatment termination (Baucom et al., 2011), and provides the strongest support thus far for differential trajectories of change in communication produced by TBCT versus IBCT. Finally, it adds to research on links between communication and relationship satisfaction, with strong support for wife's satisfaction in the relationship being more tightly linked with communication – even dyadic communication – relative to husband's satisfaction in the relationship.

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Footnotes

¹We use the term “naïve raters” to indicate naïveté with respect to research on couples and traditional observational ratings systems. However, we think it is this very naïveté that allows for quite sophisticated intuitive judgments of communication patterns in couples that cannot be made in traditional systems (see Baucom et al., in press, for discussion of this methodology).

²Although we refer to this assessment point as “post-therapy” a number of couples were still in active treatment at this time since the treatment outcome study sought to maintain equal spacing of time rather than equal number of therapy sessions between assessments for all couples.

³All analyses were conducted using Hierarchical Linear and Nonlinear Modeling (HLM 7; Raudenbush, Bryk, Cheong, Congdon, & de Toit, 2011) and included a random effect on the intercept. The time variables were dummy coded such that the intercepts represented expected level of the outcome variable in the post-therapy assessment (pre-therapy to post-therapy slope was coded *pre-therapy* = -1, *post-therapy* = 0; post-therapy to 2-year follow-up slope was coded *post-therapy* = 0, *2-year* = 1). Coding of covariates was as follows: therapy type (*TBCT* = -.5, *IBCT* = .5), pre-therapy distress stratification (*severely distressed* = -.5, *moderately distressed* = .5), interaction type (*relationship problem* = -.5, *personal problem* = .5), topic (*husband's topic* = -.5, *wife's topic* = .5). Given space constraints, we limit discussion to the effects that directly test our hypotheses.

⁴To test whether links between relationship satisfaction and communication depended on therapy type we first ran all models with added interaction terms between each partner's relationship satisfaction and therapy type. However, since there were no significant interactions

between relationship satisfaction and therapy type we did not include interaction terms in the final models.

⁵There were no significant differences between therapies in these changes.

Table 1
Naïve Observational Rating System Items

Item	Description
Relationship quality	What does this particular interaction say about the relationship? Is this a good or a bad relationship? On the basis of this interaction, how likely is the couple to stay together over the next several years and be happy with one another?
Negative reciprocity	To what extent did the couple exchange negative comments and negative nonverbal behavior in a “tit-for-tat” like way (e.g., criticize each other or exchange sarcastic comments, put-downs, frowns, sneers, or looking away in anger or disgust)?
Positive reciprocity	To what extent did the couple exchange positive comments and positive nonverbal behavior (e.g., humor, affection, praise, smiles, etc.)?
WD/HW	To what extent was the woman pressing to discuss the problem, critical of her husband, and pressuring him to change while he was avoiding the discussion, defensive about his behavior, and withdrawing from the discussion? Note that no one can literally avoid or withdraw from the discussion by leaving the room. However, one can change topics, not fully engage in a discussion, distract from the topic, remain silent or not say much, etc. and achieve a measure of avoidance/withdrawal that way.
HD/WW	To what extent was the man pressing to discuss the problem, critical of his wife, and pressuring her to change while she was avoiding the discussion, defensive about her behavior, and withdrawing from the discussion? Note that no one can literally avoid or withdraw from the discussion by leaving the room. However, one can change topics, not fully engage in a discussion, distract from the topic, remain silent or not say much, etc. and achieve a measure of avoidance/withdrawal that way.
Mutual avoidance	To what extent were both partners avoiding and withdrawing from the discussion? Sometimes a couple finishes their interaction before the time is up and then just uses the remaining time for chit-chat. Do not consider this avoidance if the couple seems “done” with the interaction. However, if you sense that this quitting before the time is up is part of their effort to avoid the discussion, then include it in your rating.
Vulnerability/empathy	To what extent was one partner’s expression of vulnerability met with the other partner’s empathy or support. For example, one partner expresses something like “I was disappointed when...” “It really hurt my feelings that...” “I am concerned that you don’t care about me...” “I am just not very good at ...” And, the other partner responds with support, understanding, or empathy. Couples would get low scores if there was little expressions of vulnerability or if those expressions were met with nonresponse or

	with dismissal, criticism, etc.
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Table 2
Descriptive Statistics of Naïve Codes by Time and Therapy

	Pre-Therapy		Post-Therapy		2-yr Follow-Up	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Quality						
TBCT	49.50	11.42	51.84	11.49	51.01	11.23
IBCT	49.72	10.81	49.59	10.63	52.77	11.34
Negative Reciprocity						
TBCT	3.71	2.08	2.98	1.71	3.09	1.70
IBCT	3.48	1.73	3.40	1.82	2.99	1.56
Positive Reciprocity						
TBCT	3.06	1.30	3.50	1.53	3.29	1.49
IBCT	3.15	1.38	3.11	1.39	3.56	1.63
WDHW						
TBCT	3.39	1.66	3.06	1.44	3.07	1.38
IBCT	3.24	1.45	3.27	1.53	3.00	1.35
HDWW						
TBCT	2.94	1.23	2.71	1.16	2.69	1.16
IBCT	2.86	1.12	2.90	1.25	2.62	1.09
Mutual avoidance						
TBCT	2.24	0.94	2.20	0.88	2.22	0.92
IBCT	2.22	0.96	2.31	0.94	2.13	0.92
Vulnerability/empathy						
TBCT	4.22	1.44	4.71	1.46	4.57	1.39
IBCT	4.34	1.40	4.30	1.39	4.77	1.41

Note. Descriptives presented in this table are untransformed.

Table 3

Post-therapy Levels of, and Changes in, Naïve Ratings over Time

	Post-Therapy Level			Pre-Post Change			Post-Follow-up Change		
	<i>B</i>	<i>SE</i>	<i>d</i>	<i>B</i>	<i>SE</i>	<i>d</i>	<i>B</i>	<i>SE</i>	<i>d</i>
Quality Intercept	51.38***	0.65		1.03*	0.50		0.37	0.56	
Therapy	-3.13*	1.29	-.28	-2.67**	1.00	-.24	4.29***	1.13	.38
Stratification	5.51***	1.29	.49	-0.85	0.99	-.08	-3.29**	1.13	-.29
Therapy*Stratification	0.02	2.58		1.21	1.98		-2.53	2.25	
Negative Reciprocity Intercept	0.95***	0.03		-0.13***	0.02		0.01	0.02	
Therapy	0.17**	0.05	.31	0.18***	0.05	.34	-0.20***	0.05	-.36
Stratification	-0.18***	0.05	-.33	0.01	0.05	.01	0.13**	0.05	.24
Therapy*Stratification	0.19	0.11		0.07	0.10		0.09	0.10	
Positive Reciprocity Intercept	1.09***	0.03		0.05*	0.03		0.03	0.03	
Therapy	-0.13**	0.05	-.31	-0.14**	0.05	-.32	0.19***	0.05	.42
Stratification	0.19***	0.05	.44	-0.05	0.05	-.10	-0.12*	0.05	-.27
Therapy*Stratification	0.03	0.10		0.05	0.10		-0.15	0.11	
WD/HW Intercept	1.00***	0.02		-0.06**	0.02		0.01	0.02	
Therapy	0.10*	0.04	.22	0.11**	0.04	.25	-0.12*	0.05	-.27
Stratification	-0.12**	0.04	-.27	-0.02	0.04	-.05	0.10*	0.05	.22
Therapy*Stratification	0.24**	0.09		0.19*	0.08		-0.22*	0.10	
HD/WW Intercept	0.93***	0.02		-0.03†	0.02		-0.05*	0.02	
Therapy	0.07	0.05	.17	0.07*	0.03	.18	-0.09*	0.04	-.23
Stratification	-0.04	0.05	-.10	0.02	0.03	.04	-0.01	0.04	-.03
Therapy*Stratification	-0.09	0.09		-0.04	0.07		0.20*	0.09	
Mutual Avoidance Intercept	0.74***	0.02		0.02	0.02		-0.04†	0.02	
Therapy	0.03	0.04	.09	0.05	0.05	.13	-0.07	0.05	-.19
Stratification	0.00	0.04	.00	0.03	0.05	.07	-0.06	0.05	-.14
Therapy*Stratification	0.02	0.08		-0.01	0.09		-0.04	0.09	
Vulnerability/Empathy Intercept	4.61***	0.08		0.24**	0.08		0.07	0.09	
Therapy	-0.53**	0.16	-.37	-0.59***	0.17	-.41	0.69***	0.18	.48
Stratification	0.80***	0.16	.56	0.10	0.17	.07	-0.58**	0.18	-.41
Therapy*Stratification	-0.26	0.33		-0.17	0.33		-0.58	0.37	

Note. *d* = Cohen's *d*. See text for results of tests of simple effects. †*p* < .10, **p* < .05, ***p* < .01, ****p* < .001

Table 4

Associations between Naïve Communication Ratings and Relationship Satisfaction Two Years Post-Therapy

Rating	Pre-therapy to Post-therapy Change		Post-therapy Levels		Post-therapy to 2-year Follow-up Change	
	<i>B (SE)</i>	<i>SC</i>	<i>B (SE)</i>	<i>SC</i>	<i>B (SE)</i>	<i>SC</i>
Quality						
H DAS	0.02 (0.17)	0.01	0.13 (0.20)	0.06	0.06 (0.15)	0.01
W DAS	0.35 (0.14)*	0.09	0.60 (0.17)***	0.26	-0.08 (0.13)	-0.02
Negative Reciprocity						
H DAS	0.00 (0.01)	0.00	-0.00 (0.01)	-0.03	-0.00 (0.01)	-0.01
W DAS	-0.01 (0.01)	-0.05	-0.02 (0.01)*	-0.15	0.01 (0.01)	0.03
Positive Reciprocity						
H DAS	0.01 (0.01)	0.03	0.00 (0.01)	-0.02	0.00 (0.01)	0.01
W DAS	0.01 (0.01)	0.08	0.02 (0.01)***	0.25	-0.00 (0.01)	-0.02
WD/HW						
H DAS	-0.00 (0.01)	-0.02	-0.00 (0.01)	-0.01	0.01 (0.01)	0.03
W DAS	-0.00 (0.01)	-0.02	-0.01 (0.01)	-0.08	0.00 (0.01)	0.01
HD/WW						
H DAS	0.00 (0.01)	0.03	-0.01 (0.01)	-0.10	0.00 (0.01)	0.01
W DAS	-0.00 (0.00)	-0.02	-0.01 (0.01)	-0.07	0.00 (0.00)	0.01
Mutual Avoidance						
H DAS	0.01 (0.01)	0.04	-0.00 (0.01)	-0.01	-0.00 (0.01)	-0.01
W DAS	-0.01 (0.01)	-0.05	-0.01 (0.00)	-0.07	0.01 (0.00)	0.04
Vulnerability Empathy						
H DAS	-0.01 (0.03)	-0.02	0.01 (0.03)	0.02	0.01 (0.03)	0.02
W DAS	0.04 (0.03)	0.07	0.07 (0.02)**	0.22	-0.03 (0.02)	-0.05

Note. *SC* = standardized regression coefficient (calculated as unstandardized coefficient times *SD* of predictor over *SD* of outcome); H = husband; W = wife; DAS = Dyadic Adjustment Scale; WD/HW = wife demand/husband withdraw; HD/WW = husband demand/wife withdraw. Unstandardized regression coefficients represent effects of relationship satisfaction on communication. Covariates included type of discussion and who chose the topic at Level 1, as well as therapy type and pre-treatment distress stratification at Level 2.

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

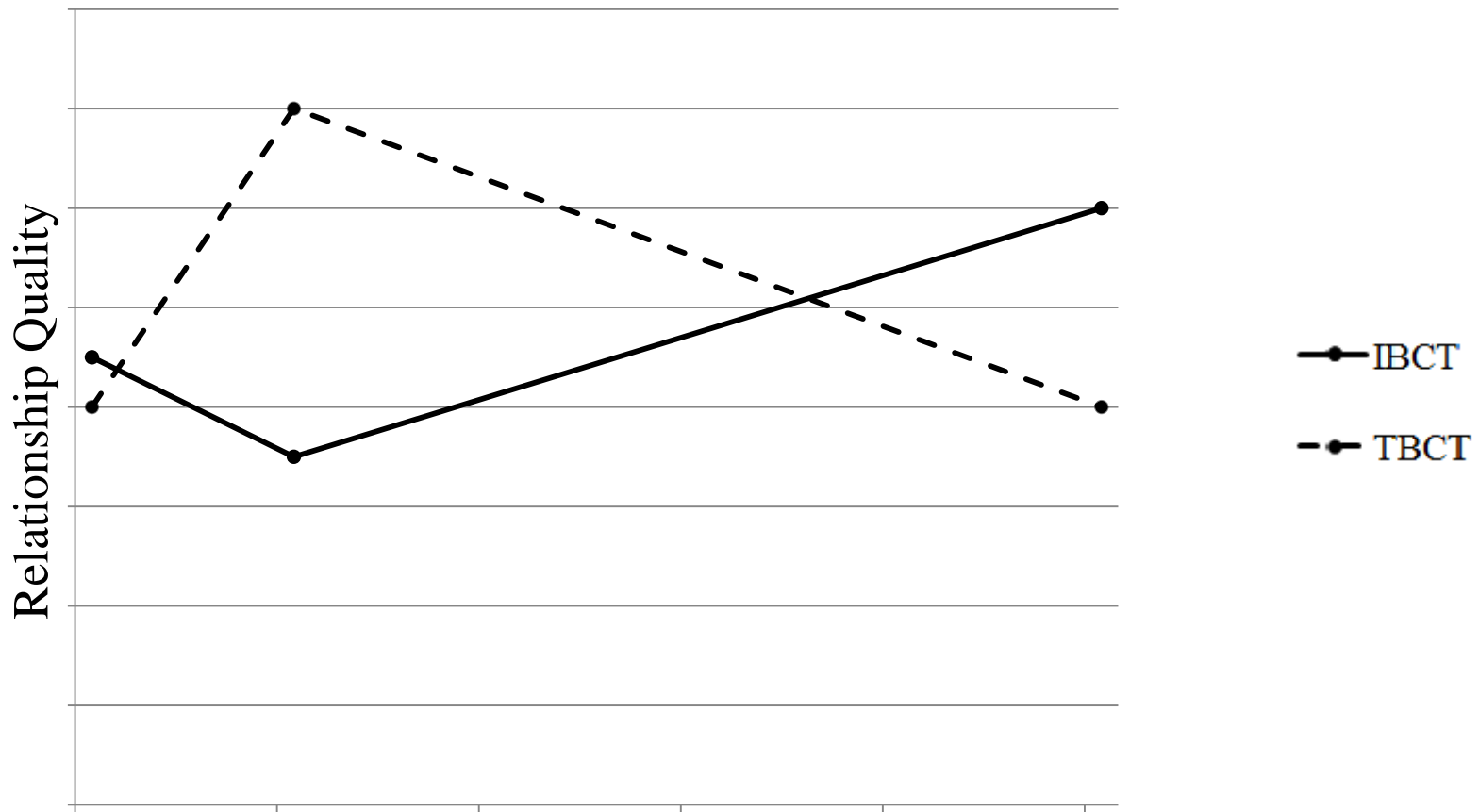


Figure 1. Hypothesized changes in observed relationship quality.

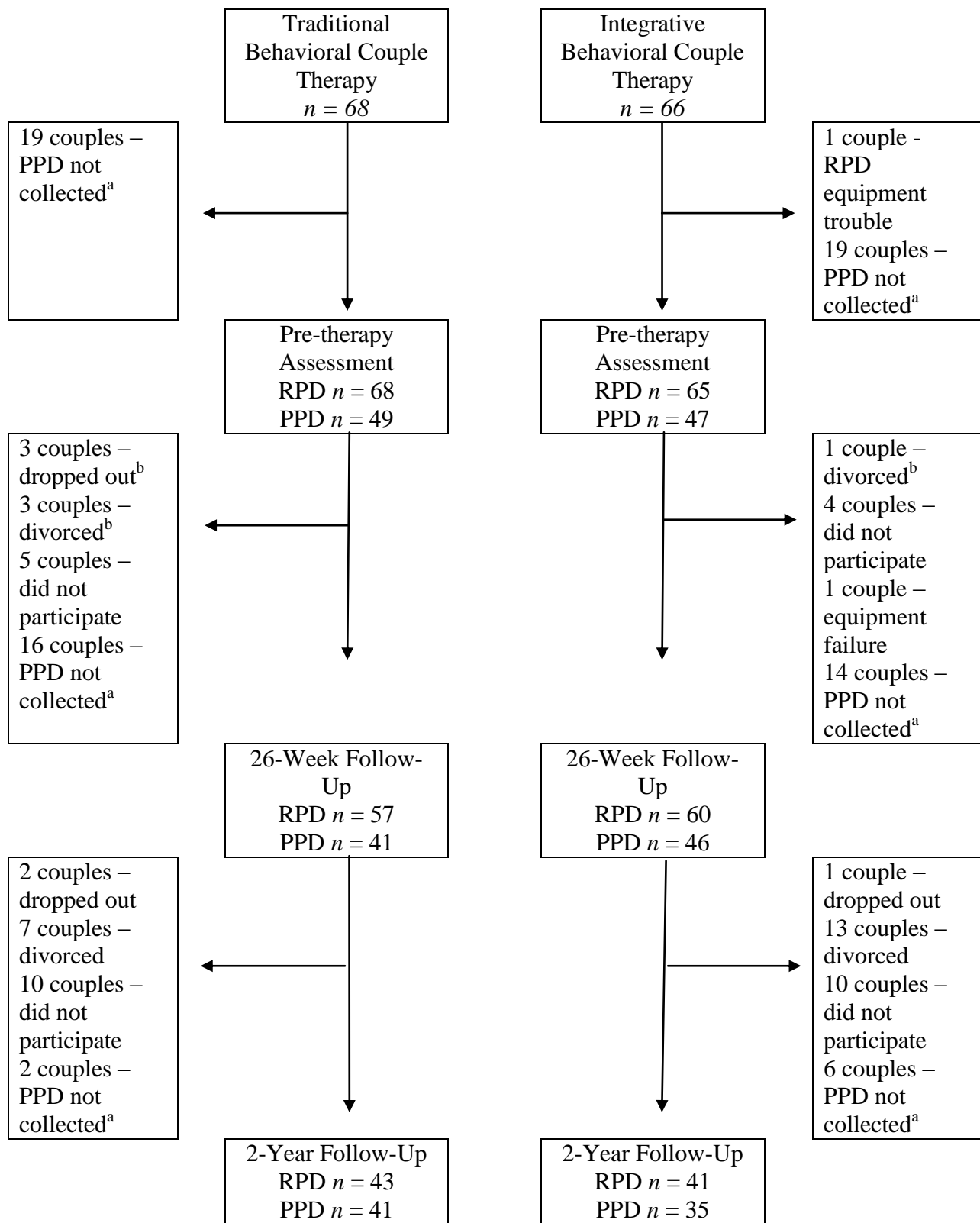
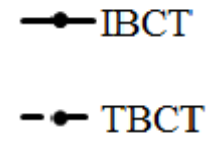
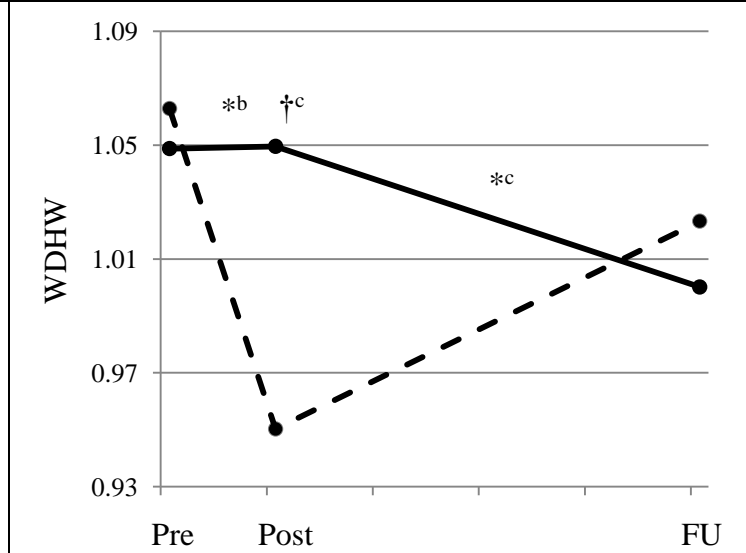
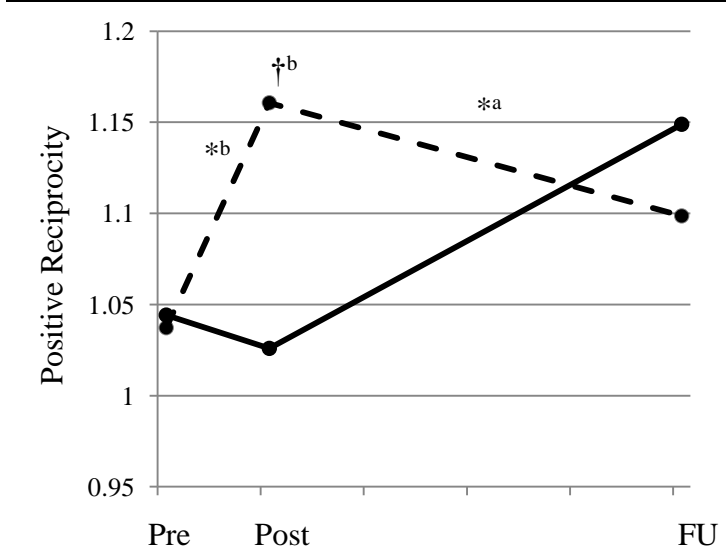
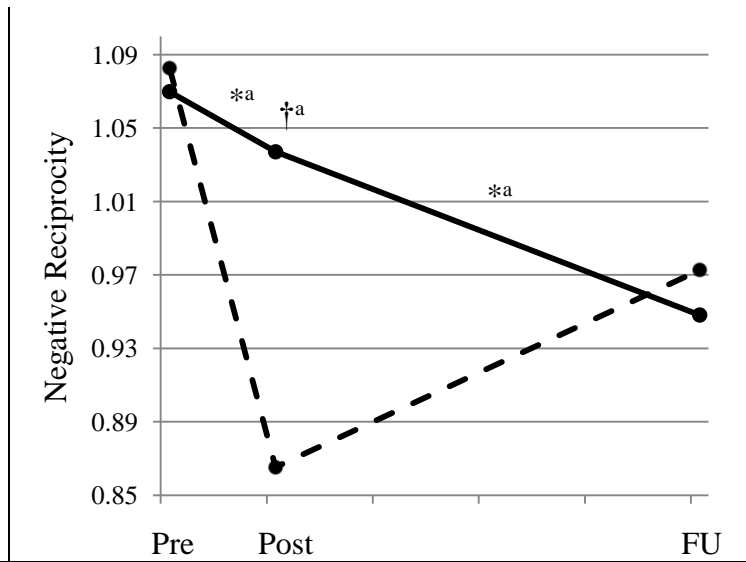
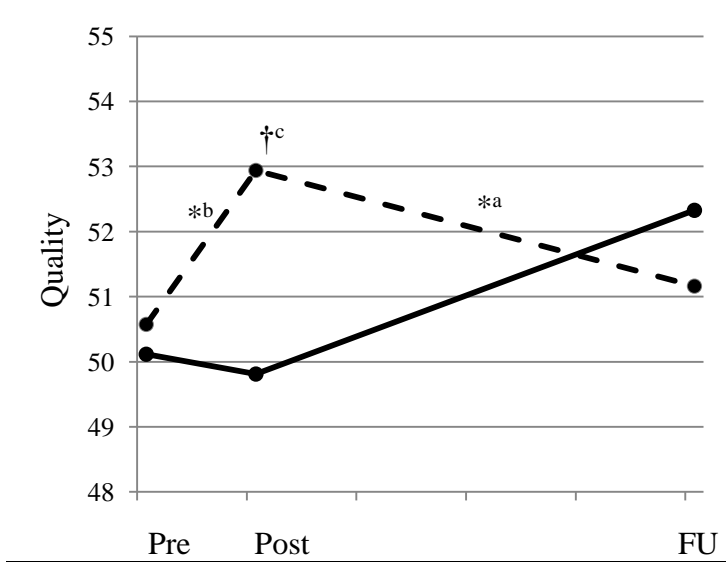


Figure 2. Two-year observational assessment flowchart – by therapy and type of interaction. n = number of couples with data at the respective time point, RPD = relationship problem discussions, PPD = personal problem discussions, ^athe UW site did not collect personal problem

interactions initially; these couples were not asked to participate in subsequent personal problem interactions, ^bnot included in subsequent assessments.



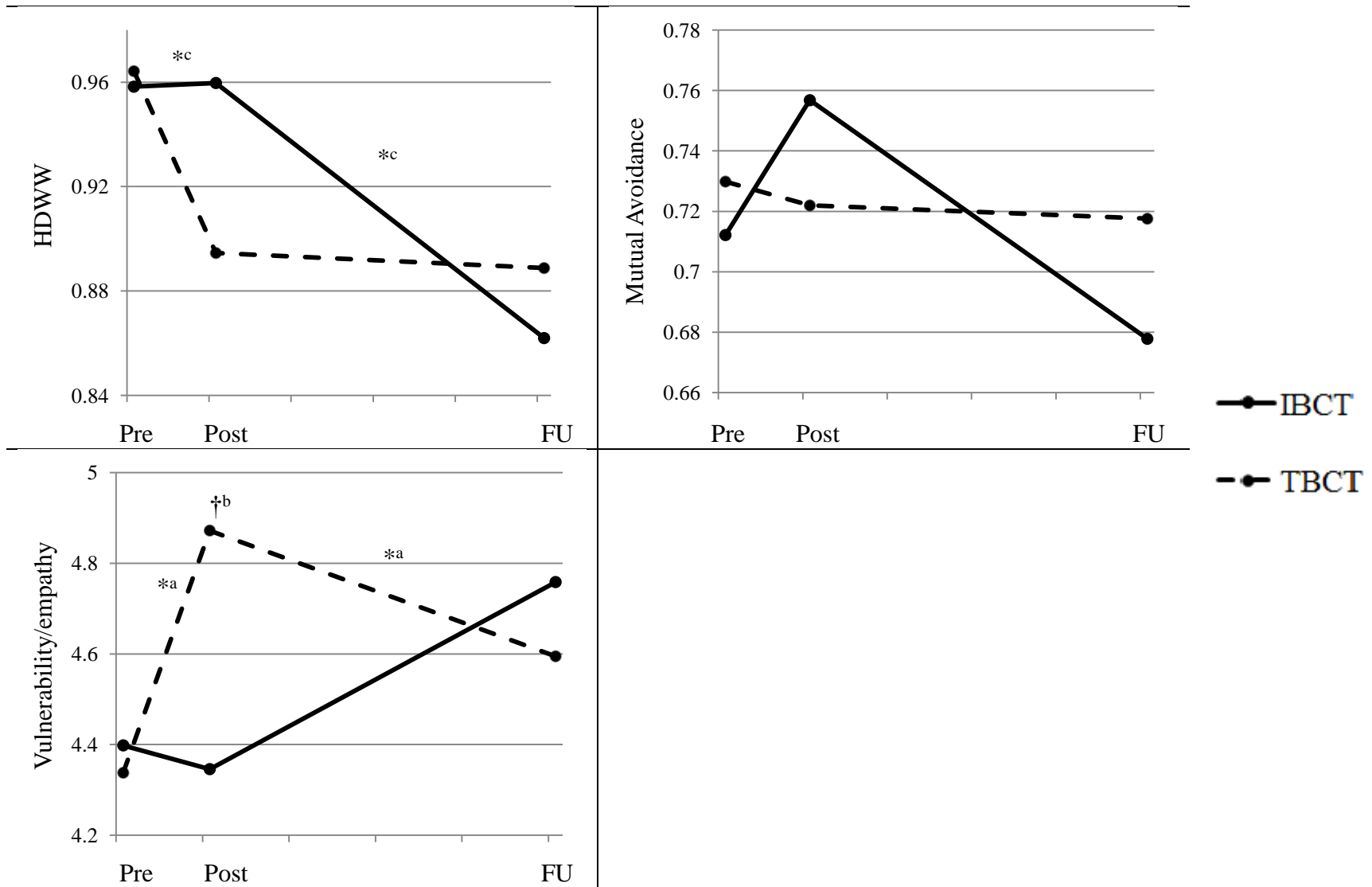


Figure 3. Predicted regression scores of observed communication in couples. *significant difference between treatments in communication change, † significant difference between treatments in level of communication
^a $p < .001$, ^b $p < .01$, ^c $p < .05$

GENERAL DISCUSSION

The series of studies in this dissertation sought to contribute to the area of observational research with distressed couples. Overall findings from Paper 1 generally supported partners' continued improvement in communication even after they had been out of active couple therapy for 2 years, as well as differential communication changes between treatments. Additionally, these findings offered a potential explanation for odd positivity findings in published work with couples (i.e., counterintuitive links between observed positivity and relationship outcomes disappeared after controlling for observed withdrawal). However, there were few links between communication – and changes therein – and subsequent long-term relationship outcomes. These results demonstrate the limitations to a strictly behavioral perspective of relationship distress and support integrative approaches to theory and practice with couples. Nonetheless, they offer encouragement as to the lasting impact of intervention on communication in couples undergoing behavioral couple therapy.

In Paper 2 we examined naïve ratings of couples' communication. We found strong empirical support for the utility of these ratings: relationship quality, four dysfunctional interaction patterns (i.e., negative reciprocity, wife demand/husband withdraw, husband demand/wife withdraw, and mutual avoidance), and one functional interaction pattern (positive reciprocity) were strongly and consistently associated with both relationship satisfaction and the trained observational ratings from Paper 1 in predicted directions. Not only that, naïve ratings similarly predicted both concurrent relationship satisfaction and divorce in a 5-year follow-up assessment compared with trained ratings, and in some cases actually were *better* predictors of outcome. These results suggest that undergraduates without training typically required of traditional observational systems are able to use their knowledge about relationships to judge how well a couple is functioning. These findings, in combination with previous published

findings using this methodology, open a door to observational research with couples that had thus far been closed to many researchers who lacked the time and money for extensive training and time in traditional systems.

Finally, treatment differences in changes in naïve ratings over time in Paper 3 were similar to those of Paper 1. IBCT produced superior changes in communication after treatment termination relative to TBCT, and TBCT produced superior immediate changes relative to IBCT. Particularly interesting in this set of findings was the consistency of treatment differences across dyadic communication patterns. Despite this, we found limited support for links between these communication patterns – and changes therein – and relationship satisfaction. We think these results support both the use of naïve raters and the examination of dyadic communication patterns in observational research with couples. They also demonstrate further empirical support for the impact of theoretical and practical differences between these behavioral couple therapies.

This is the first series of papers that we know of to examine observed communication at long-term follow-up in distressed couples who underwent couple therapy. We think these findings offer encouragement to researchers and interventionists alike that gains in communication made in treatment often are maintained if not amplified following treatment termination. Furthermore, the superiority of late gains in communication in IBCT over TBCT supports the integrative model with which it was developed, that focuses on the function of specific behaviors that are representative of broader relationship themes as opposed to solely on discrete behaviors. Finally, the support we found for the validity and utility of naïve ratings in observational assessment of couples paves the way for additional research and clinical application of these and other similar techniques. The current research contributes to the larger body of research with distressed couples, and also suggests a series of new directions in this area of research.

APPENDIX

Naïve Observational Rating System (Christensen, 2006)

Instructions: For each couple you will be observing 1, 2 or 3 interactions. You should code all of the interactions from a given couple in one sitting.

- First, watch and listen to the first interaction.
- Second, rate the first interaction on the scales below.
- Repeat these two steps for each interaction from the couple.
- The first scale below, “Relationship Quality,” is different from all the other scales in that a) it is on a 100 point scale (all others are on a 10 point scale) and b) you are not allowed to give the same rating on “relationship quality” to more than one of a couple’s interactions. We want you to discriminate which of a couple’s interactions was indicative of highest relationship quality and which was indicative of lowest relationship quality. In other words, if a couple has three interactions, you should give them *three different* relationship quality scores. If all three are of high quality, you could give all three different but high ratings. If all three are of low quality, you could give all three different but low ratings. If the three were of very different levels of quality, you could give them each quite different ratings.
- While giving different ratings is mandatory for the relationship quality item, it is also helpful if you can discriminate between the interactions of each couple on other items as well. However, if two interactions from a couple seem absolutely identical on a particular dimension, you may give them both the same score.

Explanation of the items:

- 1) **Relationship Quality.** What does this particular interaction say about the relationship? Is this a good or a bad relationship? On the basis of this interaction, how likely is the couple to stay together over the next several years and be happy with one another?
 - a. **1 – 33: Poor Relationship.** This couple has serious problems and/or is poor at dealing with them. Their problems seem insurmountable and/or love, respect, and caring have clearly deteriorated. They are likely to separate and/or divorce. If they remain together, they are likely to be very dissatisfied.
 - b. **34 – 66: Average Relationship.** This couple has typical problems and/or typical ways of dealing with them. Their problems are not insurmountable, they still love, respect, and care for each other, and they will probably stay together and have an average level of satisfaction.
 - c. **67 – 100: Excellent Relationship.** This couple has few problems or is excellent at dealing with them. They clearly love, respect, and care for each other. They will definitely stay together and have high levels of satisfaction.
- 2) **Constructiveness:** To what extent was the interaction a constructive discussion of an issue(s) the couple is having? Consider the extent to which both members are having an open, honest discussion of the issue(s), are respectful of each other, and try to understand

each other **even if** they disagree, the problem is difficult, or they have strong feelings and opinions about the issue. Note that they do not have to come to a resolution of the problem for it to be a constructive discussion of the problem.

- a. **10:** Both partners share their feelings and thoughts openly and constructively and both listen respectfully to the other's views and try to understand those views.
 - b. **1:** Neither shares their feelings and thoughts openly or constructively and/or neither listens respectfully or tries to understand the other's views.
 - c. **Note:** One can *not* have a constructive *discussion* if one partner is being open and respectful but the other is not. So rate the extent to which the discussion is constructive (i.e., *both* partners are engaging in a constructive discussion).
- 3) **Negative Reciprocity:** To what extent did the couple exchange negative comments and negative nonverbal behavior in a "tit-for-tat" like way (e.g., criticize each other or exchange sarcastic comments, put-downs, frowns, sneers, or looking away in anger or disgust)?
- a. **10:** Partners exchange high levels of negativity with each other.
 - b. **1:** Partners exchange no negativity (both exchange neutral or positive comments).
 - c. **Note:** You are to rate the extent to which partners *exchange* negative comments. If one partner is negative but the other never reciprocates that with negative behavior (instead is only neutral or positive), you would rate negative reciprocity as 1.
- 4) **Positive Reciprocity:** To what extent did the couple exchange positive comments and positive nonverbal behavior (e.g., humor, affection, praise, smiles, etc.)?
- a. **10:** Both partners exchange high levels of positivity with each other.
 - b. **0:** Partners exchange no positivity with each other (both are neutral or negative).
 - c. **Note:** You are to rate the extent to which partners *exchange* positive comments. If one partner is positive but the other never reciprocates that with positive behavior (is only neutral or negative), you would rate positive reciprocity as 1.
- 5) **Woman demand/man withdraw.** To what extent was the woman pressing to discuss the problem, critical of her husband, and pressuring him to change while he was avoiding the discussion, defensive about his behavior, and withdrawing from the discussion? Note that no one can literally avoid or withdraw from the discussion by leaving the room. However, one can change topics, not fully engage in a discussion, distract from the topic, remain silent or not say much, etc. and achieve a measure of avoidance/withdrawal that way.
- a. **10:** Woman is demanding, pressuring, and critical while her husband tries to avoid or withdraw from the discussion and is defensive about the topic.
 - b. **0:** No demanding, pressuring, or criticism by the woman and no avoiding or withdrawing by the man
 - c. **Note:** You are to rate the extent of this *pattern* of interaction. For you to rate the pattern as occurring, both partners must engage in their respective behaviors. If the woman was demanding but the man was not avoiding and withdrawing at all,

you would give this pattern a rating of 1. Likewise, if the man was avoiding and withdrawing but the woman was not demanding at all, you would give this pattern a rating of 1.

- 6) **Man demand/woman withdraw.** To what extent was the man pressing to discuss the problem, critical of his wife, and pressuring her to change while she was avoiding the discussion, defensive about her behavior, and withdrawing from the discussion? Note that no one can literally avoid or withdraw from the discussion by leaving the room. However, one can change topics, not fully engage in a discussion, distract from the topic, remain silent or not say much, etc. and achieve a measure of avoidance/withdrawal that way.
- a. **10:** Man is demanding, pressuring, and critical while his wife tries to avoid or withdraw from the discussion and is defensive about the topic.
 - b. **1:** No demanding on the man's part and no withdrawing on the woman's part.
 - c. **Note:** You are to rate the extent of this *pattern* of interaction. For you to rate the pattern as occurring, both partners must engage in their respective behaviors. If the man was demanding but the woman was not avoiding and withdrawing at all, you would give this pattern a rating of 1. Likewise, if the woman was avoiding and withdrawing but the man was not demanding at all, you would give this pattern a rating of 1.
- 7) **Mutual avoidance:** To what extent were both partners avoiding and withdrawing from the discussion? Sometimes a couple finishes their interaction before the time is up and then just uses the remaining time for chit-chat. Do not consider this avoidance if the couple seems "done" with the interaction. However, if you sense that this quitting before the time is up is part of their effort to avoid the discussion, then include it in your rating.
- a. **10:** Both partners try to avoid or withdraw from the discussion.
 - b. **1:** No avoidance or withdrawal by either.
 - c. **Note:** You are to rate the extent of *mutual* avoidance. To rate this pattern as occurring (greater than "1"), both partners must exhibit avoidance and/or withdrawal.
- 8) **Vulnerability/empathy-support.** To what extent was one partner's expression of vulnerability met with the other partner's empathy or support. For example, one partner expresses something like "I was disappointed when..." "It really hurt my feelings that..." "I am concerned that you don't care about me..." "I am just not very good at ...". And, the other partner responds with support, understanding, or empathy. Couples would get low scores if there was little expressions of vulnerability or if those expressions were met with nonresponse or with dismissal, criticism, etc.
- a. **10:** One or both express vulnerability and the other responds with empathy-support.
 - b. **1:** No expressions of vulnerability or expressions of vulnerability that receive no response of empathy-support.

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