1997

Treatment acceptability of paradoxical interventions: the role of dissonance

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Treatment acceptability of paradoxical interventions: The role of dissonance

by

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A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

Major: Psychology
Major Professor: Norman A. Scott

Iowa State University
Ames, Iowa
1997
This is to certify that the Doctoral dissertation of

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For the Major Program

For the Graduate College
# TABLE OF CONTENTS

**INTRODUCTION** ................................................................. 1
  Purpose of Study .......................................................... 2

**REVIEW OF RELATED LITERATURE** ........................................... 6
  Paradoxical Interventions ................................................ 6
    History ................................................................. 6
    Types of Paradoxical Interventions .................................. 7
    Theoretical Underpinnings and Mechanisms of Change ........... 9
      Double Bind Theory ................................................ 9
      Psychological Reactance ......................................... 11
      The Novelty Effect ................................................. 14
      Summary of Mechanisms of Change ................................. 16
  Effectiveness of Paradoxical Interventions ......................... 17
    Meta-Analytic Studies ............................................... 17
    Limitations of the Meta-Analytic Research ....................... 20
  Guidelines for Therapeutic Use ....................................... 21
  Ethical Issues ........................................................... 24
    The Therapeutic Rationale ......................................... 25
    Empirical Studies of the Rationale ................................ 26
    Summary: Ethical Issues and the Rationale ....................... 29
  Treatment Acceptability ................................................. 30
    Treatment Acceptability: Critique and Recommendations ....... 34

  Cognitive Dissonance Theory ............................................ 36
    A Revision of Dissonance Theory .................................. 38
    Conditions for Dissonance Arousal ................................ 40
      Aversive Consequences ............................................ 40
      Irrevocability of Behavior ........................................ 43
      Perceived Responsibility .......................................... 45
      Dissonance Arousal in the Present Study ....................... 47
    Dissonance Reduction ................................................ 47
      Dissonance Reduction in the Present Study .................... 49

  Research Questions and Hypotheses ................................ 50
    Hypotheses for Multiple Regression Analyses .................. 51
      General Hypotheses ............................................... 52
      Main Effects ....................................................... 54
      Interactions ........................................................ 54
      Rationale X Experience ............................................ 54
      Reactance X Experience .......................................... 55
    Hypotheses for Proposed Modeling Analysis ..................... 56
INTRODUCTION

Paradoxical interventions are therapeutic change strategies which appear to run counter to conventionally defined principles of human change. The practice of therapeutic paradox has been recorded as early as 1786 (O'Connell, 1983). The case literature is replete with descriptions of rapid and dramatic behavioral change (DiTomasso & Greenberg, 1989), as well as an higher number of empirical studies to test the effectiveness of such techniques. The first section of the literature review briefly describes paradoxical interventions, outlines appropriate conditions for their use, as well as notes how they are imbedded in various theoretical systems of psychotherapy. In addition, a description of proposed mechanisms of change is provided, including the role of client reactance potential (a primary predictor variable in this study).

Although the reported outcomes of these interventions appear very attractive to therapists searching for additional treatment methods (particularly for work with treatment refractory cases), clinical data are needed to provide a stronger foundation for using techniques which appear to be counterintuitive. Outcome research has begun to provide evidence of the general efficacy of paradoxical interventions (Hill, 1987; Shoham-Salomon & Rosenthal, 1987; DeBord, 1989; Martinez-Taboas, 1990). A synthesis and analysis of this literature will be provided.

As literature on clinical efficacy continues to develop, so does the discussion regarding the ethics of using paradoxical strategies in therapy. The effects of using these techniques has at times been so startling that some have labeled adept
practitioners of paradox "therapeutic magicians" (Weeks, 1991). Such a reaction has drawn an appropriately skeptical eye, and the literature review outlines the ethical issues surrounding the use of paradox, including the role of the therapeutic rationale (another primary predictor variable in this study).

When ethical concerns surround a treatment approach that is counterintuitive by definition, clinicians considering the use of these techniques may experience cognitive dissonance (Festinger, 1957; Cooper and Fazio, 1984). Of relevance to such a concept is the question: "Do some clinicians perceive the paradox to contradict their fundamental belief systems about therapy to such an extent that they experience psychological discomfort when considering the use of such interventions?" In the present study it was proposed that the experience and reduction of dissonance arousal may be important factors which are predictive of clinician treatment acceptability ratings of paradoxical interventions.

**Purpose of Study**

The central purpose of this study was to determine what role dissonance plays in the decision making process associated with the consideration of using paradoxical techniques. More specifically, the role of dissonance was studied in relation to effects of client reactance and the presence or absence of a rationale. These two variables (reactance and rationale) were hypothesized to influence the level of clinicians' acceptability ratings, and may be associated with clinicians' levels of cognitive dissonance. Contingent upon the degree of dissonance arousal
experienced, various clinician treatment decisions and dissonance-reducing motivational behaviors were predicted and stated as directional hypotheses. The study had three basic purposes, which range from descriptive to predictive in their intended contribution to the literature.

First, this study proposed to provide a quantitative assessment of psychologists' familiarity, use, and attitudes regarding the use of paradoxical interventions. The best available standards of practice are conceptual articles and books which offer the clinical positions of the respective authors. While these provide some guidelines to therapists, their impact on what psychologists are actually doing is uncertain at this time. A descriptive assessment of a sample of psychologists should add to defining a standard of practice for the field.

Second, this study proposed to assist in gaining an understanding of the reasons for clinicians' decisions whether to use paradoxical interventions. To the extent that there are objections within the profession, are they made on theoretical grounds, are they related to lack of information and training regarding paradoxical interventions, or perhaps both? This study provided a fully crossed model of two variables considered to be important in the determination of appropriateness of a paradoxical intervention (rationale and reactance), and included the influence of demographic variables and overall clinician experience with using paradoxical interventions.
Third, this study included cognitive dissonance in a proposed model for intervention decision making regarding paradoxical interventions. This study proposed that dissonance may play a role in decisions about the treatment acceptability of these interventions. Psychologists' levels of dissonance arousal were measured following exposure to a vignette in which they will assume the role of a clinician administering a paradoxical intervention. The reactance potential of the client in the vignette and the presence or absence of a treatment rationale were manipulated, with predictions made about how various levels of these manipulated variables may lead to varying levels of dissonance arousal. In addition, psychologists use of dissonance reduction strategies as a means of coping with the discomfort of cognitive inconsistency were measured.

This study offered additional information about the factors relevant to psychologists when making decisions about the acceptability of this controversial form of treatment. In a broader sense, mediational models involving dissonance and other social psychological processes may become instructive in understanding ethical decision making behavior. For example, if dissonance is found to be a relevant factor in choosing an intervention for a client, can or should such arousal be effectively and ethically reduced? This may have immediate implications for training and supervision, and farther reaching implications for the field upon the introduction of novel ideas.
Statistical analyses were conducted to report demographic information about the sample, psychometric properties of the survey, and manipulation checks to determine the effectiveness of the experimental conditions. Multiple regression analyses were conducted to test for differences by condition on each of the dependent variables. It was proposed that if a strong pattern of meaningful differences were detected, a modeling procedure would be conducted to account for such group differences. This was proposed to consist of a series of regression analyses that can be compared to one another to determine if client reactance potential, the therapeutic rationale, and level of clinician experience explain a meaningful amount of the variance in reported levels of treatment acceptability and dissonance arousal and reduction.
REVIEW OF RELATED LITERATURE

Paradoxical Interventions

The empirical and conceptual literature on the use of paradoxical interventions in psychotherapy has developed significantly in the past decade. Paradoxical interventions are so named because the therapist assists the client in behavioral change through ways that appear to contradict expected therapeutic change principles. A classic example involved directing a client who suffered from insomnia to scrub and wax the kitchen floor whenever his attempts to sleep failed. The client was given an ordeal (scrubbing the floor) in which the symptom of insomnia (staying awake) must be maintained. Haley (1984) reports that in this particular case, the client's insomnia went into remission after several weeks of treatment.

History

Encouraging or intensifying presenting symptoms, or even attempting to prevent or restrain client attempts to reduce their symptoms, appears at first to be a counterproductive strategy for promoting enhanced psychological functioning. The conceptual basis for paradoxical techniques is based upon theoretical and practical considerations. Several authors have provided summaries of the historical development and classification of paradoxical interventions (Weeks & L'Abate, 1982; Dowd & Milne, 1986; Ascher, 1989).
One of the earliest accounts of paradoxical therapy was described by O'Connell (1983), who reported an English physician's use of such a strategy for therapeutic purposes as early as 1786. More recently, the first half of this century is sparingly marked with reports of the use of paradoxical interventions by influential practicing theorists (Adler, 1923; Dunlap, 1928; Frankl, 1939). As today, these therapists were able to integrate paradoxical interventions into comprehensive theories of human behavior change. This counterintuitive treatment approach has been more closely examined in conceptual writings and case literature since the 1960s (Riebel, 1984), and has been subject to empirical scrutiny for little more than a decade (Dowd & Swoboda, 1984; Strong, 1984; Kraft, Claibom, & Dowd, 1985). Contemporary research is briefly reviewed in later sections on treatment effectiveness and acceptability.

Types of Paradoxical Interventions

Paradoxical interventions have been developed within a wide variety of theoretical systems. Some of the interventions that may appear to be more conventional can be conceptualized as paradoxical. These include: massed practice, stimulus satiation, implosion and flooding in behavior therapy (Hull, 1943; Allyon, 1963; Weeks & L'Abate, 1982; Marks, 1970); reframing in cognitive therapy (Mahoney, 1986); paradoxical intention in logotherapy (Frankl, 1939, 1991); and ordeal therapy (Haley, 1973, 1984; Erickson, 1959, 1964, 1965, 1973, 1977; Madanes, 1981; Papp, 1980; Watzlawick, Weakland & Fisch, 1974).
With a more recent effort at developing an integrative model of therapy which is uniquely paradoxical, these interventions have been categorized by similarity of format or by therapeutic intent. Symptom prescription, the prototypical intervention, requires the client to engage in or exaggerate the problematic symptom or behavior. This usually takes the form of homework assignments, but in-session use may also be effective. The therapist might encourage specifying the time of initiation and the duration of engaging in symptom prescription.

Less active and more cognitive than prescribing or scheduling, reframing the symptom can shift the client’s frame of reference about the presenting concern and lead to effective behavior change. Research suggests that reframing interventions that involve a positive connotation tend to be more effective than interventions without a positive connotation (Akillas & Efran, 1995). A positive connotation refers to the process of giving the client feedback about the presenting problems or symptoms in a favorable context. For example, a withdrawn and depressed client could be told about the healthy, protective and restorative qualities of retreating in order to take good care of himself. Similarly, relabeling explicitly uses language to assign new names to problem behaviors and symptoms. The intended effect is to shift the frame of reference in a plausible way that normalizes the client experience and enhances perceived efficacy in managing the presenting problem.

Another form of paradoxical interventions is exemplified by the strategy of restraining. Rather than encouraging client growth and change, a client who is being restrained is quite literally discouraged from making progress. This can take
extreme forms in forbidding change, or be more subtle in pointing out negative consequences of change. Additional restraining strategies include predicting relapses, prescribing relapses, declaring hopelessness, and positioning.

**Theoretical Underpinnings and Mechanisms of Change**

With the presence of paradoxical strategies in a variety of theoretical systems are a variety of explanations for how such interventions produce client change. Dowd (personal communication, 10/20/95) has stated that the primary mechanisms of change for paradoxical interventions are likely: 1) a therapeutic double-bind (the logically binding proposition of being "changed if you do and changed if you don't"); and 2) a novelty effect which aids the client in shifting the client's frame of reference regarding the problem and its potential solutions. The double-bind and a novelty effect have roots in various systems of psychotherapy. This section will further elucidate the theoretical foundations for these concepts.

**Double-Bind Theory**

The double-bind concept has origins in the communications studies of anthropologist Gregory Bateson and his colleagues (Bateson, Jackson, Haley, & Weakland, 1956). Bateson et al. (1956) proposed that schizophrenic symptoms were the result of communication patterns (pathological double-binds) within the family of the schizophrenic patient. Typical of this pattern is a situation whereby a parent delivers to the child a directive with punishing consequences and a contradictory directive with equally punishing consequences, but at a higher level of
abstraction (Dowd & Milne, 1986). A frequently used example of this pattern is a mother who verbally directs her child to come closer to her while nonverbally pushing the child away. In order to produce the pathological effect, Bateson et al. (1956) suggested that these patterns must occur repeatedly and in the context of an intense emotional relationship. When such a pattern becomes internalized, the child perceives interactions with the world as double-binds, resulting in confusion and impaired communication abilities. Bateson et al. suggested that psychotherapy could be used to propose therapeutic double binds which could produce more effective interaction patterns.

Many theorists, clinicians, and researchers in family therapy expanded on Bateson's work in devising a variety of creative techniques to deliver therapeutic double binds. The work of Milton Erickson (1959; 1964; 1965; 1973; 1977), Jay Haley (1963; 1984), Paul Watzlawick (Watzlawick, Beavin, & Jackson, 1967; Watzlawick, Weakland, & Fisch, 1974), Mara Selvini-Palazzoli (Selvini-Palazzoli, Cecchin, Prata, and Boscolo, 1978), and Cloe Madanes (1981) are a few of the exemplar figures in family therapy who have made substantial contributions to the applications of therapeutic paradox.

The family therapy field has since turned attention toward models of therapy that advocate for more direct, open, and mutually constructive dialogical processes. Examples of these from the past decade include collaborative language systems theory (Goolishian & Anderson, 1987, 1992; Anderson & Goolishian, 1988) and narrative approaches to therapy (White & Epston, 1990). These approaches signify
movements within the field of family therapy away from comparatively more manipulative strategies toward philosophical stances such as social constructionism (Gergen, 1985; McNamee & Gergen, 1992). For example, Goolishian and Anderson have proposed that the primary objective in collaborative language systems therapy is to allow the client's story to be an ever-evolving, self-constructioning reality that develops in the context of therapy. Change occurs through mutual dialogue which constructs new meaning, not by the therapists efforts to lead (whether or not paradoxically) a client to an inherent truth or an assumed objective reality.

Psychological Reactance

Though the concept of pathogenic double bind in the etiology of schizophrenia has debatable explanatory utility, the logic of a therapeutic double bind remains central to explaining the mechanism of paradoxical change. More recent research has explored the role of psychological reactance (Brehm, 1966; Brehm & Brehm, 1981) in the double binding process of a paradoxical intervention (Dowd, Hughes, Brockbank, Halpain, Siebel & Siebel, 1988; Shoham-Salomon, Avner, & Neeman, 1989). Psychological reactance is a motivational state assumed by persons when they perceive their freedom to choose or behave has been threatened or eliminated by some external agent. The goal of this motivation is to maintain or restore the lost freedom. Dowd, Wallbrown, Sanders and Yesenosky (1994) noted that a range of recent studies have suggested that psychological reactance may be an important client variable which mediates therapy process and
outcome. Beutler and Clarkin's (1990) integrated therapy model of treatment selection includes reactance as an important element in the decision making process of therapy.

A client who is high in reactance can be assumed to be relatively more resistant to interpersonal influence in therapy than the client who is low in reactance. Personality research suggests that highly reactant persons (in comparison to persons low in reactance) are likely to be less concerned with making a good social impression, less likely to follow social norms and rules, more likely to be careless about meeting obligations, less likely to be tolerant of the beliefs and values of others, and more likely to express strong feelings and emotions (Dowd, et al., 1994). Beutler and Clarkin (1990) suggested that reactance is inherently an interpersonal phenomenon, describing reactance as "an individual's likelihood of resisting threatened loss of interpersonal control," which includes "the forcefulness of one's efforts to resist external influence" (pp. 72-73).

Empirical studies testing the role of reactance in paradoxical therapy have provided tentative support for the importance of this client personality variable. Dowd et al. (1988) concluded that reactance has some minor effects on therapy outcome, although no main effect was found for reactance in their analyses. Shoham-Salomon et al. (1989) reported that clients high in reactance potential showed more improvement when administered a paradoxical intervention than did clients low in reactance potential, while the latter group did increase their general sense of their ability to make changes. The validity of this study is limited, however,
due to the nature of the reactance manipulation in the experiment (e.g., tone of voice was manipulated to represent high and low levels of reactance). Reactance was manipulated by these researchers, thus not measured as a trait of individual subjects. Swoboda et al. (1990) reported no effects of reactance in research with depressed clients.

Rohrbaugh, Tennen, Press and White (1981) suggested that two kinds of paradoxical interventions (compliance-based and defiance-based interventions) could be considered, contingent upon client reactance potential. Defiance-based interventions are most appropriate when reactance potential is high. When a highly reactant client resists the counselor's paradoxical directive by defying the directive, the client has met the goals of therapy. An unwanted behavior (e.g., a panic attack) cannot continue if the client defies the instruction to perform that behavior. Thus, paradoxical interventions with clients who are high in reactance use the clients' own defense strategies as tools to promote therapeutic change. However, paradoxical interventions may also provide some benefit to clients who are designated to be low in psychological reactance.

Compliance-based interventions assume that when clients comply with an assigned intervention, the change process has already begun. Change occurs when the client begins to establish some volition over a behavior previously thought to be "out of control." For example, the avoidant behaviors of a client who is concerned about socially anxious responses to embarrassing situations can no longer be considered automatic if the client is able to produce them according to a
predetermined schedule. Such compliance-based strategies appear to be associated with Bandura's (1986) self-efficacy theory, as the client strives to enhance self-efficacy expectations through behavioral experiments (Shoham-Salomon, Avner, & Neeman, 1989). Dowd et al. (1994) noted that several recent studies provide support for Rohrbaugh et al.'s proposal of classifying paradoxical interventions into compliance-and defiance-based strategies. Most notably, Horvath and Goheen (1990) reported significant support for the moderating effects of reactance in the compliance-and defiance-based model of paradoxical interventions.

The Novelty Effect

In addition to the double binding mechanism, a number of authors suggest that paradoxical interventions produce client change via a novelty effect which assists the client in shifting personal meaning about themselves, their problems, and the possibilities for solutions (Dowd, 1995; Mahoney, 1986; Madanes, 1981). Such shifts are initiated through reframing, the use of humor, and detachment. The emphasis on detachment from symptoms through humor is a notion that has been emphasized by Frankl (1939) in his early writings about the use of paradoxical intention.

Paradoxical interventions produce a second-order change, the impact of which can be change that affects the symptomatic behaviors as well as the contexts in which they are imbedded (Watzlawick et al., 1974). In contrast, first order change directives instruct clients to apply the opposite of the target behavior. First-
order change directives are used with the intent of effecting behavior change at the level of the individual and his or her symptoms. Second-order change directives are used with the intent of effecting changes in an individual's behavior, but with farther reaching implications for change in systems in which symptoms and problematic behaviors are imbedded. Second-order changes are presumed to have greater durability in the way that systemic changes can continue to support changes in previously symptomatic behavior.

If first order change is effective in treating depression, then a client's symptoms might have been reduced by encouraging increased activity, regular sleep and diet, and maintenance of positive affect. If first order change directives are not effective, then "more of the same" therapeutic strategy is applied (Dowd & Pace, 1989). However, first order changes are more likely to be experienced in isolation from other aspects of the client's life—most notably, the systems in which the client lives. The client experiencing depression may show a reduction in target symptoms while the family or work systems may begin to suffer as previous interaction patterns are disrupted. Paradoxical interventions can be utilized as second order change strategies—as unconventional tools which can lead to new levels of insight, shifts in the client's frame of reference, and change at a more systemic level. Conceptually, second order change could be more effective, pervasive, and perhaps more generalizable than first order change.
While the basic idea of assisting the client in adopting a new frame of reference could be a common factor to a variety of therapeutic approaches, this mechanism appears to be particularly important to paradoxical interventions. The novelty effect has been conceptualized in a variety of ways. Merely assisting a client in thinking about the problem in a different way is likely to be broadly agreed-upon contributor to change in a variety of therapies. Omer (1986) offers an elegant discussion of how a client's symptoms are imbedded in a context which the therapist must creatively consider when integrating paradoxical interventions in promoting client growth.

**Summary of Mechanisms of Change**

In summary, there appears to be general consensus that paradoxical interventions contribute to client change by placing the client in a therapeutic double bind which provides a novel frame of reference for solution finding. The concepts of the double bind and a novel reframe both have evolved through various theories of psychotherapy. The notion of positive reframing is important to paradoxical interventions in particular (Akillas & Efran, 1995; Dowd and Milne, 1986), and does not appear to be a source of ethical contention among therapists. The concept of a logical double-bind appears to be unique to this therapeutic maneuver. Recent psychological literature provides some support for the role that reactance potential plays in the process of a therapeutic double bind. Reactance potential as a proposed client variable is included in this study because this may be a crucial determinant in clinicians' decisions about the appropriateness of
paradoxical interventions with a particular client. Do therapists assess (implicitly or explicitly) reactance potential in their clients, then decide to utilize such motivational states as therapeutic leverage? This study intended to help in determining the extent to which licensed psychologists consider reactance potential in making judgments about the acceptability of paradoxical interventions.

**Effectiveness of Paradoxical Interventions**

While process research strives to explain the nature of paradoxical mechanisms of change, outcome research documents the treatment effectiveness of such interventions. Two meta-analytic reviews have been conducted (Shoham-Salomon & Rosenthal, 1987; Hill, 1987), as well as a variety of narrative reviews of the empirical literature to date (Ascher, 1989; DeBord, 1989; Dowd & Milne, 1986; Weeks, 1991). The conclusions of the quantitative outcome reviews to date will be briefly described to establish the utility of paradoxical interventions in the context of psychotherapy. The limitations of this literature have been targets of criticism—adding to the controversy associated with the use of these techniques, and potentially diminishing the utility of this research to the practitioner.

**Meta-Analytic Studies**

Shoham-Salomon and Rosenthal's (1987) meta-analytic review included twelve data sets from empirical outcome research using symptom prescription as a paradoxical technique. The inclusion criteria for studies required the use of a group (rather than case) design, random assignment of subjects to groups, and the
context of an individual therapy session for the provision of the clinical interventions. These criteria yielded ten studies and a total of twelve data sets. For each comparison between two groups, the effect size $r$ was computed. Shoham-Salomon and Rosenthal's (1987) general results indicated that paradoxical interventions were as effective as (but not more effective than) other techniques of treatment. Second, this level of effectiveness was found for one-month follow-up assessments.

A third important finding suggested that when only considering the use of paradoxical interventions, those interventions which employ a positive connotation of the symptom are more effective than interventions which do not. When a positive connotation is used, the therapist suggests that there is some beneficial function for the client's symptoms or problematic behaviors. For example, a depressed client might be given encouraging feedback about her efforts to care for herself by withdrawing from stressful life events. The authors then assessed the efficacy of paradoxical interventions within the context of Smith, Glass, & Miller's (1980) classic meta-analysis of psychotherapies. Positively connoted paradoxical interventions ranked third highest in a rank ordering of effect sizes for seventeen psychotherapies (behind cognitive therapies and hypnotherapy).

Hill (1987) also performed a meta-analysis of this literature, including fifteen studies of empirical treatment-outcome data (nine of these studies were included in the Shoham-Salomon & Rosenthal [1987] study). Criteria for inclusion in this study required at least one comparison between a paradoxical intervention and a control
group (which must have been no-treatment, placebo-control, or non-paradoxical treatment in nature), and a between-subjects design which measured therapeutic outcome. Effect size (Cohen's $d$) was computed by subtracting the mean of the control group from the mean of the treatment group, then dividing by the standard deviation of the control group.

Hill's (1987) conclusions suggested that paradoxical interventions were more effective than no-treatment control groups (mean effect size of 0.99). Paradoxical interventions were also more effective than placebo control groups (mean effect size of 0.56). These results are consistent with those of Shoham-Salomon and Rosenthal's (1987) study in stating that paradoxical interventions tend to produce favorable outcomes for clients when compared to other kinds of therapeutic interventions. In addition, Hill (1987) provided convergent evidence for the enhanced-impact of paradoxical interventions which incorporate a positive connotation.

Hill (1987) provided the boldest interpretation to date by suggesting that paradoxical interventions may be more effective than non-paradoxical treatments. Today, the breadth of such a statement appears to be misguided given theoretical guidelines to utilize paradoxical interventions under appropriate circumstances, rather than in any given situation. Hill (1987) may have recognized this limitation to some degree when he noted that paradoxical interventions may be most effective with presenting problems that are more severe, or at least demonstrated to be treatment refractory when other therapeutic methods have been applied.
Since the publication of these initial quantitative reviews, further research has provided data with which to guide the practitioner and spur future research. Akillas and Efran (1995) found that the use of symptom prescription combined with reframing was more effective than symptoms prescription without reframing and a wait-list control condition in treating socially anxious males. This finding supports previous clinical guidelines which advocated the use of a positive connotation to assist the client in reframing the meaning that client's associate with symptoms and solutions.

Limitations of the Meta-Analytic Research

Although the research reviews just described support the conclusion that paradoxical interventions are generally effective within the context of psychotherapy, there are important limitations of this research which must be noted. Martinez-Taboas (1990) conducted a qualitative review and invoked the traditional cautions regarding the interpretations of meta-analytic data to temper the relatively enthusiastic conclusions of previous researchers (Shoham-Salomon and Rosenthal, 1987; Hill, 1987). Specifically, Martinez-Taboas (1990) noted that Hill's use of average effect size with a small set of heterogeneous studies likely contributed to a distortion of clinical facts. Within the set of Hill's original studies, several limitations to clinical generalizability were noted, including: 14% of studies used a truly clinical population; five types of presenting problems were represented (67% of cases studied depression and insomnia); and therapy contexts were relatively contrived (43% of studies provided one total hour of therapy; 29% provided three or less total
hours). The relatively small number of studies of limited ecological validity should be considered a modest beginning in a research area from which only cautious interpretations can be gleaned.

In addition, one might expect enhanced effect sizes in this literature, as the types of symptoms being treated in many of the studies have previously been suggested to have specific amenability to paradoxical therapy (i.e., insomnia, procrastination, agoraphobia). As with all programs of psychological research, appropriate cautions must be considered in interpreting empirical results. Definitive conclusions about the outcome and process of using paradoxical interventions are certainly premature at this point. However, the data that exist provide directions for future research and clinical practice.

**Guidelines for Therapeutic Use**

Procedural guidelines for the effective use of paradoxical interventions tend to be less specific than for more conventional psychotherapy techniques (which may be explicitly described as an extension of theory or even manualized). There is no unifying or standard set of instructions which uniquely characterizes paradoxical treatment strategies. This is certainly related to the fact that a variety of schools of therapy incorporate paradoxical interventions into their repertoire of treatment choices. Nevertheless, several guidelines have been suggested by leading authors in this area.
Dowd and Milne (1986) support the generally agreed-upon importance of having a strong therapeutic relationship with the client as a requisite condition for the effectiveness of therapeutic paradox. Paradoxes are to be used with careful attention to how the intervention fits with the particular client and the context of their treatment (Omer, 1986; Papp, 1980). Highly reactant clients may be well-suited for this form of treatment, as previously described in terms of defiance-based interventions.

Weeks (1991) and Omer (1986) discuss the subtle importance of skillfully integrating paradoxical interventions into the therapy process. Therapists use paradoxical interventions to purposefully complement their treatment plans with clients. It is difficult to imagine a reason for conducting therapy with a completely paradoxical philosophy. A number of authors have noted the importance of therapist competency in using therapeutic paradox (Stanton, 1981; Brown & Slee, 1986; Dowd & Milne, 1986; Ascher, 1989). The degree of sophistication involved in using such techniques requires that the novice receive careful supervision and training.

Because of the paucity of process-oriented research to validate how paradoxical interventions are effective in assisting with client change, differential treatment guidelines based on diagnostic categories are not available. The empirical findings that are available have focused on the treatment of agoraphobia, insomnia, procrastination, and depression (Shoham-Salomon, Avner, & Neeman, 1989). The case study literature is replete with accounts of the successful usage of
therapeutic paradox (DiTomasso & Greenberg, 1989; Stanton, 1981; Wilson & Bornstein, 1984). Examples of presenting problems that have been studied in this descriptive literature include: anxiety disorders, simple and social phobias, compulsive gambling, eating disorders, substance abuse, psychosexual disorders, enuresis, relationship and family concerns, pain, and vocational indecision.

Some contraindications are available in guiding the clinician in using paradoxical interventions. Behaviors or thoughts destructive to self or others should not be prescribed, encouraged, or exaggerated. The potential risk involved in such cases precludes the use of strategic paradox, and should be addressed with more appropriate methods of crisis intervention. Sociopathic or paranoid clients may present unstable personality characteristics which present risks for extreme exacerbation of injurious behaviors (Weeks & L'Abate, 1982). Highly chaotic marriages and families also tend to be less appropriate candidates for paradoxical interventions. The appropriateness of any intervention given the context of the treatment involves congruence with the research literature and careful consideration of relevant ethical issues.

To return to the primary argument levied against paradoxical interventions, many perceive these interventions to be manipulative or coercive (Perrin & Dowd, 1986). Subtle coercion of a patient is still coercion, and a client's perception that a therapist has been manipulative can be associated with disrespect, and may be anti-therapeutic. Although some contend that therapeutic paradox is simply too manipulative, others argue that all therapy is manipulation, and that the most skillful
manipulators find ways to promote client change (Beahrms, 1977). Further ethical concerns are then raised about the potential damage to a therapeutic relationship should such manipulation become apparent. Brown and Slee (1986) provide further discussion of the issues of coercion and trust in the practice of using paradoxical interventions.

Ethical Issues

Ethical concerns about paradoxical interventions are associated with the notion that such strategies are tricky or manipulative (Perrin & Dowd, 1986). Such concerns are most often based upon the procedural recommendation that the rationale for the intervention be withheld from the client—to do otherwise would jeopardize the potential effectiveness of the intervention. Haley (1963, 1984) and many others have explained that commenting on the double bind allows the client to see the logical constraints being presented, thus permitting escape from the double bind. Indeed, one might expect a highly reactant client to be motivated to oppose the influence of a therapist; this may be particularly so if the intervention strategy is deemed somehow subversive and manipulative. In this case, one is not changed regardless of compliance or defiance, as the intervention has been rendered irrelevant (via disclosure of the treatment rationale). Haley further suggested "...although a therapist might want to 'share' with a client and explain what he is really doing, the risk is a relapse caused by the therapist's need for comfort" (Haley, 1976, p.74).
Brown and Slee (1986) also introduced discussion about the extent to which paradoxical interventions may violate the intent of informed consent to treatment. As was mentioned previously, marked differences of opinion exist with regard to the role of the rationale. When no rationale is given, do clients truly have complete information about the nature of treatment for which we ask their consent? While an argument can be made that therapists do not typically provide full theoretical rationale for all of the skills used in a session, the unique nature of paradoxical interventions may be a notable exception to this argument.

The Therapeutic Rationale

Although some therapists believe that no rationale should be available for clients, others take variable positions on the degree of disclosure of therapeutic intent. Nondisclosure rationales provide the client with some explanation for the directive, but do not allow for revelation of the double-bind concept. Boettcher and Dowd (1988) utilized nondisclosure rationales to offer clients a believable reason to follow the intervention. Examples of nondisclosure rationales include positive reframing, assigning some positive connotation to the targeted symptom (e.g., depressive symptoms are actually coping skills to wisely retreat from stress and take better care of oneself), prescribing a symptom to enhance awareness of the problem, and assigning symptoms in order to gather baseline data for future interventions (Boettcher & Dowd, 1988).
On the other hand, disclosure rationales reveal the logic of the intervention based on the assumption that this insight will render the intervention more successful and more ethical than if the rationale were withheld. The theoretical nature of these rationales may vary by therapist, but the spirit of full disclosure of the expected mechanism of action is present. Frankl's use of paradoxical intention in logotherapy is an example of instructing the client (with the use of humor) that an increase in symptoms is not desired, but is merely a means to the opposite effect (Hills, et al., 1985).

Hill (1992) described a very respectful application of feminist therapy to the use of paradoxical interventions in general, and to the specific question of whether or not to provide a therapeutic rationale. Her "open paradox" is characterized by sharing the intended rationale and providing as much information as would be useful to the client. The effort to involve the client in an egalitarian treatment process is intended to empower the client to effect his or her own changes, rather than to rely on the direction of a therapist. Hill's (1992) use of therapeutic paradox within a feminist conceptualization addresses a number of the relationship issues of deception, trust, and power that have been raised by many others.

Empirical Studies of the Rationale

The empirical literature contains only three studies and yields inconclusive evidence to determine the role of the rationale in therapeutic outcome. A number of analog studies (typically measuring counselor social influence variables) have been published. Ascher and Turner (1980) reported a study of subjects who were
administered a paradoxical directive for symptoms of insomnia. They utilized
disclosure rationales (whereby the expected mechanism of change was provided to
the client as part of the intervention) and nondisclosure rationales (whereby clients
were given an explanation that does not reveal the true expected mechanism of
change, but offers a more vague description of the need to learn more about the
problem in order to arrive at solutions). Subjects in their study who received a
disclosure rationale were superior to subjects who received a nondisclosure
rationale in terms of reducing sleep onset latency, in lessening the difficulty in
returning to sleep, and in higher subjects' ratings of restedness. The therapeutic
outcomes of subjects who received the nondisclosure rationale were not discernible
from either of two control groups (Ascher & Turner, 1980).

Hills, Gruszkos, and Strong (1985) concluded that providing an explanation
of the mechanism of change may actually diminish the effectiveness of the
intervention. In their study with moderately depressed college students, their forms
of rationale were essentially a no rationale condition, a nondisclosure rationale
condition that involved reframing and a disclosure rationale which explained the
therapeutic double bind. Results indicated that, in comparison to the no rationale
condition, the two conditions which employed rationales that disclosed the nature of
the intervention were associated with more favorable ratings of the counselor and
more internalized attributions for client change. However, the disclosure conditions
were associated with lesser therapeutic outcome.
Boettcher and Dowd (1988) incorporated four treatment conditions in their study utilizing symptom prescription with anxious college students: no rationale, a positive reframe rationale, a performance anxiety rationale, and a double bind rationale. Their results indicated that all clients made therapeutic gains regardless of condition, while none of the treatment group comparisons were significant in terms of therapeutic outcome and social influence ratings of the counselor.

March (1993) presented videotaped counseling vignettes to undergraduate students in a study which tested the potentially moderating effects of psychological reactance and need for cognition on ratings of counselors who administered paradoxical interventions with and without a treatment rationale. Subjects who viewed the counselor who provided a rationale were more willing to see the videotaped counselor for a variety of concerns than were subjects who viewed the counselor that did not offer a rationale. Higher levels of reactance corresponded with lower favorable ratings of the counselor regardless of whether or not a rationale was present.

These studies yield a mixed message to clinicians searching for the position that is both empirically validated and clinically ethical. It may be that studies have not been adequate in number and quality to sufficiently address the question of whether or not to provide a rationale for paradoxical interventions. On the other hand, perhaps it matters less what kind of rationale is offered, provided that some credible rationale is given (Akillas and Efran, 1995).
Summary: Ethical Concerns and the Rationale

The majority of ethical concerns surrounding the use of therapeutic paradox are associated with attributions of manipulation on the behalf of the therapist. The process of prescribing those symptoms from which the client is seeking relief has been characterized as deceptive and coercive—and against sound ethical standards of practice. Ethical issues of informed consent are compounded when theoretical guidelines indicate the withholding of a rationale for this form of treatment. The empirical literature provides inconclusive evidence for the clinician.

In addition to the controversy over the rationale, there is no consensus on how paradoxical interventions lead to positive client change. Double-bind theory has been used to explain the mechanism of therapeutic action in terms of administering an intervention which proposes client change whether the client complies or defies the directive. There is modest support in the literature for considering client reactance potential as an individual difference variable which may indicate the use of a form of paradoxical intervention. However, little is known about the extent to which licensed psychologists use this variable in making decisions about using paradoxical interventions. The following section outlines the findings from the literature on the treatment acceptability of paradoxical interventions.
Treatment Acceptability

Treatment acceptability was defined by Kazdin (1981) as judgments about the fairness, appropriateness, and reasonableness of treatment procedures for clients or their problems. Elliott (1988) noted that Wolf's (1978) work on social validity provides a basis for the importance of treatment acceptability, suggesting that the validity of behavioral interventions will in part be determined at a societal level. The literature on the treatment acceptability of paradoxical interventions is limited in size, and has yielded inconclusive findings. These findings are outlined here, followed by ways in which the proposed study intends to meaningfully add to this literature. This literature also contains several conceptual articles which present various positions regarding the acceptability of therapeutic paradox. This section will include those arguments.

Hunsley (1993) reported two studies that examined treatment acceptability ratings of symptom prescription relative to ratings of alternative treatment strategies for procrastination. In the first study, university students were measured for degree of personality characteristics (Machiavellianism—interpersonal manipulativeness, and reactance), both of which were used as covariates in data analyses. Subjects were then randomly assigned to one of four conditions in which a clinical vignette was read. The four conditions represented the possible combinations of two types of intervention rationales (compliance- and defiance-based; Rohrbaugh, et al., 1981) and previous treatment history of the client in the vignette (unsuccessful treatment history and no treatment history). Subjects then rated the acceptability of
the intervention using the Treatment Acceptability Questionnaire (TAQ; Hunsley, 1992), and rated their own difficulty with procrastination. This final, one-item rating was used as an additional covariate. Results of the first study showed no main effects or interaction effects, nonsignificant effects of the covariates, and ratings that indicated that subjects perceived the intervention to be acceptable.

The second study in Hunsley's report (1993) compared treatment acceptability ratings between symptom prescription and a behavioral intervention. Again, university subjects participated in reading clinical vignettes and responding on the TAQ. The same covariates were used in this study as were used in the first study. The results of the second study indicated no significant covariate effects. The behavioral intervention was rated as more acceptable than the symptom prescription strategy, and both interventions were rated as acceptable in an absolute sense (i.e., above the midpoint on the TAQ).

Hunsley and LeFebvre (1991) surveyed 88 Canadian clinical psychologists' views of the treatment acceptability of paradoxical techniques. Their results indicated that the acceptability of paradoxical techniques was generally related to theoretical orientation in the predicted direction. Specifically, psychologists who described themselves as "strategic/systemic" rated paradoxical techniques as more acceptable than did those whose orientation was described as "other." However, results indicated that respondents perceived paradoxical techniques to be ethical in an absolute sense, regardless of orientation. Second, ratings of acceptability were not associated with levels of therapist Machiavellianism—a trait measure of
manipulativeness in interpersonal relationships. Third, acceptability ratings were not related to the type of rationale offered in a clinical vignette, nor to the availability of treatment history information.

Some of the limitations of this published study are the lack of a fully crossed research design, limited response rate (29%), and the broadly defined theoretical orientation measurement (e.g., psychologists were classified as "strategic/systemic" or "other"). Further, the sophistication of the research subjects may have rendered the assessment of Machiavellianism rather transparent, possibly diminishing the impact of this measured variable in the analyses.

Betts and Remer (1993) offered undergraduate students the option of participation in a semester-long family simulation project as an alternative to writing an in-depth autobiographical term paper. In an interesting paradigm, they instructed subjects to play roles in a fabricated family situation involving a rebellious adolescent daughter. These simulated families were involved in four role-playing exercises, one family therapy session, and then received a letter from the session therapist which contained an intervention (either paradoxical or nonparadoxical). The results indicated that the paradoxical interventions did not negatively influence the social influence variables of expertness, attractiveness, and trustworthiness. Although both interventions were deemed acceptable in an absolute sense, the nonparadoxical intervention was rated more acceptable than the paradoxical intervention.
Hirschman and Sprenkle (1989) conducted an exploratory survey of clinical members of the American Association of Marriage and Family Therapy (AAMFT), hypothesizing that the users and non-users of paradoxical interventions are characteristically different. Compared to non-users, users of paradoxical techniques tended to be younger, had less clinical experience, saw themselves as more directive in therapy, received more supervision, and were less concerned about the ethical issues associated with the use of paradoxical interventions. Users reported symptom prescription, positioning, restraining, and ordeal techniques (in that order) as the techniques most often used, although their rationales for mechanism of change varied. The authors concluded that users of paradox are made, not born. Additionally, they called for increased theoretical grounding in the process of training therapists to use paradoxical interventions.

Cavell, Frentz, and Kelly (1986) asked middle school and high school teachers to rate the treatment acceptability of paradoxical (four different kinds of rationale) and nonparadoxical (continue with an unsuccessful contingency contract) techniques. The interventions were presented in case vignettes about treating truant and disruptive adolescents, and subjects rated the overall acceptability of the intervention, willingness to carry out the intervention, and the risk of adverse side effects of the intervention. Cavell et al. (1986) reported that the teachers rated paradoxical interventions as generally unacceptable treatment options. These acceptability ratings were significantly lower than the ratings for the nonparadoxical condition.
Treatment Acceptability: Critique and Recommendations

The literature on the treatment acceptability of paradoxical interventions is limited in size, but the early studies do provide a foundation for the proposed study. Three studies have reported that paradoxical interventions are generally rated as less acceptable than non-paradoxical treatment groups (Hunsley, 1993; Betts & Remer, 1993; Cavell et al., 1986). Two of these three studies (Hunsley, 1993; Betts & Remer, 1993) showed that although less acceptable than a more conventional alternative, paradoxical interventions were still rated as acceptable in an absolute sense, whereas the other (Cavell, et al., 1986) showed an overall unacceptable rating for paradoxical interventions. Hirschmann and Sprenkle (1988) noted that users of paradox tend to differ on a number of demographic variables (including their findings that users tend to be younger, have less clinical experience, and tended to see themselves as more directive in therapy when compared to non-users). A number of methodological limitations hamper the studies in this field— attempts will be made to improve upon the current body of literature.

A number of methodological limitations compromise the validity of the aforementioned results. First, Hunsley (1993) indicated that his studies may have suffered from inadequate power to detect group differences in treatment acceptability. While most researchers have studied the acceptability ratings of students or other potential consumers, only one of the studies (Hunsley & LeFebvre, 1991) used clinician rating of acceptability to address the ethical issues in question. This is a very useful perspective to examine, as acceptability ratings
based upon full understanding of theoretical rationale provide information about professional perceptions of an appropriate standard of practice.

In addition to establishing such a standard, this study also proposed to further elucidate the role of client reactance potential (a client personality variable assumed to be relevant to the mechanism of action) in the process of determining the acceptability of a paradoxical intervention. Also, the role of the rationale (a point of procedural and ethical contention) was studied in terms of the contribution this variable makes in clinicians' decision making processes. To date, the literature that exists on all of these issues provides only minimal guidance to the clinician searching for an appropriate standard of practice when considering the use of paradoxical interventions.

The inconclusiveness of the literature may in part be due to the exclusion of important variables which influence professional's ratings of treatment acceptability. Such a variable might be associated with ethical dilemmas or perceived threats to social validity. A unique feature of this study was the addition of a mediational model which includes the role of cognitive dissonance—a therapist variable that has not yet been studied in relation to this ethically contentious topic. The following section outlines key elements of dissonance theory, and relates these concepts to clinical decision making about the use of paradoxical interventions.
Cognitive Dissonance Theory

In 1957, Leon Festinger presented his theory of cognitive dissonance—an early theory of cognitive consistency that has been one of the most influential in psychology. Festinger introduced a theoretical formulation which stated that cognitive dissonance is a negative state that emerges when a person is experiencing discomfort secondary to holding two psychologically inconsistent cognitions (Aronson, 1969). Further, the person experiencing this negative state is assumed to be motivated to reduce this state, often resulting in changes in attitude or behavior (Festinger, 1957).

The induced compliance research paradigm was begun to test the original theory. Festinger and Carlsmith (1959) conducted an experiment in which subjects (college students) were required to inform peers that consecutive tasks (emptying and refilling a tray with spools and turning square pegs on a tray one-quarter turn, each task for one-half hour) in which they had engaged and perceived to be boring was actually quite interesting and exciting. Behaviorally making a statement which was contrary to their private cognitions was assumed to have aroused dissonance. In order to reduce this dissonance, it was hypothesized that subjects would change their private cognition about the task ("It was boring") to become more consonant with their behavioral cognition ("I told my fellow student 'It was exciting!'"). In addition, Festinger and Carlsmith (1959) varied the amount of reward that was given to subjects who were induced to mislead their peers. Subjects were assigned to one of three conditions: A control condition in which no public opinion was offered
to a peer, but subjects were evaluated; a $1 condition in which subjects received $1 for their duping of a peer; and a $20 condition which provided $20 to the subject for lying to a peer.

Festinger and Carlsmith (1959) found that subjects in the $1 condition showed more attitude change regarding the original task relative to the $20 and the control conditions. These results were interpreted as consistent with the proposed cognitive dissonance theory, suggesting that "If a person is induced to do or say something which is contrary to his private opinion, there will be a tendency for him to change his opinion so as to bring it into correspondence with what he has done or said," and "The larger the pressure used to elicit the overt behavior (beyond the minimum needed to elicit it) the weaker will be the above-mentioned tendency."

(Festinger & Carlsmith, 1959, pp. 209-210).

Through an explosion of research on this theory, the original formulation has evolved to become a much more sophisticated explanation of attitude-discrepant behavior (Aronson 1969; Cooper and Fazio, 1984; Worchel, Cooper, and Goethels 1988). Cooper and Fazio (1984) reported that more than 1000 published research articles have been produced which involved tests of dissonance theory. Berkowitz and Devine (1989) cited Aronson as stating that there has been diminished interest in studying dissonance theory, and that some published research findings that could have been predicted by dissonance theory formulations do not mention such a conceptualization. Dissonance theory was used as an example by Berkowitz and Devine (1989) to make a point that social psychological research in recent years
has been characterized by declining interest in motivational psychology in favor of
cognitive models and striving to be theoretically innovative. The authors also note
that social psychology has relegated dissonance theory to the status of elderly
relative: "We know that Uncle Louie exists, but we never go to visit him" (p. 494).

A Revision of Dissonance Theory

Cooper and Fazio (1984) provide a synthesis of research findings that adds
greater complexity to the original propositions of cognitive dissonance theory.
These authors suggested that dissonance as it had previously been used should be
differentiated into dissonance arousal and dissonance motivation. Dissonance
arousal is described as a general, undifferentiated state that is necessary but not
sufficient in the dissonance-produced attitude change process. Mere arousal is not
sufficient because a person could interpret the arousal as a positive state (thus not
leading to a motivation to reduce the affective response) or misattribute the arousal
to an external source (rather than to inconsistencies within the self). In either of
these cases, attitude change is not likely to occur. If, on the other hand, the
dissonance arousal state is interpreted as negative, and the person experiencing
arousal is willing to take responsibility for any potential negative consequences that
could occur as a result of behavior that is associated with the inconsistent cognition,
then dissonance motivation can occur. In this way, dissonance motivation is
necessary for attitude change. Persons may avoid attitude change via dissonance
reduction strategies (Festinger, 1957).
The central premise of this study was that some clinicians may experience cognitive dissonance when faced with having used a paradoxical intervention. Thus, upon presenting subjects with a therapeutic situation (depicted in a written vignette) in which they will be using a paradoxical intervention, some subjects (predicted by assignment to experimental conditions and secondary predictor variables) were expected to experience dissonance arousal. Cooper and Fazio's (1984) review of dissonance research suggests a number of conditions that must be present in order for dissonance arousal to occur. Specifically, these conditions are: 1) the subject must perceive that aversive consequences may occur subsequent to their counterattitudinal behavior; 2) the consequences of their behavior must be perceived as irrevocable; and 3) the subject must perceive responsibility for the behavior.

There have been challenges to Cooper and Fazio's (1984) revision of cognitive dissonance theory (Harmon-Jones, Brehm, Greenberg, Simon, & Nelson, 1996; Berkowitz & Devine, 1989). Such challenges suggest that the proposed revisions have constrained Festinger's original proposal of a rather robust phenomena associated with cognitive inconsistency. Critics suggest that the three conditions (listed in the previous paragraph) proposed by Cooper and Fazio are not necessarily required to elicit cognitive dissonance, but may intensify the state of emotional arousal. Even though there is no intention of changing subjects' attitudes about paradoxical interventions in this study (via the induced compliance paradigm),
efforts were made to represent those three conditions to maximize the degree of
dissonance which subjects may experience.

These three conditions will be described briefly and placed in the context of
this study in order to establish a sound theoretical basis for the hypothesis that
some clinicians experience dissonance arousal related to the choice of whether or
not to use paradox. Further, dissonance reduction strategies are described and
related to therapeutic decision-making attitudes and behaviors related to the use or
non-use of paradoxical interventions. Specific hypotheses that logically flow from
this theoretical discussion will follow.

Conditions for Dissonance Arousal

Aversive Consequences

The first condition needed for the presence of dissonance arousal requires
that the person must perceive that aversive consequences may follow the
counterattitudinal behavior. Merely holding inconsistent cognitions does not lead to
such arousal. Cooper, Zanna, and Goethels (1974) conducted a study to test the
hypothesis that the consequences must be aversive. Consider the previously
described Festinger and Carlsmith (1959) induced compliance study. In such a
study, deceiving a peer with regard to the degree of interest held during a boring
task presents the subject with two inconsistent cognitions, but the deception itself is
not necessarily aversive. Cooper et al. (1974) produced conditions that led to a
greater likelihood of experiencing discomfort with the deception by creating two
conditions in which their subjects were led to either like or dislike the peer who was about to be deceived (a confederate). All experimental subjects were presented with the same counterattitudinal task of convincing a peer that a boring task was exciting. However, the presence of inconsistent cognitions was not sufficient to lead to dissonance-aroused attitude change. Only those subjects who perceived that they successfully deceived a liked peer actually changed their attitude regarding the task. Cooper et al. (1974) concluded that this manipulation of the degree to which the deceived peer was liked led to results supporting their hypotheses that the consequences of counterattitudinal behavior must be perceived as aversive.

Cooper and Fazio (1984) add that the aversive consequences need not actually occur to lead to dissonance arousal. The unwanted or unpleasant consequences must be perceived as possible. These perceptions that are associated with the agreement to engage in counterattitudinal behavior are the essence of this first condition of dissonance arousal. Recent research supports the notion that aversive consequences do not have to be produced in order to arouse cognitive dissonance (Harmon-Jones et al., 1996).

Clinicians faced with the decision to use paradoxical interventions may perceive aversive consequences, regardless of whether or not they are proponents of this technique. Therapists who are fundamentally opposed to therapeutic paradox on the basis that such maneuvers are manipulative would be expected to experience dissonance arousal when the task at hand is to prescribe a symptom. The aversive consequences may include risking the integrity of the therapeutic
relationship (via perceived manipulation or deception; Perrin & Dowd, 1986), compromising therapist credibility (if the treatment is ineffective, or if the client escapes the paradoxical double-bind), exacerbating the presenting problem, or bringing therapy to a "dead-end" situation (Omer, 1986). Similarly, a clinician who does not use these techniques for theoretical reasons or because of lack of exposure to theory may also find the choice to work paradoxically to be aversive. In such cases, the unpredictability of consequences may be an aversive, unwanted state.

Even those who choose to use paradoxical interventions may experience dissonance when the conditions presented in the case run counter to their own theoretical grounding for using such a strategy. As previously discussed in this paper, there are indications and contraindications for the use of paradoxical interventions, as well as varying guidelines for implementation of the intervention. For some clinicians, the presence of high client reactance potential is required before the paradox may be used (e.g., as a defiance-based strategy). Others may have particular positions regarding the presence or absence of the rationale based on theoretical orientation and perceived role of professional ethics and informed consent. Hence, it is possible for a range of clinicians to perceive the potential for aversive consequences when presented with the vignettes in the proposed study.
Irrevocability of Behavior

Associated with the condition of aversive consequences is another condition that the consequences of the counterattitudinal behavior must be perceived as irrevocable. For example, in the aforementioned Cooper et al. (1974) study, the subjects experienced dissonance arousal when they believed that they had deceived a liked peer. The condition of irrevocability would also require that subjects perceive that the counterattitudinal behavior could not be undone via some means of discounting the deception (e.g., such as confessing to telling a lie only as a part of a research study, then relaying a description of the task that is more congruent with true personal perception of the task). Davis and Jones (1960) conducted an experiment of this condition in which they assigned subjects to deliver counterattitudinal, negative, personal descriptions of a peer. Half of the subjects believed that they would have an opportunity to revoke this statement in a meeting with the peer prior to the presentation of the description, whereas the other half had no expectation of this opportunity. Results showed that only those subjects who believed their statements were irrevocable actually produced attitude change as a result of the experience of dissonance.

When therapists deliver paradoxical interventions, the common procedure is to assign the intervention at or near the end of a counseling session. Once the intervention has been delivered and the session has ended, it is unlikely that the therapist will take the opportunity to rescind the intervention and reveal that such a strategy runs counter to how that particular therapist conducts therapy. In this
study, the delivery of paradoxical interventions was assumed to be
counterattitudinal for some respondents, partly based on conditions of the
presented vignettes, and partly based on their own theoretical orientations to
therapy. For practical purposes, once the symptom is prescribed or scheduled, this
therapist behavior was considered irrevocable.

Further, the role of the therapeutic rationale has direct application to the
condition of irrevocability. Some explanations of how paradoxical interventions
work (previously described) require that no rationale for the intervention be
provided, lest the client escape the therapeutic double-bind—rendering the
intervention ineffective. For those who perceive paradoxical interventions as
unacceptable, providing a rationale (one that explains the expected mechanism of
change) under such conditions can be seen as revoking the counterattitudinal
behavior. Some rationales, by intent and effect, do not reveal the mechanism of
change, and thus do not effectively revoke the behavior. Such rationales would
likely continue to contribute to dissonance arousal, as the intervention (and the
associated risks to the therapy process) would be perceived as irrevocable.

Subjects in this study were not induced to actually perform a paradoxical
intervention for purposes of measuring dissonance arousal. Rather, a scripted case
vignette was used as a stimulus for respondents. Recent research has justifiably
raised concerns over the limited generalizability of analogue research designs
(Heppner and Claiborn, 1989). With regard to dissonance research, however,
Cooper and Fazio (1984) note: "It is the subjects perception that negative
consequences will result from their actions that are important. In fact, there is abundant research indicating that even the counterattitudinal behavior itself can be anticipated rather than experienced" (p. 235).

Subjects in this study were asked to imagine themselves performing the behavior of prescribing symptoms, and to anticipate their resultant thoughts and feelings about such a choice. Some subjects were expected to experience imagined dissonance based on their perceptions that the use of symptom prescription would lead to negative consequences. The presence and amount of dissonance was predicted to be a function of subject characteristics and experimental conditions. Gibbons (3/4/96, personal communication) indicated that measuring dissonance arousal is difficult, particularly when the person is actively engaged in a highly significant state of arousal. It appears that the nature of such a state of psychological tension may actually be the greatest impediment to measuring it's presence. Enhancing the perceived responsibility of the subjects in this study was the next important task.

**Perceived Responsibility**

The role of perceived responsibility is a third condition required for the arousal of dissonance (Cooper & Fazio, 1984). A number of researchers have suggested that persons who perceive themselves to have the choice to behave in a counterattitudinal manner are more likely to experience dissonance than their counterparts (Davis & Jones, 1960; Linder, Cooper, & Jones, 1967; Sherman, 1970; Wicklund & Brehm, 1976). In addition to perceiving the freedom to choose a
behavior, the aversive consequences of the behavior must be foreseeable. The subject must have been able to anticipate that the consequences would be aversive. Thus, research suggests that a person must make an internal attribution for irrevocably causing a foreseeable, aversive event in order for dissonance arousal to occur.

Therapists are responsible for choosing the theoretical approaches and interventions which they believe to be most appropriate and likely to contribute to successful outcomes (Beutler and Clarkin, 1990). Therapists have high freedom of choice to select intervention strategies. Based on careful assessment of the client and knowledge of various treatment approaches, certain kinds of therapy outcomes may be foreseen. This is the basis for the treatment selection process. Those therapists who do not advocate the use of paradoxical interventions are hypothesized to hold this position based on the perception that aversive consequences would be foreseeable if such an intervention were chosen. In clinical settings, therapists hold personal responsibility for their behaviors and the consequences of those behaviors.

In this study, an element of public commitment was included in an attempt to enhance the likelihood that subjects would perceive personal responsibility for the decision to use symptom prescription. This was done by including a statement in the vignette which indicated that the imagined case was to be presented at the next agency case conference. Gibbons (3/4/96, personal communication) recommended
the inclusion of such a commitment in an attempt to further enhance the perception that subjects bear some accountability for the choice of intervention.

**Dissonance Arousal in the Present Study**

Thus, the three conditions required for the arousal of cognitive dissonance were incorporated into the design of this study. As was previously mentioned, there were potentially aversive consequences to the choice to prescribe a symptom—regardless of the position that therapists hold regarding paradoxical interventions. Second, once a paradoxical intervention has been delivered, the therapist message was (for all practical purposes) irrevocable. This may be particularly applicable when no rationale for the intervention is provided. Third, therapists assume personal responsibility for their behaviors in the context of treatment, and should also strive (via the guidance of theory and ongoing assessment) to foresee the consequences of such behaviors. Persons who experience dissonance arousal according to these conditions may be expected to engage in a number of cognitive or behavioral strategies to reduce this negative state of arousal.

**Dissonance Reduction**

In the induced compliance research paradigm, dissonance arousal is requisite for the presence of dissonance motivation—a drive to alleviate the negative arousal state by changing one's attitude. The theory holds that a person is motivated to change the attitude that initially contradicted the induced behavior. However, this study does not intend to change attitudes regarding the acceptability
of paradoxical intentions by forcing compliance with the practice of paradoxical interventions. Although this may be possible, this is an issue that reaches beyond the purpose of this study. Rather than change their attitudes regarding paradoxical interventions, it was hypothesized that some therapists in this study will experience dissonance arousal, and then engage in dissonance reduction strategies.

Aronson (1969) discussed the importance of self-concept to dissonance theory. He stated: "Thus, at the very heart of dissonance theory, where it makes its clearest and neatest prediction, we are not dealing with any two cognitions; rather, we are usually dealing with the self-concept and cognitions about some behaviors. If dissonance exists, it is because the individual's behavior is inconsistent with his self-concept." (Aronson, 1969, p.27). There must be some personal relevance involved in the study, such that the subject experiences an aversive state associated with an irrevocable action for which the subject perceives responsibility. The experience of aversiveness arises when a proposed behavior (e.g., prescribing symptoms of anxiety) is perceived to be inconsistent with core beliefs about the self (e.g., as assessed by attitudes regarding therapy and theoretical orientation). Behaviors that do not threaten core aspects of the self may not arouse dissonance. In this manner, some of the subjects in this study may not experience dissonance arousal, and will rate paradoxical interventions as acceptable.
In this study, it was hypothesized that some subjects who experience dissonance arousal will engage in some form of dissonance reduction in order to preserve their cognitions associated with self-concept. Based on their review of the literature, Cooper and Fazio (1984) outlined a number of alternatives to attitude change in which persons may engage to reduce dissonance. First, subjects may reassess the dissonance arousal situation and shift their perceptions regarding the source of the arousal by misattributing the emotion to another event. Second, subjects may reassess the potential consequences of their counterattitudinal behavior by minimizing or ignoring the nature of the consequences. A third reduction strategy is an attempt to atone for their counterattitudinal behavior, perhaps by attempting to re-establish the strength of their original attitude (which represents the self-concept).

In this study, it was hypothesized that subjects who oppose the use of paradoxical interventions as unacceptable will experience dissonance arousal when in an experimental condition requiring them to advocate the use of such an intervention. These persons were not expected to change their attitudes regarding paradoxical interventions. However, it was hypothesized that they will engage in reduction strategies as a means of reducing the negative affect of dissonance arousal.
Items were written to represent reduction strategies (as outlined above) in which clinicians might reasonably engage to preserve their cognitions associated with their personal and professional self-concept. The process of misattributing the arousal to another event in order to reduce dissonance was captured in the following items: "I am concerned that the clinical utility of paradoxical interventions has not yet been sufficiently demonstrated," and "The influence of managed care in the practice of psychology encourages the use of provocative interventions." The process of minimizing or ignoring the nature of the consequences of the counterattitudinal behavior in order to reduce dissonance was captured in these items: "I am not personally responsible for any manipulation that Chris may perceive," and "Chris's symptoms are mild enough that prescribing an exacerbation is not clinically risky." Finally, the process of reducing dissonance by re-establishing the strength of the original attitude was captured in these two items: "Failure of the symptom prescription is attributable to the intervention itself, not to my own lack of skill," and "My ethical concerns about paradoxical interventions make this a poor choice of intervention."

Research Questions and Hypotheses

The primary hypothesis of this study was that the variables rationale, client reactance potential, and clinician experience with paradoxical interventions will be associated with varying levels of treatment acceptability. This relationship was hypothesized to be mediated by the arousal of cognitive dissonance, which may be
reduced via dissonance reduction strategies. Clinician experience is expected to interact with the manipulated variables (presence or absence of therapeutic rationale, and high or low level of client reactance potential). Four manipulated conditions will be used in a written vignette, which are as follows: 1) rationale present, high client reactance potential; 2) rationale absent, high client reactance potential; 3) rationale present, low client reactance potential; and 4) rationale absent, low client reactance potential. A control group was not used in this multivariate, predictive design. The four conditions are presented in Figure 1.

<table>
<thead>
<tr>
<th>Rationale Present</th>
<th>Rationale Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Reactance</td>
<td>1</td>
</tr>
<tr>
<td>Low Reactance</td>
<td>3</td>
</tr>
</tbody>
</table>

Figure 1. Treatment conditions

Hypotheses for Multiple Regression Analyses

This study proposed that three predictor variables (presence or absence of a therapeutic rationale, level of client reactance potential, and respondent experience with paradoxical interventions) would be predictive of psychologists' ratings of three criterion variables (treatment acceptability of paradoxical interventions, level of
dissonance arousal, and use of dissonance reduction strategies). The rationale and reactance variables were experimentally manipulated in a clinical vignette, whereas respondent experience with paradoxical interventions were measured with items regarding exposure, frequency of use, and general attitudes toward such interventions. The criterion variables were measured with empirically validated items and face-valid items generated by the investigator. The predictive relationships among these variables were tested with multiple regression analyses.

**General Hypotheses**

Two general hypotheses were generated with regard to the relationships among the criterion variables. First, a negative relationship was expected between ratings of treatment acceptability and level of dissonance arousal. Thus, it was hypothesized that as subjects' level of cognitive dissonance heightens (when confronted with the circumstance of having administered a paradoxical intervention), their subsequent treatment acceptability ratings of the intervention itself will be lower as a function of this state of discomfort. A higher level of tension was hypothesized to be associated with lower ratings of acceptability. Conversely, as levels of dissonance arousal are lower, ratings of treatment acceptability are expected to be higher. Second, a positive relationship between dissonance arousal and dissonance reduction strategies was expected. Thus, it was hypothesized that as subjects' levels of dissonance arousal lowers, their endorsement of items which measure dissonance reduction will lower. Conversely, as levels of dissonance
arousal are lower, endorsement of dissonance reduction strategies was expected to also be lower (there should be no need to reduce a nonexistent state of arousal).

Theoretical orientation of clinicians was hypothesized to be associated with higher ratings of treatment acceptability for those clinicians whose descriptions of their own therapeutic style are higher on dimensions of directiveness and level of activity and spontaneity. In addition, because of the significant presence in the empirical and case study literature, higher ratings on orientations of cognitive/rational, behavioral, systemic, and eclectic/integrative approaches were expected to be associated with higher ratings of treatment acceptability of paradoxical interventions. The demographic variables age and years of experience were expected to be associated with ratings of treatment acceptability of paradoxical interventions, such that as age and years of experience increase, treatment acceptability ratings were be expected to.

Recall that in this particular study including cognitive dissonance theory, there was no induced compliance paradigm employed for the purpose of measuring attitude change. Attitude change was not expected from these experimental manipulations, but the presence of dissonance arousal is expected to emerge. The following hypotheses were generated to predict the direction of main effects and the nature of selected interactions of the predictor variables in this study. Predictions regarding the treatment acceptability ratings were drawn from the paradoxical intervention literature, whereas predictions involving dissonance arousal and reduction are grounded in the previous discussion of dissonance theory.
Main Effects

It was predicted that subjects will rate the treatment as less acceptable, will experience more dissonance arousal, and use more dissonance reduction strategies under the following conditions: 1) when the rationale is not provided (compared to subjects in conditions in which the rationale is provided; see Hills et al., 1985; Elliott, 1988; March, 1993); 2) when subjects are exposed to conditions in which the client is low in reactance potential (compared to subjects in conditions in which reactance potential is high; see Rohrbaugh, et al., 1981; Shoham-Salomon et al., 1989; Horvath and Goheen, 1990); and when subjects have had less exposure to paradoxical interventions (compared to subjects who have had more exposure to the use of paradoxical interventions; see Elliott, 1988).

Interactions

Rationale X Experience

For subjects in conditions in which a rationale is not provided, higher levels of experience with paradoxical interventions were expected to be associated with higher ratings of treatment acceptability, lower levels of dissonance arousal, and less utilization of dissonance reduction strategies. This was hypothesized because psychologists with more experience with the theory and use of these interventions are expected to understand the reasons for withholding a treatment rationale from the client. Conversely, lower levels of experience with paradoxical interventions were expected to be associated with lower ratings of treatment acceptability, higher levels of dissonance arousal, and greater utilization of dissonance reduction strategies.
strategies when the rationale is absent. Persons with less experience were expected to rate conditions with a therapeutic rationale higher than they would for conditions without the rationale. These predictions were also driven by the general prediction that familiarity with an intervention is associated with higher ratings of acceptability (Elliott, 1988).

Compared to conditions in which the rationale is present, lower levels of experience with paradoxical interventions were expected to be associated with even lower ratings of treatment acceptability, higher levels of dissonance arousal, and greater utilization of dissonance reduction strategies when the rationale is absent. When no rationale is present, subjects with more experience with paradoxical interventions were expected to more likely to accept the absence of the rationale given their understanding of the theory. As levels of experience, ethical concerns over the absence of a rationale were expected to lead to lower ratings of acceptability and higher levels of dissonance arousal and reduction.

**Reactance X Experience**

For subjects in conditions in which client reactance potential is high, higher levels of experience with paradoxical interventions were expected to be associated with higher ratings of treatment acceptability, lower levels of dissonance arousal, and lesser utilization of dissonance reduction strategies when compared to clinician's with less experience. Conversely, lower levels of experience with paradoxical interventions was expected to be associated with lower ratings of treatment acceptability, higher levels of dissonance arousal, and greater utilization
of dissonance reduction strategies when compared to clinician's with more experience.

For subjects in conditions in which client reactance potential is low, it was predicted that all subjects will rate the intervention as generally low in acceptability, will experience dissonance arousal, and will be likely to utilize dissonance reduction strategies regardless of level of experience. As was mentioned previously, theory suggests that low reactance potential may contraindicate the use of paradoxical interventions. In particular, as levels of experience, the intervention was expected to be seen as especially unacceptable, should arouse more dissonance, and be associated with greater use of reduction strategies.

**Hypotheses for Proposed Modeling Analysis**

Provided that significant relationships between predictor and criterion variables are identified in the regression model, the next level of analysis will test a proposed model in which dissonance arousal plays a partial mediational role between the predictor variables in the regression model (the manipulated variables reactance and rationale, and level of experience) and the other two criterion variables from the regression model (treatment acceptability and dissonance reduction strategies). The mediational role of dissonance was predicted to diminish the strength of the relationships between these two sets of variables.

Briefly, the demographic variables (age, years of experience, theoretical orientation, level of directiveness and spontaneity as a therapist) were expected to
be related to level of experience with paradoxical interventions. Specific levels of
the manipulated variables (rationale and reactance) and the experience measure
were expected to lead to dissonance arousal in directions consistent with those
previously outlined in the multiple regression hypotheses. The experience measure
was expected to interact with rationale and reactance as previously outlined.
Higher levels of dissonance arousal were expected to lead to lower ratings of
treatment acceptability and a lower utilization of dissonance reduction strategies.
The proposed model is presented in Figure 2.

Figure 2. Hypothetical Model
MATERIALS AND METHODS

Subjects

Six hundred licensed psychologists from Alabama, Arizona, South Dakota, and Oklahoma were randomly selected from lists obtained from respective state licensing boards. States were selected on the basis of geographic diversity and limited cost of obtaining address lists from state psychology license boards. An effort was made to randomly select a final sample which contained subjects from each state in proportion to their membership in the original sample (i.e., the entire lists of all four states). To accomplish this, the number of names from each list was calculated, then a random start procedure was used to determine the first psychologist to be included in the subject pool. Via the use of a random numbers table, a positive integer was chosen to count from the beginning of each state’s list. After selecting the first subject, every nth psychologist (n = the denominator of a ratio representing the proportion of psychologists on a given state’s list to the entire original sample of four lists) from the list was designated as a subject in the study. Informed consent was obtained via a cover letter (see Appendices A and B).

Stimulus Materials

A 63-item survey containing a therapy vignette, the reaction stimulus, was developed to measure information relevant to the variables proposed in this study. Four different vignette and associated survey forms were produced with identical content except for the manipulations of reactance (high and low conditions;
manipulated in the second paragraph of the vignette) and rationale (present and absent conditions; manipulated in the fourth paragraph in the vignette). With the exception of the experimental manipulations, all vignettes were identical in content and word length. Experimental manipulations were designed to be similar in word length, contrasting only in content. The four conditions presented in the vignettes were as follows: 1) rationale present, high client reactance potential; 2) rationale absent, high client reactance potential; 3) rationale present, low client reactance potential; and 4) rationale absent, low client reactance potential. An example survey from condition 1 is presented in Appendix C. The other three conditions were constructed by simply replacing the second and fourth paragraphs with appropriate text, given for each level of the manipulation as follows.

The high reactance manipulation read as follows: "Chris expressed a high degree of interest in therapy, but has shown less behavioral commitment. Chris has arrived late to several sessions and has failed to complete mutually agreed-upon assigned readings and journaling tasks. Chris's behaviors within session are characterized with some reluctance in terms of taking risks. Personality assessment results suggested low concern for making a good impression, low concern for following social norms, low tolerance of others' beliefs and values, and an inclination to express strong feelings and emotions."

The low reactance manipulation read as follows: "Chris has maintained a high degree of interest in therapy throughout treatment. Chris has been responsible in keeping appointments and has worked diligently on mutually agreed-upon
assigned readings and journaling tasks. Chris' behaviors within session are characterized with appropriate disclosure and sincere attempts at gaining insight. Personality assessment results suggested high concern for making a good impression, high concern for following social norms, high tolerance of other's beliefs and values, and low inclination to express strong feelings and emotions."

The rationale present manipulation read as follows: "In the process of assigning this intervention, you provide specific explanations of how you expect the paradoxical intervention to lead to the desired behavior change."

The rationale absent manipulation read as follows: "In the process of assigning this intervention, you will not provide specific explanations of how you expect the paradoxical intervention to lead to the desired behavior change."

The survey was developed utilizing the recommendations for mail survey research design (Weathers, Furlong, & Soloranzo, 1993; Fowler, 1993). This survey was developed using face-valid, theory-driven case vignettes and Likert scale rating items (empirically validated and face-valid items which were generated by the principal investigator) and demographic items. For purposes of refining instrument clarity and credibility, a pilot study was conducted with the participation of 15 staff psychologists and pre-doctoral interns at the Knoxville Department of Veterans Affairs Medical Center (DVAMC) in Knoxville, Iowa. Consistent with Medical Center policy, the pilot survey was approved by the President of American Federation of Government Employees Local 1226 for use with DVAMC employees.
Eleven staff members returned completed surveys, and they provided feedback regarding administration time and clinical credibility of the vignette and items.

As noted in Appendix C, the survey contained the following elements and was presented in sequence as follows: 1) instructions; 2) six items (items 1-6) which assess level of experience with paradoxical interventions; 3) the clinical vignette, in which the two manipulated variables (rationale and client reactance potential) are contained; 4) five items (items 7-11) which are manipulation checks; 5) eleven items (items 12-22) which measure treatment acceptability (some items derived from Abbreviated Acceptability Rating Profile; Tarnowski & Simonian, 1992); 6) eight items (items 23-30) which measure dissonance arousal; 7) five items (items 31-35) which measure dissonance reduction; 8) five items (items 36-40) which measure treatment acceptability of symptom prescription and alternative intervention choices; 9) four items (items 41-44) which measure the respondents' perceptions of the mechanism of action of paradoxical interventions; 10) thirteen items (items 45-57) which measure dimensions of theoretical orientation; and 11) six demographic items (items 58-63).

A response card was developed for use in this study (see Appendix D) so that subjects who returned the survey from the first round of mailings could return the postage-paid reminder card to the primary investigator. In that way, their participation could be identified from the return address label on the card. These respondents were not mailed a second, follow-up survey. However, their anonymity was preserved.
Procedure

Prior to administering the surveys to identified subjects, human subjects committee approval was obtained from Iowa State University (ISU), the ISU Psychology Department, and the Knoxville DVAMC Research and Development Committee. For each potential respondent, one of four possible surveys was randomly chosen and mailed with a cover letter (see Appendix A), a response card (see Appendix D), and a stamped and addressed return envelope. Nonrespondents were sent a second mailing of the research materials three weeks after the first mailing with a different cover letter (see Appendix B).

Design and Analyses

As previously noted in the description of proposed hypotheses, this study used a two-tiered analytical strategy to determine the relationships among the variables of interest. Multiple regression analyses (Pedhazur, 1984; Wampold and Freund, 1987; Howell, 1987; Jaccard, Turrisi, & Wan, 1990; Aiken & West, 1991; Nunnally & Bernstein, 1994) were used to determine the extent to which rationale, reactance, and experience with paradoxical interventions were predictive of treatment acceptability ratings and dissonance arousal. Dissonance reduction scores were analyzed using multiple analysis of variance (MANOVA) procedures due to the low internal consistency of this construct.

Contingent upon the significance of the regression analyses, another multiple regression procedure tested the proposed model of significant relationships
discovered in the first level of analysis. Within this model, the effects of reactance, rationale, and experience on treatment acceptability were expected to be mediated by dissonance arousal. Those subjects who experienced cognitive dissonance were expected to engage in dissonance reduction strategies.

The first set of results that are presented describe the sample. Next, results from a constructed scale to measure the respondents' levels of experience with paradoxical interventions are presented in some detail, as this variable was expected to play an important role in the prediction of relevant criterion variables.

The sequence of presentation of the results continues with an analysis of the effectiveness of experimental manipulations will be reported utilizing analysis of variance (ANOVA) procedures. This section is followed by a reporting of item and scale statistics to demonstrate the psychometric properties of four constructed variables in the proposed study (experience, treatment acceptability, dissonance arousal and dissonance reduction). These four scales were constructed to provide reliable measure of the constructs hypothesized to be predictor and criterion variables in this specific study. In view of the expected strong relationship between dissonance arousal and treatment acceptability, a section of the next chapter presents results of procedures to establish the discriminant validity of these two variables.

Finally, the effects of the hypothesized predictors on the primary dependent measures is reported on the basis of results from several multiple regression procedures. A summary of results from regressing dissonance arousal and
treatment acceptability scores is given first. The results from regressing dissonance arousal and treatment acceptability scores on hypothesized demographic predictor variables are reported separately. Significant main effects and interactions are described. Next, the influence of the manipulated variables on dissonance reduction scores are tested via a multiple analysis of variance (MANOVA) procedure. Lastly, the results of a post-hoc multiple regression analysis to explain the interrelationships among the primary hypothesized variables is reported.
RESULTS AND DISCUSSION

Response Rate

A summary of response rate statistics is presented in Table 1. A total of 147 usable surveys were returned from the initial mailing of 600 surveys. In addition, a total of 61 usable surveys were returned from a follow-up mailing of 400 surveys. Also, a total of 16 surveys were returned to sender unopened as the addressee was not identifiable, and an additional 38 uncompleted surveys were returned with an indication from the addressee that the instrument was either not applicable to their role as a psychologist or that the addressee had died. Thus, a total of 208 completed surveys were included in the study, from a total of 545 potential respondents, resulting in a response rate of 38.2%.

Response rates from psychologists licensed in each of the states included in the study were calculated for the initial mailing of the surveys (70.1% of the usable surveys). Response rates for Alabama, Arizona, Oklahoma and South Dakota were 30.0%, 26.1%, 24.1%, and 45.0%, respectively. A chi-square test was performed on the responses from the initial mailing by state and it indicated that response rate did not differ significantly by state, $X^2 (n=167, df=3)=5.25, p>.10$. Because response cards were not used in the follow-up mailing, response rates and a test of independence by state for the total set of respondents could not be determined.
### Table 1. Response rate statistics

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Usable surveys</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returned from initial mailing (n=600)</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>Returned from follow-up mailing (n=400)</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Total usable surveys</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td><strong>Non-useable surveys</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Returned to sender, addressee unknown</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Instrument not applicable</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>Addressee deceased</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total non-useable surveys</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td><strong>Total response rate (208/545)</strong></td>
<td></td>
<td>38.2%</td>
</tr>
<tr>
<td><strong>Response rate by state (initial mailing only)</strong></td>
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<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>39</td>
<td>30.0%</td>
</tr>
<tr>
<td>Arizona</td>
<td>83</td>
<td>26.1%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>27</td>
<td>24.1%</td>
</tr>
<tr>
<td>South Dakota</td>
<td>18</td>
<td>45.0%</td>
</tr>
<tr>
<td><strong>Response rate by condition</strong></td>
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<td></td>
</tr>
<tr>
<td>Condition 1 (rationale present, high reactance)</td>
<td>27.9%</td>
<td></td>
</tr>
<tr>
<td>Condition 2 (rationale absent, high reactance)</td>
<td>20.2%</td>
<td></td>
</tr>
<tr>
<td>Condition 3 (rationale present, low reactance)</td>
<td>26.4%</td>
<td></td>
</tr>
<tr>
<td>Condition 4 (rationale absent, low reactance)</td>
<td>25.5%</td>
<td></td>
</tr>
</tbody>
</table>
Proportion of surveys of the total returned by condition were as follows: condition 1 (rationale present, high reactance) yielded 58 surveys (27.9%); condition 2 (rationale absent, high reactance) yielded 42 surveys (20.2%); condition 3 (rationale present, low reactance) yielded 55 surveys (26.4%); and condition 4 (rationale absent, low reactance) yielded 53 surveys (25.5%). A chi-square test was performed on the four conditions in the study, and it was noted that response rate did not differ significantly by condition, $X^2(n=208, df=3)=2.808, p>.10$.

Demographics

Gender

A summary of demographic characteristics of the respondents is presented in Table 2. A total of 60.1% of the respondents were male (n=125), and 39.4% of the respondents were female (n=82). Respondents ranged in age from 29 to 77 years of age (M=48.44, SD=9.70). Two separate chi-square tests were performed to determine whether the gender ratio of respondents differed from the gender distribution of all American Psychological Association (APA) members and separately for therapy-related divisions. Gender ratios of APA and APA clinical and counseling psychology divisions were determined by utilizing demographic information from the 1996 APA membership directory. Expected values for gender ratios were considered for the overall membership of APA (54.1% male, 45.9% female) and by combining the memberships of Divisions 12 and 17 (clinical and
Table 2. Demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
<th>M</th>
<th>S.D.</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
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</tr>
<tr>
<td>range = 29 to 77 years</td>
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<td></td>
<td>48.44</td>
<td>9.70</td>
</tr>
<tr>
<td>Years of postdoctoral experience</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>range = 0 to 46 years</td>
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<td></td>
<td>14.38</td>
<td>8.89</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
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</tr>
<tr>
<td>Male</td>
<td>125</td>
<td>60.1</td>
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</tr>
<tr>
<td>Female</td>
<td>82</td>
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<td>Degree</td>
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<td>Ph.D.</td>
<td>168</td>
<td>80.8</td>
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<td>Psy.D.</td>
<td>19</td>
<td>9.1</td>
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<td>Ed.D.</td>
<td>17</td>
<td>8.2</td>
<td></td>
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<tr>
<td>M.A./M.S.</td>
<td>4</td>
<td>1.9</td>
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<tr>
<td>Primary practice setting</td>
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</tr>
<tr>
<td>Private/group practice</td>
<td>88</td>
<td>42.3</td>
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<td></td>
</tr>
<tr>
<td>Other</td>
<td>36</td>
<td>17.3</td>
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<tr>
<td>Community mental health center</td>
<td>18</td>
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</tr>
<tr>
<td>Private general hospital</td>
<td>11</td>
<td>5.3</td>
<td></td>
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<tr>
<td>VA Medical Center</td>
<td>10</td>
<td>4.8</td>
<td></td>
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<tr>
<td>Child facility</td>
<td>9</td>
<td>4.3</td>
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<td>Military medical center</td>
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<td>Health maintenance organization</td>
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<td>3.4</td>
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<tr>
<td>University counseling center</td>
<td>6</td>
<td>2.9</td>
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<tr>
<td>Private psychiatric hospital</td>
<td>5</td>
<td>2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical school</td>
<td>4</td>
<td>1.9</td>
<td></td>
<td></td>
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<tr>
<td>Consortium</td>
<td>3</td>
<td>1.4</td>
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<tr>
<td>State/county hospital</td>
<td>3</td>
<td>1.4</td>
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<tr>
<td>Clientele served by respondents (percentages)</td>
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<tr>
<td>Adult</td>
<td>56.99</td>
<td>31.00</td>
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<tr>
<td>Adolescents</td>
<td>17.11</td>
<td>18.83</td>
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<tr>
<td>Children</td>
<td>15.99</td>
<td>21.39</td>
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<tr>
<td>Geriatric adult</td>
<td>8.12</td>
<td>14.56</td>
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<td></td>
</tr>
<tr>
<td>Individual</td>
<td>66.55</td>
<td>24.50</td>
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<td></td>
</tr>
<tr>
<td>Marital</td>
<td>12.45</td>
<td>14.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>12.41</td>
<td>16.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>6.60</td>
<td>12.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
counseling, respectively; 65.2% male, 34.8% female). When using the full APA membership to determine expected values, it was found that the response rate did not differ from expectations by gender, $X^2 (n=207, df=1)=3.30, p>.05$. When using the gender ratios of Divisions 12 and 17 to determine expected values, it was again found that response rate did not differ from expectations by gender, $X^2 (n=207, df=1)=2.10, p>.10$.

Years of Experience, Degree and Setting

Reported years of post-doctoral experience (Appendix C, item 60) ranged from 0 to 46 years (M=14.38, SD=8.89). A total of 1.9% of respondents (n=4) indicated their highest academic degree (Appendix C, item 61) was M.A./M.S., 80.8% of respondents (n=168) indicated their highest academic degree was Ph.D., 8.2% of respondents (n=17) indicated their highest academic degree was Ed.D., and 9.1% of respondents (n=19) indicated their highest academic degree was Psy.D. A total of 42.3% of respondents (n=88) reported a primary practice setting (Appendix C, item 62) of private or group practice, while others (57.7%, n=120) reported primary practice settings in places such as child facility, community mental health center, private general hospital, VA Medical Center, or a setting other than those provided in the survey. Refer to Table 2 for specific information on setting.
**Clientele Age and Treatment Context**

Respondents were asked to indicate the estimated percentage of their clientele by age group and treatment context (Appendix C, item 63). Mean percentages were computed to determine the nature of the clientele that are treated by the respondents. These statistics are also summarized in Table 2. Results in mean percentages were as follows: children (M=15.99; SD=21.39); adolescents (M=17.11; SD=18.83); adult (M=56.99; SD=31.00); geriatric adult (M=8.12; SD=14.56); individual (M=66.55; SD=24.50); marital (M=12.45; SD=14.02); family (M=12.41; SD=16.39); and group (M=6.60; SD=12.56). These mean percentages of time reported by age group and treatment type are depicted in Figures 3 and 4, respectively.

**Theoretical Orientation**

A summary of statistics computed to describe the nature of respondents' theoretical orientations (Appendix C, items 45-50) is presented in Table 3. A rating scale was presented to respondents so they could indicate level of emphasis on a given orientation. The scale given to respondents was as follows: 1) no emphasis; 2) slight emphasis; 3) moderate emphasis; 4) strong emphasis; and 5) very strong emphasis. Mean scores of emphasis on a range of theoretical orientations was calculated, and are reported here in order of greatest to least...
Figure 3. Percentage of clinical time by age group
Figure 4. Percentage of clinical time by treatment group
Table 3. Nature of respondents' clinical work

<table>
<thead>
<tr>
<th>Theoretical Orientation</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive/rational</td>
<td>3.99</td>
<td>0.97</td>
</tr>
<tr>
<td>Eclectic/integrative</td>
<td>3.89</td>
<td>1.13</td>
</tr>
<tr>
<td>Behavioral</td>
<td>3.54</td>
<td>1.11</td>
</tr>
<tr>
<td>Systemic</td>
<td>2.92</td>
<td>1.21</td>
</tr>
<tr>
<td>Psychodynamic</td>
<td>2.71</td>
<td>1.20</td>
</tr>
<tr>
<td>Existential</td>
<td>2.47</td>
<td>1.12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Therapeutic behaviors</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focusing on conscious processes</td>
<td>4.01</td>
<td>0.83</td>
</tr>
<tr>
<td>Being active and spontaneous as a therapist</td>
<td>3.85</td>
<td>0.96</td>
</tr>
<tr>
<td>Attending to the client's objective, observable behaviors</td>
<td>3.73</td>
<td>0.90</td>
</tr>
<tr>
<td>Attending to my subjective, intuitive levels of experience</td>
<td>3.57</td>
<td>0.96</td>
</tr>
<tr>
<td>Being directive as a therapist</td>
<td>3.17</td>
<td>1.01</td>
</tr>
<tr>
<td>Focusing on unconscious processes</td>
<td>2.93</td>
<td>1.13</td>
</tr>
<tr>
<td>Maintaining personal distance from the client</td>
<td>2.24</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Note: The scale for the above items was as follows: 1) no emphasis; 2) slight emphasis; 3) moderate emphasis; 4) strong emphasis; and 5) very strong emphasis.
emphasis: cognitive/rational (M=3.99; SD=0.97); eclectic/integrative (M=3.89; SD=1.13); behavioral (M=3.54; SD=1.11); systemic (M=2.92; SD=1.21); psychodynamic (M=2.71; SD=1.20); and existential (M=2.47; SD=1.12).

For inclusion in primary analyses, this information was converted to a dichotomous scale to identify those respondents that indicated very strong emphasis (i.e., a score of 5) on a particular theoretical orientation item. Respondents who indicated a score of 5 on a given item were assigned a score of "1," whereas those who scored less than five were assigned a score of "0" on a variable created to represent "primary adherents" of a given orientation (cognitive/rational, n = 71; behavioral, n = 45; psychodynamic n= 18; existential, n = 7; systemic, n = 19; and eclectic/integrative, n= 78). The numbers of respondents in each of these categorical indices of "primary adherents" are depicted in Figure 5.

Therapeutic Behaviors

Using the same anchors as just described, mean scores of emphasis on a set of therapeutic behaviors (Appendix C, items 51-57) were computed, and were as follows (see Table 3 for a summary): being directive as a therapist (M=3.17; SD=1.01); being active and spontaneous as a therapist (M=3.85; SD=0.96); maintaining personal distance from the client (M=2.24; SD=0.92); attending to the client's objective, observable behaviors (M=3.73; SD=0.90); attending to my
Figure 5. Number of "primary adherent" respondents
subjective, intuitive levels of experience (M=3.57; SD=0.96); focusing on conscious processes (M=4.01; SD=0.83); and focusing on unconscious processes (M=2.93; SD=1.13). These results are depicted graphically in Figure 6.

Acceptability of Other Treatments

A summary of statistics computed to describe respondents' agreement that a variety of treatment approaches would be acceptable for the client in the vignette (Appendix C, items 36-40) is presented in Table 4. The scale given to respondents was as follows: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree. Mean scores of agreement were calculated, and are reported here in order of greatest to least agreement: challenge cognitive distortions and irrational thinking (M=5.03; SD=1.19); relaxation training (M=4.84; SD=1.12); assertiveness training (M=4.30; SD=1.32); symptom prescription (M=3.64; SD=1.40); and analysis of transference and countertransference (M=2.88; SD=1.70). The results are depicted in Figure 7.

Mechanism of Change

Using the same rating scheme as just described, mean scores of ratings about the mechanism of change involved in paradoxical interventions (Appendix C, items 41-44) were calculated, and were as follows (see Table 4 for a summary): providing a novel frame of reference for the problem and its solution (M=4.53;
Figure 6. Mean scores on therapeutic behavior items
Table 4. Scores on other treatment and mechanism of change items

<table>
<thead>
<tr>
<th>Items</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive^</td>
<td>5.03</td>
<td>1.19</td>
</tr>
<tr>
<td>Relaxation training^</td>
<td>4.84</td>
<td>1.12</td>
</tr>
<tr>
<td>Assertiveness training^</td>
<td>4.30</td>
<td>1.32</td>
</tr>
<tr>
<td>Symptom prescription^</td>
<td>3.64</td>
<td>1.40</td>
</tr>
<tr>
<td>Psychodynamic^</td>
<td>2.88</td>
<td>1.70</td>
</tr>
<tr>
<td><strong>Mechanism of Change</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novel reframe^</td>
<td>4.53</td>
<td>1.22</td>
</tr>
<tr>
<td>Therapeutic double bind^</td>
<td>4.17</td>
<td>1.47</td>
</tr>
<tr>
<td>Utilize reactance^</td>
<td>3.93</td>
<td>1.37</td>
</tr>
<tr>
<td>Ordeal therapy^</td>
<td>3.59</td>
<td>1.43</td>
</tr>
</tbody>
</table>

Note: The scale for the above items was as follows: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree.

^Challenge cognitive distortions and irrational thinking.
^bRelaxation training.
^cAssertiveness training.
^dSymptom prescription.
^eAnalysis of transference and countertransference.
^fProviding the client with a novel frame of reference for the problem and its solution.
^gPlacing the client in a therapeutic double bind.
^hCapitalizing on a client's tendency to resist the influence of the therapist.
^iCreating such a therapeutic ordeal that the client begins to avoid symptomatic behaviors.
Figure 7. Mean scores on acceptability of other treatment items
SD=1.22); placing the client in a therapeutic double bind (M=4.17; SD=1.47); capitalizing on the client's tendency to resist the influence of the therapist (M=3.93; SD=1.37); and creating such a therapeutic ordeal that the client begins to avoid symptomatic behaviors (M=3.59; SD=1.43). These results are depicted graphically in Figure 8.

Respondents' Levels of Experience With Paradoxical Interventions

Respondents were asked to indicate their level of agreement or disagreement with six statements about their experience with paradoxical interventions (Appendix C, items 1-6). Results are reported in terms of mean raw scores, standard deviations, and percent of respondents who indicated particular raw scores on the given scale. Some of these percent scores are reported below in narrative fashion to offer some practical indication of the meaning of the raw scores. The overall experience score is discussed within the next section as a part of validation of multi-item scales for use in later analyses.

The first item, "I have used paradoxical interventions in my practice," yielded a mean score that indicated slight agreement (M=4.0; SD=1.66). This was also the median and modal response. Although 73.4% (n=149) of respondents indicated at least slight agreement with this item, 14.4% (n=30) reported strong disagreement.

The second item, "I have received training and supervision in the therapeutic use of paradoxical interventions," yielded a mean score that approached slight
Figure 8. Mean scores on mechanism of change items
agreement (M=3.9; SD=1.73). The median and modal response indicated slight agreement. While 70.0% (n=142) of respondents indicated at least slight agreement with this item, 18.2 % (n=37) reported strong disagreement.

The third item, "Paradoxical interventions conflict with principles of informed consent," yielded a mean score that indicated slight to moderate disagreement (M=2.72; SD=1.34). The item was reverse scored for inclusion in the variable that measured overall level of experience. These results are reported after scores were reversed in order to maintain consistency with the other five items in the scale. The median response indicated slight disagreement, and the modal response indicated moderate disagreement. Although 72.1% (n=145) of respondents indicated at least slight disagreement with this item, 27.9% (n=56) of respondents indicated at least a slight level of agreement.

The fourth item, "Paradoxical interventions can be effective treatment strategies," yielded a mean score that approached moderate agreement (M=4.94; SD=1.01). The median and modal response indicated moderate agreement. While 93.1 % (n=188) of respondents indicated at least slight agreement with this item, 6.9% (n=14) reported some level of disagreement.

The fifth item, "The use of paradoxical interventions requires extensive training and supervision," yielded a mean score between slight and moderate agreement (M=4.40; SD=1.27). The median and modal response indicated moderate agreement. While 79.2% (n=160) of respondents indicated some level of agreement with this item, 20.8% (n=42) reported some level of disagreement.
The sixth item, "Paradoxical interventions are ethically sound treatment strategies," yielded a mean score between slight and moderate agreement (M=4.46; SD=1.10). The median and modal response indicated moderate agreement. While 86.1% (n=173) of respondents indicated at least slight agreement with this item, 13.9% (n=28) reported some level of disagreement.

In summary, respondents reporting of their levels of experience with paradoxical interventions suggested that most respondents have received supervision and training in using paradoxical interventions, have used these techniques in their own practice, and believe that the interventions can be effective treatment strategies. Most respondents indicated that using these procedures requires extensive training and supervision, and that the interventions are ethically sound and do not conflict with principles of informed consent.

**Manipulation Checks**

The two experimental manipulations in this study were the level of reactance (high or low) presented on the part of the client in the vignette, and whether or not a therapeutic rationale is to be given to the proposed client. The effectiveness of the manipulations provided in the case vignette were tested by performing 2X2 (reactance X rationale) analyses of variance (ANOVA) on each of the items (Appendix C, items 7-8) that measured the manipulations. Manipulations were deemed successful if main effects for a factor are found in the ANOVA for it's
respective item in the absence of an main effect for the other factor and the absence of a significant interaction effect.

Three additional items (Appendix C, items 9-11) were administered to determine the clinical relevance and credibility of the vignette; results of these items are also reported. All three of the items were rated on the following scale: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree.

Experimental Manipulations

Respondents' perceptions of the level of psychological reactance on the part of the client in the vignette was measured with the item, "Chris appears to be resisting my interpersonal influence as a therapist." The 2X2 ANOVA for this item yielded a main effect for reactance, $F(1,200)=125.87$, $p<.05$, and an effect size which indicated that the main effect of reactance accounted for 39.2% of the variance in scores on this item ($\eta = .626$). Neither the main effect for rationale, $F(1,200)=0.21$, $p>.10$, nor the rationale X reactance interaction effect, $F(1,200)=0.75$, $p>.10$, were significant. Respondents in the low reactance group reported moderate to strong disagreement with this statement ($M=1.60$, $SD=1.03$; $n=105$), whereas respondents in the high reactance group reported slight agreement to slight disagreement with the item. The manipulation appears to have been effective with regard to portraying a client low in psychological reactance.
However, the portrayal of a client high in reactance appears to have been perceived ambiguously. Though significantly different from their counterparts in the low reactance conditions, respondents in the high reactance conditions do not report a level of agreement satisfactory to conclude that the manipulation of client reactance level was entirely successful. Certainly, this is anticipated to have implications for subsequent analyses including reactance as a variable of interest.

Respondents' understanding of the instruction regarding whether or not the client in the vignette was given a rationale for the paradoxical interventions was measured with the item, "Chris was given the rationale for this intervention." The 2X2 ANOVA for this item yielded a main effect for rationale $F(1,202)=213.58, p<.05$, and an effect size which indicated that the manipulation of rationale accounted for 51.8% of the variance in scores on this item ($\eta = .720$). Neither the main effect for reactance, $F(1,202)=0.90, p>.10$, nor the rationale X reactance interaction effect, $F(1,202)=0.99, p>.10$, were significant. Respondents in conditions with the rationale absent reported moderate to strong disagreement with the item ($M=1.77, SD=1.14$), whereas respondents in conditions with the rationale present reported slight to moderate agreement with the item ($M=4.49, SD=1.43$). The effect of the rationale manipulation was most successful in indicating absence of rationale, and less successful (though considered adequate for purposes of this study) in terms of indicating presence of a therapeutic rationale.
Clinical Credibility

Three items measured the clinical credibility of the vignette (Appendix C, items 9-11). For each item, results are first presented for the entire group of respondents. Then, results are given for 2X2 ANOVAs performed on each of these three items with reactance and rationale as factors.

The first item, "Chris's problem and behaviors are generally similar to those presented by clients in my clinical practice" was presumed to be the most rigorous test of relevance given the requirement of a general correspondence between the vignette and the practice of the respondent. Results showed that the average respondent found slight agreement (M=4.00; SD=1.46) with this item; the median response indicated slight agreement, and the modal response moderate agreement. 72.3% (n=146) of respondents indicated some level of agreement, while 27.7% (n=56) indicated some level of disagreement.

The results of the first item regarding similarity of the vignette to one's own clinical practice might be interpreted with consideration given to previously reported results on the nature of respondents' practice characteristics. The vignette portrayed a psychologist working with an individual client with anxiety associated with work-related responsibilities. On average, respondents indicated spending 66.55% of their time with individuals, and 82.22% of their time with persons who could conservatively be conceived to be of working age (56.99% of their time with adults; 17.11% with adolescents; 8.12% with geriatric adults). These estimations give some insight into the nature of the respondents' comparisons between the
vignette and their own practice. One would not expect the results of first of these three manipulation check items about similarity to substantially exceed the estimations from clinical practice.

The 2X2 ANOVA for this item yielded a significant main effect for reactance $F(1,201)=5.91, p<.05, \eta = .18$ (accounting for 3.1% of the variation in scores on this item). Though both groups indicate some level of agreement with regard to similarity, respondents in conditions with a low reactance client indicated that the client in the vignette ($M=4.25, SD=1.41$) was more similar to clients in their own clinical practices than did respondents in conditions with a high reactance client in the vignette ($M=3.73, SD=1.48$). There were no other significant main effects or interactions for this item.

The second of three items regarding clinical credibility stated "I am comfortable working with Chris." Results showed that the average respondent found moderate agreement with this statement ($M=5.09; SD=1.06$); the median and modal responses also showed moderate agreement. Nearly 83% ($n=170$) reported moderate to strong agreement with this item, whereas 7.8% ($n=16$) reported some level of disagreement.

The 2X2 ANOVA for this item yielded a significant main effect for reactance $F(1,205)=12.93, p<.05, \eta = .24$ (accounting for 5.7% of the variation in scores on this item). Though both groups indicated some level of agreement with regard to comfort level working with the client in the vignette, respondents in conditions with a low reactance client indicated more comfort working with the client in the vignette.
(M=5.33, SD=0.98) than did respondents in conditions with a high reactance client in the vignette (M=4.83, SD=1.09). There were no other significant main effects or interactions for this item.

The third of these items regarding clinical credibility stated "I am able to imagine myself in this psychologist role." Results showed that the average respondent approached moderate agreement with this statement (M=4.91; SD=1.35); the median response showed moderate agreement, while the modal response showed strong agreement. 77.2\% (n=159) reported moderate to strong agreement with this item, whereas 14.1\% (n=29) reported some level of disagreement.

The 2X2 ANOVA for this item yielded no significant main effects. The interaction term, however, was significant, F(1,205)=7.87, p<.01, \eta = .19 (accounting for 3.7\% of the total variance in scores on this item). The pattern of the means indicated that in conditions in which a rationale was not given, respondents were better able to imagine themselves in the psychologist role when the client was high in reactance than in cases in which the client was low in reactance. The reverse was true when a rationale was present, such that respondents in conditions in which the client was low in reactance were more able to imagine themselves in the psychologist role than were those in conditions in which the client was high in reactance.

A one-way ANOVA with was conducted to further explain the nature of the simple effects of the independent variables on this manipulation check item. The
overall model indicated significant differences between the four conditions, $F(3,205)=3.93, p<.05$. Post hoc comparisons using a least significant difference test (LSD) procedure to identify differences between groups with an alpha level set at .05. These comparisons yielded the finding that condition 3 (rationale present, low reactance; $M=5.40, S=0.81$) differed significantly from condition 1 (rationale present, high reactance; $M=4.63, SD=1.46$) and condition 4 (rationale absent, low reactance; $M=4.68, SD=1.66$), and that no group differed significantly from condition 2 (rationale absent, high reactance; $M=4.95, SD=1.16$). There were no other significant differences among the means.

**Summary**

The experimental manipulations were shown to generally be effective, although with some limitations. Presence or absence of rationale was determined to be successfully manipulated, although the effect was stronger for conditions in which the rationale was absent than for conditions in which the rationale was present. This finding might be due to variability in respondents' definitions of what constitutes the provision of a rationale for a paradoxical intervention. Respondents with varying training and clinical experiences may very well provide different type of rationale to clients.

The manipulation of high or low psychological reactance on the part of the proposed client was quite effective for the low reactance condition, and quite ambiguous for conditions in which reactance levels were intended to be perceived
as high. Even though the difference between the two levels of reactance were statistically significant, the actual level of agreement that the proposed highly reactant client was perceived to be resisting the therapist's interpersonal influence was too low to be considered a successful manipulation of high reactance.

In terms of clinical credibility, respondents reported acceptable levels of: 1) agreement that the client's problem and behaviors were generally similar to those presented by clients in their own practices; 2) comfort in working with the client in the vignette; and 3) ability to imagine themselves in the analogue psychologist role. Perceived similarity to current practice and overall level of comfort were greater for respondents in low reactance conditions than was the case for respondents in high reactance conditions. Although these findings may lend some support for the effectiveness of the reactance manipulation, they do not indicate enough support to warrant strong conclusions about clinician's practices with clients who are perceived to be high in reactance. Further, respondents in rationale absent conditions were better able to imagine the analogue role when the client was high in reactance (rather than low in reactance), and respondents in rationale present conditions were better able to imagine the analogue role when the client was low in reactance (rather than high in reactance).
Instrument Development

Reliabilities of Constructed Variables

Four sets of multiple-item measures were constructed for use in this study. Scales with items specific to the stimulus were desirable in order to maximize the relevance of items to the case vignette. Cronbach's alpha coefficients were computed as measures of the internal consistencies of the proposed scales. When appropriate, items were deleted to improve the psychometric properties of the scales. All scale modifications were performed prior to using the scales as variables in subsequent analyses. Predetermined criteria for coefficient alpha and item-total correlations were set to be greater than or equal to 0.75 and 0.30, respectively (Nunnally and Bernstein, 1994; Howell, 1987).

Experience

Six items (Appendix C, items 1-6) were generated to measure the extent of experience that respondents had with paradoxical interventions. Three of these five items (Appendix C, first page, items 3, 4 and 6) appear to also measure respondents' attitudes toward paradoxical interventions. The item, "The use of paradoxical interventions requires extensive training and supervision" was found to have a low corrected item-total correlation (.07) and was excluded from the scale. The resulting five item measure of clinician experience had a coefficient alpha of 0.80. The average inter-item correlation for this scale was .49. Item statistics for this scale are reported in Table 5.
Table 5. Item and scale statistics for experience scale

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>S.D.</th>
<th>Corrected item-total if item deleted</th>
<th>Alpha if item deleted</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Have used\textsuperscript{a}</td>
<td>4.03</td>
<td>1.64</td>
<td>.65</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>2) Received training\textsuperscript{b}</td>
<td>3.92</td>
<td>1.72</td>
<td>.54</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>3) Informed consent\textsuperscript{c,r}</td>
<td>4.28</td>
<td>1.34</td>
<td>.55</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>4) Can be effective\textsuperscript{d}</td>
<td>4.96</td>
<td>0.98</td>
<td>.57</td>
<td>.70</td>
<td></td>
</tr>
<tr>
<td>5) Requires training\textsuperscript{e}</td>
<td>4.42</td>
<td>1.25</td>
<td>.07</td>
<td>.80\textsuperscript{X}</td>
<td></td>
</tr>
<tr>
<td>6) Ethically sound\textsuperscript{f}</td>
<td>4.46</td>
<td>1.10</td>
<td>.63</td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21.65</td>
<td>5.18</td>
<td></td>
<td></td>
<td>.80</td>
</tr>
</tbody>
</table>

Notes: The scale for the above items was as follows: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree. Totals provide scale statistics subsequent to deletions.

\textsuperscript{a}Denotes reverse scored item.
\textsuperscript{b}Denotes deleted item.

a I have used paradoxical interventions in my practice.
b I have received training and supervision in the therapeutic use of paradoxical interventions.
c Paradoxical interventions conflict with principles of informed consent.
d Paradoxical interventions can be effective treatment strategies.
e The use of paradoxical interventions requires extensive training and supervision.
f Paradoxical interventions are ethically sound treatment strategies.
Treatment Acceptability

Eleven items (Appendix C, items 12-22) were written to measure the extent to which respondents believed the paradoxical intervention administered in the vignette was an acceptable form of treatment. One item, "Overall, this form of treatment will be helpful," was found to have a negative (though strong) relationship to the other items (-.90) and was therefore excluded from the scale. Another item, "I provide only those treatments that have been empirically validated," was found to have a negative and weak relationship (-.16). The resulting nine item measure of treatment acceptability had a coefficient alpha of .95. The average inter-item correlation for this scale was .68. Item statistics for this scale are reported in Table 6.

Dissonance Arousal

Eight items (Appendix C, items 23-30) were written to measure the extent to which respondents felt a level of emotional arousal that could be attributed to cognitive dissonance. No items were deleted from the scale on the basis of corrected item-total correlations. The resulting eight item measure of dissonance arousal had a coefficient alpha of 0.91. The average inter-item correlation for this scale was .56. Item statistics for this scale are reported in Table 7.
Table 6. Item and scale statistics for treatment acceptability scale

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>S.D.</th>
<th>Corrected item-total correlation</th>
<th>Alpha if item deleted</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Acceptable choice(^a)</td>
<td>3.82</td>
<td>1.49</td>
<td>.84</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>2) Should be effective(^b)</td>
<td>3.58</td>
<td>1.30</td>
<td>.84</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>3) Severe enough(^c)</td>
<td>3.64</td>
<td>1.48</td>
<td>.86</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>4) Willing to use(^d)</td>
<td>3.81</td>
<td>1.61</td>
<td>.77</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>5) Bad side effects(^e)</td>
<td>4.09</td>
<td>1.26</td>
<td>.68</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>6) Expect positive results(^f)</td>
<td>3.67</td>
<td>1.34</td>
<td>.85</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>7) Helpful(^g)</td>
<td>3.31</td>
<td>1.31</td>
<td>-0.89</td>
<td>.91(^x)</td>
<td></td>
</tr>
<tr>
<td>8) Appropriate(^h)</td>
<td>3.51</td>
<td>1.37</td>
<td>.83</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>9) Consider again(^i)</td>
<td>4.44</td>
<td>1.23</td>
<td>.66</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>10) Benefits vs. Risks(^j)</td>
<td>3.83</td>
<td>1.36</td>
<td>.69</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>11) Empirically validated(^k)</td>
<td>3.44</td>
<td>1.40</td>
<td>-0.16</td>
<td>.87(^x)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>41.05</td>
<td>9.14</td>
<td></td>
<td>.95</td>
<td></td>
</tr>
</tbody>
</table>

Notes: The scale for the above items was as follows: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree. Totals provide scale statistics subsequent to deletions.

\(^a\)Denotes reverse scored item.
\(^x\)Denotes deleted item

- This is an acceptable choice of intervention for this case.
- The treatment should be effective in changing Chris's symptoms.
- Chris's symptoms are severe enough to justify the use of this intervention.
- I would be willing to use this treatment with one of my own clients.
- This intervention is likely to have bad side effects for Chris.
- I expect positive results from this particular intervention.
- Overall, this form of treatment will be helpful.
- I am confident that a paradoxical intervention would be appropriate with Chris.
- Given a successful outcome, I would consider using symptom prescription again in the future.
- The potential benefits of using a paradoxical intervention outweigh the potential risks.
- I provide only those treatments that have been empirically validated.
Table 7. Item and scale statistics for dissonance arousal scale

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>S.D.</th>
<th>Corrected item-total correlation</th>
<th>Alpha if item deleted</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Regret&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.88</td>
<td>1.44</td>
<td>.77</td>
<td>.89</td>
<td></td>
</tr>
<tr>
<td>2) Guilty&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2.38</td>
<td>1.27</td>
<td>.70</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>3) Deceived&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2.52</td>
<td>1.49</td>
<td>.68</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>4) Tension&lt;sup&gt;d&lt;/sup&gt;</td>
<td>2.84</td>
<td>1.43</td>
<td>.71</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>5) Uncomfortable&lt;sup&gt;e&lt;/sup&gt;</td>
<td>2.75</td>
<td>1.48</td>
<td>.81</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>6) Manipulative&lt;sup&gt;f&lt;/sup&gt;</td>
<td>2.35</td>
<td>1.37</td>
<td>.78</td>
<td>.90</td>
<td></td>
</tr>
<tr>
<td>7) No apprehension&lt;sup&gt;g,r&lt;/sup&gt;</td>
<td>3.72</td>
<td>1.49</td>
<td>.61</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>8) Comfortable&lt;sup&gt;h,r&lt;/sup&gt;</td>
<td>2.89</td>
<td>1.48</td>
<td>.63</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>22.30</td>
<td>8.98</td>
<td></td>
<td></td>
<td>.91</td>
</tr>
</tbody>
</table>

Note: The scale for the above items was as follows: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree.

<sup>a</sup> Denotes reverse scored item.

<sup>a</sup> I regret taking the risk of providing this intervention.

<sup>b</sup> I feel guilty about prescribing Chris's symptoms.

<sup>c</sup> I have deceived Chris with my choice of intervention.

<sup>d</sup> I feel tension after prescribing a paradoxical intervention with Chris.

<sup>e</sup> I am uncomfortable about the potential damage that may be done to my relationship with Chris.

<sup>f</sup> I have been unjustifiably manipulative toward Chris.

<sup>g</sup> I have no apprehension about administering a paradoxical intervention with Chris.

<sup>h</sup> I will be comfortable sharing this intervention choice with my colleagues.
Dissonance Reduction

Five items (Appendix C, items 31-35) were generated to measure the extent to which respondents were motivated to reduce the level of cognitive dissonance. The proposed five item measure of dissonance reduction had a coefficient alpha of 0.17, indicating a scale quite diverse in content. Corrected item-total correlations for all five items ranged from -.04 to .15. With such diversity of item content, this scale would not be used as a variable that could yield interpretable results. Thus, the decision was made to use each dissonance reduction item as a separate dependent measure in the study. The average inter-item correlation for this scale was .05. Item statistics for this scale are reported in Table 8.

Discriminating Between Treatment Acceptability and Dissonance Arousal

The scales for dissonance arousal and treatment acceptability (Appendix C, items 23-30 and 12-22, respectively) were submitted to statistical tests to determine if their content was sufficiently different to warrant their inclusion as two distinct constructs in this study. Three procedures were conducted to address this issue: 1) calculation of the correlation between the two multi-item scales; 2) two confirmatory factor analyses (both one factor and two factor solutions were generated), and 3) scale statistics to determine the corrected item-total correlations and change in alpha as each item from one of the two scales was included in the scale of the counterpart scale (e.g., one treatment acceptability item at a time was included in the scale for dissonance arousal and vice versa).
Table 8. Item and scale statistics for dissonance reduction scale

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>S.D.</th>
<th>Corrected item-total correlation</th>
<th>Alpha if item deleted</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Not demonstrated^a</td>
<td>3.34</td>
<td>1.47</td>
<td>.12</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>2) Managed care^b</td>
<td>3.48</td>
<td>1.71</td>
<td>-0.04</td>
<td>.28</td>
<td></td>
</tr>
<tr>
<td>3) Not responsible^c</td>
<td>2.17</td>
<td>1.17</td>
<td>.15</td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>4) Patient compliance^d</td>
<td>2.67</td>
<td>1.27</td>
<td>.12</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>5) Ethical concerns^e</td>
<td>3.01</td>
<td>1.44</td>
<td>.05</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14.67</td>
<td>3.42</td>
<td></td>
<td></td>
<td>.17</td>
</tr>
</tbody>
</table>

Note: The scale for the above items was as follows: 1) strongly disagree; 2) moderately disagree; 3) slightly disagree; 4) slightly agree; 5) moderately agree; and 6) strongly agree.

^a I am concerned that the clinical utility of paradoxical interventions has not been sufficiently demonstrated.
^b The influence of managed care in psychotherapy encourages the use of provocative interventions.
^c I am not personally responsible for any manipulation that Chris may perceive.
^d The outcome of the symptom prescription is attributable to Chris's compliance, not my own lack of skill.
^e My ethical concerns about paradoxical interventions make this a poor choice for this client.
First, the correlation between dissonance arousal and treatment acceptability was calculated, $r = -.75$. Note that the internal consistencies of each of the two scales had previously been established as very high. Cronbach’s coefficient alphas for dissonance arousal and treatment acceptability were calculated to be .91 and .95, respectively. This implies that there was some unique variation in these two scales.

Next, two confirmatory factor analyses were performed on the 17 items comprising the two scales for dissonance arousal and treatment acceptability. These procedures were conducted to test the hypothesis that a two-factor model provided a better fit to the data than a one-factor model. Results from these procedures are summarized in Tables 9 and 10 (representing results from one and two factor maximum likelihood solutions, respectively). Chi-square statistics and goodness of fit indices are reported for each model.

Examination of the correlations of each of the 17 items with a derived single factor (labeled as “factor loadings” in Table 9) shows that all the correlations were strong (e.g., minimum value = -.558). Examination of these correlations also suggests an overall stronger pattern of relationships for the group of treatment acceptability than is observed for the group of arousal items. Looking at the correlations reported for the two-factor solution (Table 10) reveals that the coefficients tended to be slightly higher with the use of this model when compared with the one factor model. This increase in correlations is more evident for the eight dissonance arousal items.
Table 9. Summary of confirmatory factor analysis results: One factor model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat1</td>
<td>.875</td>
</tr>
<tr>
<td>Treat2</td>
<td>.864</td>
</tr>
<tr>
<td>Treat3</td>
<td>.879</td>
</tr>
<tr>
<td>Treat4</td>
<td>.811</td>
</tr>
<tr>
<td>Treat5</td>
<td>.743</td>
</tr>
<tr>
<td>Treat6</td>
<td>.894</td>
</tr>
<tr>
<td>Treat7</td>
<td>.881</td>
</tr>
<tr>
<td>Treat8</td>
<td>.697</td>
</tr>
<tr>
<td>Treat9</td>
<td>.711</td>
</tr>
<tr>
<td>Treat10</td>
<td>-0.797</td>
</tr>
<tr>
<td>Arouse1</td>
<td>-0.595</td>
</tr>
<tr>
<td>Arouse2</td>
<td>-0.558</td>
</tr>
<tr>
<td>Arouse3</td>
<td>-0.595</td>
</tr>
<tr>
<td>Arouse4</td>
<td>-0.707</td>
</tr>
<tr>
<td>Arouse5</td>
<td>-0.664</td>
</tr>
<tr>
<td>Arouse6</td>
<td>-0.658</td>
</tr>
<tr>
<td>Arouse7</td>
<td>-0.690</td>
</tr>
<tr>
<td>Arouse8</td>
<td>-0.690</td>
</tr>
</tbody>
</table>

Goodness of Fit Summary

Satorra-Bentler scaled chi-square ($X^2; n=195, df=119$) = 406.82 (p<0.05)

Bentler-Bonett Normed Fit Index 0.808
Bentler-Bonett Non-normed Fit Index 0.819
Comparative Fit Index (CFI) 0.841
Robust Comparative Fit Index 0.851

Note: All factor loadings were statistically significant (p<.05).
Table 10. Summary of confirmatory factor analysis results: Two factor model

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treat1</td>
<td>.901</td>
<td></td>
</tr>
<tr>
<td>Treat2</td>
<td>.889</td>
<td></td>
</tr>
<tr>
<td>Treat3</td>
<td>.893</td>
<td></td>
</tr>
<tr>
<td>Treat4</td>
<td>.802</td>
<td></td>
</tr>
<tr>
<td>Treat5</td>
<td>.739</td>
<td></td>
</tr>
<tr>
<td>Treat6</td>
<td>.909</td>
<td></td>
</tr>
<tr>
<td>Treat8</td>
<td>.854</td>
<td></td>
</tr>
<tr>
<td>Treat9</td>
<td>.691</td>
<td></td>
</tr>
<tr>
<td>Treat10</td>
<td>.699</td>
<td></td>
</tr>
<tr>
<td>Arouse1</td>
<td></td>
<td>.825</td>
</tr>
<tr>
<td>Arouse2</td>
<td></td>
<td>.730</td>
</tr>
<tr>
<td>Arouse3</td>
<td></td>
<td>.711</td>
</tr>
<tr>
<td>Arouse4</td>
<td></td>
<td>.737</td>
</tr>
<tr>
<td>Arouse5</td>
<td></td>
<td>.849</td>
</tr>
<tr>
<td>Arouse6</td>
<td></td>
<td>.807</td>
</tr>
<tr>
<td>Arouse7</td>
<td></td>
<td>.647</td>
</tr>
<tr>
<td>Arouse8</td>
<td></td>
<td>.667</td>
</tr>
</tbody>
</table>

$r_{F1-F2} = -0.80$

Goodness of Fit Summary
Satorra-Bentler scaled chi-square ($X^2; n=195, df=118) = 252.65$ ($p<0.05$)

<table>
<thead>
<tr>
<th>Fit Index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bentler-Bonett Normed Fit Index</td>
<td>0.883</td>
</tr>
<tr>
<td>Bentler-Bonett Non-normed Fit Index</td>
<td>0.908</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.920</td>
</tr>
<tr>
<td>Robust Comparative Fit Index</td>
<td>0.930</td>
</tr>
</tbody>
</table>

Note: All factor loadings were statistically significant ($p<.05$).
Chi-square statistics were computed to evaluate whether or not these factor models could account for the relationships among the items. The one factor model was found to be statistically significant, $X^2 (n=195, \text{df}=119)=406.82, p>.05$. The two factor model was also statistically significant, $X^2 (n=195, \text{df}=118)=252.65, p>.05$.

The difference between these two chi-square statistics is itself distributed as a chi-square. Thus, one can subtract the two-factor solution chi-square from the one-factor solution chi-square to determine whether the two models differ by more than would be expected by chance. The difference between the chi-square statistics for the one factor and two factor models was highly significant, $X^2 (n=195, \text{df}=1) = 154.17, p>.05$. This result suggests that the two factor model provided a better fit to the data than the one factor model. The correlation between the two factors in the two factor model was -.80, indicating that 64% of the variance in scores on these items can be explained with these two factors. The amount of unique variance in the factors (36%) suggests that treatment acceptability and dissonance arousal are related but distinct constructs.

As a third method to assess the distinctiveness of the two scales, items from one of the two scales were included in the composition of the other scale, then scale statistics were generated to determine the corrected item-total correlation of one item within the context of all of its counterparts. For example, one dissonance arousal item was included in the treatment acceptability scale. Then, scale statistics were computed to examine the change in internal consistency that occurs
when one item from a given scale is included in the composition of the other scale. These data are summarized in Table 11.

In general, the results indicate that the individual dissonance arousal items are correlated in a moderate to strong negative manner with the overall treatment acceptability scale. However, the inclusion of the dissonance arousal items in the treatment acceptability scale tended to the internal consistency of the scale in terms of alpha level from .05 to .08. With regard to the other scale, individual treatment acceptability items were correlated in a moderate to strong negative manner with the overall dissonance arousal scale. However, inclusion of dissonance arousal items in the treatment acceptability scale tended to the internal consistency of the scale in terms of alpha by .08 to .12. These data suggest that items from one of these scales detract from the effort to create homogenous scales when included in the composition of the other scale. The small variation in the change in the alpha statistics for both scales is reflective of the very high internal consistency of the constructed scales.

In summary, these results provide evidence to support the conclusion that while dissonance arousal and treatment acceptability are related, the constructs have adequate discriminant validity to allow for inclusion in this study as distinct dependent variables. Further evidence for discriminant validity may be provided when experimental manipulations are tested for effects on the two dependent variables of dissonance arousal and treatment acceptability. The extent to which
Table 11. Item and scale statistics for inclusion of TA and DA items in counterpart scales

<table>
<thead>
<tr>
<th>Item</th>
<th>Corrected item-total correlation with TA scale</th>
<th>Corrected item-total correlation with DA scale</th>
<th>Change in alpha if item included in:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TA</td>
</tr>
<tr>
<td>Arouse1</td>
<td>-0.75</td>
<td>.77</td>
<td>-0.08</td>
</tr>
<tr>
<td>Arouse2</td>
<td>-0.52</td>
<td>.70</td>
<td>-0.05</td>
</tr>
<tr>
<td>Arouse3</td>
<td>-0.49</td>
<td>.68</td>
<td>-0.06</td>
</tr>
<tr>
<td>Arouse4</td>
<td>-0.52</td>
<td>.72</td>
<td>-0.06</td>
</tr>
<tr>
<td>Arouse5</td>
<td>-0.64</td>
<td>.81</td>
<td>-0.07</td>
</tr>
<tr>
<td>Arouse6</td>
<td>-0.60</td>
<td>.78</td>
<td>-0.06</td>
</tr>
<tr>
<td>Arouse7</td>
<td>-0.62</td>
<td>.61</td>
<td>-0.07</td>
</tr>
<tr>
<td>Arouse8</td>
<td>-0.67</td>
<td>.63</td>
<td>-0.07</td>
</tr>
<tr>
<td>Treat1</td>
<td>0.84</td>
<td>-0.63</td>
<td>-</td>
</tr>
<tr>
<td>Treat2</td>
<td>0.84</td>
<td>-0.62</td>
<td>-</td>
</tr>
<tr>
<td>Treat3</td>
<td>0.86</td>
<td>-0.66</td>
<td>-</td>
</tr>
<tr>
<td>Treat4</td>
<td>0.76</td>
<td>-0.67</td>
<td>-</td>
</tr>
<tr>
<td>Treat5</td>
<td>0.68</td>
<td>-0.62</td>
<td>-</td>
</tr>
<tr>
<td>Treat6</td>
<td>0.85</td>
<td>-0.69</td>
<td>-</td>
</tr>
<tr>
<td>Treat7</td>
<td>0.83</td>
<td>-0.71</td>
<td>-</td>
</tr>
<tr>
<td>Treat8</td>
<td>0.66</td>
<td>-0.59</td>
<td>-</td>
</tr>
<tr>
<td>Treat9</td>
<td>0.69</td>
<td>-0.61</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: TA = Treatment Acceptability, DA = Dissonance Arousal.
different patterns of results emerge when using the same predictor variables may provide additional evidence to address this particular issue of discriminant validity.

Primary Analyses

The Effects of Manipulated Variables on Dependent Measures

Multiple regression procedures were conducted to determine the effects of the demographic and manipulated variables on the criterion variables dissonance arousal and treatment acceptability. For purposes of analysis and determining significance of effect, standardized scores were calculated for predictor variables to reduce potential multicollinearity. To assist in the interpretive process, a master table of means and standard deviations of scores on major variables of interest, reported by condition, was generated (Appendix E).

The results of the regression of dissonance arousal and treatment acceptability scores on hypothesized predictors among the demographic variables are summarized in Table 12. None of these demographic variables were significant in terms of ability to predict scores on dissonance arousal or on treatment acceptability. Thus, none of the demographic variables were included in subsequent analyses.

The constructed variable paradoxical treatment experience and the four experimental conditions (manipulations of the two levels of rationale and reactance) comprised the first block of variables entered in the analyses, the two-way
Table 12. Summary of regression analysis for hypothesized demographic variables predicting dissonance arousal and treatment acceptability scores

<table>
<thead>
<tr>
<th>Dissonance Arousal</th>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
<td>.03</td>
<td>.07</td>
<td>.04</td>
<td>.48</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>.47</td>
<td>1.70</td>
<td>.02</td>
<td>.28</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>-0.53</td>
<td>1.45</td>
<td>-0.03</td>
<td>-0.36</td>
</tr>
<tr>
<td></td>
<td>Directive</td>
<td>.30</td>
<td>.76</td>
<td>.03</td>
<td>.36</td>
</tr>
<tr>
<td></td>
<td>Active/spontaneous</td>
<td>-0.50</td>
<td>.77</td>
<td>-0.05</td>
<td>-0.65</td>
</tr>
<tr>
<td></td>
<td>Cognitive</td>
<td>-1.67</td>
<td>1.58</td>
<td>-0.09</td>
<td>-1.05</td>
</tr>
<tr>
<td></td>
<td>Behavioral</td>
<td>-0.09</td>
<td>1.81</td>
<td>-0.01</td>
<td>-0.05</td>
</tr>
<tr>
<td></td>
<td>Systemic</td>
<td>-2.95</td>
<td>2.27</td>
<td>-0.10</td>
<td>-1.30</td>
</tr>
<tr>
<td></td>
<td>Eclectic/integrative</td>
<td>-1.25</td>
<td>1.37</td>
<td>-0.07</td>
<td>-0.91</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment Acceptability</th>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Beta</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Age</td>
<td>.01</td>
<td>.08</td>
<td>.01</td>
<td>.14</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>.06</td>
<td>1.90</td>
<td>.00</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>.47</td>
<td>1.62</td>
<td>.02</td>
<td>.29</td>
</tr>
<tr>
<td></td>
<td>Directive</td>
<td>-1.01</td>
<td>.84</td>
<td>-0.10</td>
<td>-1.20</td>
</tr>
<tr>
<td></td>
<td>Active/spontaneous</td>
<td>.89</td>
<td>.86</td>
<td>.09</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>Cognitive</td>
<td>.55</td>
<td>1.77</td>
<td>.03</td>
<td>.31</td>
</tr>
<tr>
<td></td>
<td>Behavioral</td>
<td>1.70</td>
<td>2.02</td>
<td>.07</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>Systemic</td>
<td>-0.35</td>
<td>2.54</td>
<td>-0.01</td>
<td>-0.14</td>
</tr>
<tr>
<td></td>
<td>Eclectic/integrative</td>
<td>.97</td>
<td>1.53</td>
<td>.05</td>
<td>.63</td>
</tr>
</tbody>
</table>

Note: For Dissonance Arousal, overall F (9,191)=0.42, p>.10; for Treatment Acceptability, overall F (9,190)=0.55, p>.10.

*Denotes p<.05
interaction terms of the three variables from the first step comprised the second block, and the three-way interaction among the three variables in the first step was entered as the third and final step. The results of these analyses are summarized for dissonance arousal and treatment acceptability scores in Tables 13 and 14, respectively.

**Dissonance Arousal**

With regard to the regression analysis on dissonance arousal scores, the first step in the regression procedure was significant (see Table 13), indicating that the effects of experience, rationale and reactance accounted for 24% of the variance in dissonance arousal scores. The main effect for experience was significant and indicated that higher levels of experience with paradoxical interventions were associated with lower levels of dissonance arousal. No significant main effects were found for rationale or reactance.

The rationale X experience interaction was significant (see Table 13). The results suggest that when the rationale was absent, a stronger association of higher levels of experience and lower levels of arousal is evident than when the rationale was present. Clinicians with the most experience with paradoxical interventions reported lower levels of dissonance arousal when the rationale was absent than when it was present. Clinicians with relatively less experience with paradoxical interventions reported lower levels of dissonance arousal when the rationale was present than when it was absent. This interaction is depicted in Figure 9.
Table 13. Summary of hierarchical regression analysis for variables predicting dissonance arousal scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>t</th>
<th>R² changea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.24*</td>
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<tr>
<td>Experience</td>
<td>-4.28</td>
<td>.57</td>
<td>-0.47</td>
<td>-7.53*</td>
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</tr>
<tr>
<td>Rationale</td>
<td>-0.88</td>
<td>.57</td>
<td>-0.10</td>
<td>-1.55</td>
<td></td>
</tr>
<tr>
<td>Reactance</td>
<td>.35</td>
<td>.57</td>
<td>.04</td>
<td>.61</td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
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<td></td>
<td>.03</td>
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<tr>
<td>Rat X Exp</td>
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<td>.17</td>
<td>2.64*</td>
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<td>-0.78</td>
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</tr>
<tr>
<td>Rat X React</td>
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<td>.11</td>
<td>1.72</td>
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<tr>
<td>Step 3</td>
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<td></td>
<td>.02</td>
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<tr>
<td>Rat X React X Exp</td>
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<td>.58</td>
<td>-0.14</td>
<td>-2.19*</td>
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</tr>
</tbody>
</table>

*Denotes p<.05.

F values for the full model for each step were as follows: Step 1, F(3,199)=20.59*; Step 2, F(6,199)=12.10*; and Step 3, F(7,199)=11.26*.

Table 14. Summary of hierarchical regression analysis for variables predicting treatment acceptability scores

<table>
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<th>SE B</th>
<th>Beta</th>
<th>t</th>
<th>R² changea</th>
</tr>
</thead>
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<td></td>
<td></td>
<td></td>
<td>.10*</td>
</tr>
<tr>
<td>Experience</td>
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<td>.32</td>
<td>4.73*</td>
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<tr>
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<td>.70</td>
<td>.05</td>
<td>.71</td>
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<tr>
<td>Reactance</td>
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<td>.70</td>
<td>.02</td>
<td>.30</td>
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<td></td>
<td>.04</td>
</tr>
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<td>-2.15*</td>
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</tr>
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<td>.15</td>
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<td>Step 3</td>
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<td>.13</td>
<td>1.85</td>
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</tr>
</tbody>
</table>

*Denotes p<.05.

F values for the full model for each step were as follows: Step 1, F(3,199)=7.67*; Step 2, F(6,199)=5.43*; and Step 3, F(7,199)=5.20*.
Figure 9. Rationale X experience interaction effect on dissonance arousal scores
All figures that report interaction effects were constructed using data from the respective regression equations. All significant interactions involved the constructed variable experience. The x-axis on figures represents scores on the experience scale. Representations of regression lines were constructed by using the intercept term for each model (which was plotted on the y-axis and indicates the value of the criterion variable when experience is assumed to be zero) and a maximum value for the experience variable (calculated algebraically by using the maximum raw value of the experience variable in the regression equation).

The three-way interaction between experience, rationale and reactance was also significant. This interaction is depicted graphically in Figure 10 (in which dissonance arousal x experience regression lines are plotted for each of the four experimental conditions). Examination of these regression lines suggests that the manipulation of rationale had little differential effect for respondents in conditions with highly reactant clients (conditions 1 and 2). In these two conditions the relationship between experience and dissonance arousal appears to be consistent with the previously described effects. However, the presence or absence of a rationale did discriminate between respondents in conditions with low levels of reactance (conditions 3 and 4). When the rationale was present (condition 3), the inverse relationship between experience and dissonance arousal diminished compared to what was observed in high reactance conditions. Conversely, the strength of this inverse relationship between experience and dissonance arousal
Figure 10. Rationale X reactance X experience interaction effect on dissonance arousal scores
was greater when the rationale was absent in low reactant client condition (condition 4). In condition 4, less experience with paradoxical interventions was associated with higher levels of arousal, while more experience was associated with lower levels of arousal.

In summary, the main effect of higher levels of experience being associated with lower levels of arousal was generally evident (with the exception of condition 3). However, a contrasted effect appeared between the two different rationale conditions with low reactant clients. The main effect diminished for the rationale present condition (experience levels had minimal effect on arousal levels), and that the effect was stronger for rationale absent conditions (experience levels were strongly related to lower levels of dissonance arousal).

Treatment Acceptability

In terms of the regression of treatment acceptability scores (see Table 14), the first step was again determined to be significant in that the effects of experience, rationale and reactance accounted for 10% of the variance in treatment acceptability scores. Once again, only the main effect for experience was significant, indicating that higher levels of experience with paradoxical interventions was associated with higher ratings of treatment acceptability. There were no main effects for rationale or reactance.

Two of the three two-way interactions were significant (see Table 14). The results for the rationale X experience effect suggest that when the rationale was absent, a stronger association of higher levels of experience and higher levels of
treatment acceptability was evident than when the rationale was present. Clinicians
with the most experience with paradoxical interventions reported higher levels of
treatment acceptability when the rationale was absent than when it was present.
Clinicians with relatively less experience with paradoxical interventions reported
higher levels of treatment acceptability when the rationale was present than when it
was absent. This interaction is graphically depicted in Figure 11.

The reactance X experience interaction was also significant (see Table 14).
These results suggest that when the client was high in reactance, a stronger
association of higher levels of experience and higher levels of treatment
acceptability was evident than when the client was low in reactance. Clinicians with
the most experience with paradoxical interventions reported higher levels of
treatment acceptability when the client was high in reactance than when the client
was low in reactance. Clinicians with relatively less experience with paradoxical
interventions reported higher levels of treatment acceptability when the client was
low in reactance than when the client was high in reactance. This interaction is
depicted in Figure 12. There was no significant three-way interaction for scores on
treatment acceptability.

**Dissonance Reduction**

The influence of the manipulated variables on dissonance reduction scores
was evaluated with a 2X2 multiple analysis of variance (MANOVA) procedure. This
procedure was chosen as a more stringent test of possible main effects or
interactions among the dissonance reduction items which did not have sufficient
Figure 11. Rationale X experience effect on treatment acceptability scores
Figure 12. Reactance X experience effect on treatment acceptability scores
internal consistency to warrant analysis as a scale. The results of this procedure are summarized in Table 15. The only multivariate effect that was statistically significant the main effect for reactance. Respondents endorsed stronger levels of agreement with dissonance reduction items when the client was low in reactance than when the client was high in reactance. This was particularly the case with the first, third and fourth dissonance reduction items (Appendix C, items 31, 33, and 34)—each of which was found to be significant in univariate analyses. Compared to groups with highly reactant clients, respondents in groups with the client low in reactance more strongly endorsed these items: 1) I am concerned that the clinical utility of paradoxical interventions has not been sufficiently demonstrated; 2) I am not personally responsible for any manipulation that Chris may perceive; and 3) The outcome of the symptom prescription is attributable to Chris's compliance, not to my own lack of skill. In general, however, there was a limited effect of the manipulated variables on the dissonance reduction items.

The influence of the reactance manipulation on dissonance reduction scores can be further examined by calculating the centroids for the high and low reactance groups. The centroid is a new variable created in the MANOVA procedure and can be calculated by summing the products of mean scores on dissonance reduction items by their respective discriminant weights. A discrepancy between centroid values indicates the nature of the differences between two groups as defined by a particular dependent measure (in this case, dissonance reduction). Respondents in
Table 15. Multiple analysis of variance for dissonance reduction scores

<table>
<thead>
<tr>
<th>Effects</th>
<th>Univariate</th>
<th>Multivariate</th>
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<th></th>
<th></th>
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<td>F</td>
<td>eta²</td>
<td>weights</td>
<td></td>
<td>F</td>
<td>size</td>
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</tr>
<tr>
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<td>.02</td>
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<td>.01</td>
<td>.49</td>
<td>.86</td>
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<td></td>
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</tr>
<tr>
<td>Reduce 3</td>
<td>.02</td>
<td>.00</td>
<td>.00</td>
<td>.09</td>
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</tr>
<tr>
<td>Reduce 4</td>
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<td>.00</td>
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<td>-0.02</td>
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<tr>
<td>Reduce 5</td>
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<td>.00</td>
<td>.07</td>
<td>-0.23</td>
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<td></td>
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<tr>
<td>Reactance</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
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<td>-0.34</td>
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<td>Rationale X Reactance</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reduce 1</td>
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<td>.01</td>
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<td>-0.59</td>
<td>1.21</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Reduce 2</td>
<td>.09</td>
<td>.00</td>
<td>-0.15</td>
<td>-0.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduce 3</td>
<td>2.61</td>
<td>.01</td>
<td>.08</td>
<td>.65</td>
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<tr>
<td>Reduce 4</td>
<td>.08</td>
<td>.00</td>
<td>-0.37</td>
<td>-0.12</td>
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<td></td>
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<tr>
<td>Reduce 5</td>
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<td>.00</td>
<td>-0.21</td>
<td>-0.45</td>
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<td></td>
</tr>
</tbody>
</table>

Note: For all univariate tests, df = (1,186); for all multivariate tests, df = (5,182).
*Denotes p<0.05.
groups with clients low in reactance (M=-4.35) reported stronger agreement with
dissonance reduction items than did respondents in conditions with clients high in
reactance (M=-3.74).

The lack of a strong pattern of significant relationships among dependent
measures by condition suggested that a modeling procedure utilizing path analytic
methods was not warranted. The existing set of findings was further interpreted by
including the most relevant and significant variables in a post-hoc analysis, again
utilizing multiple regression procedures. This procedure does not have the
explanatory power to test the strength of all relationships among the manipulated
and measured variables in the study. However, it is possible to examine basic
questions of interest in this study, including testing for the potential of a mediational
model whereby manipulations of rationale and reactance best explain treatment
acceptability ratings through an affective state of cognitive dissonance.

Post-hoc Analyses

An additional hierarchical regression procedure was conducted to further
examine the relationships among the variables in this study. The variables included
were the two manipulated variables rationale and reactance, the constructed
variable of treatment experience, and the primary dependent variables of
dissonance arousal and treatment acceptability.

First, the scores of dissonance arousal were regressed on four blocks of
variables, entered in a hierarchical manner: 1) treatment acceptability (serving as a
covariate to control for the relationship between dissonance arousal and treatment acceptability; 2) treatment conditions; 3) experience; and 4) the two-way interaction terms. Then, treatment acceptability scores were regressed in an identical procedure, but with dissonance arousal replacing treatment acceptability as the first entry (again, serving as a covariate) in the hierarchical procedure.

This procedure was used to determine the amount of variance in the primary dependent measures (dissonance arousal and treatment acceptability) that can be uniquely explained by treatment conditions and respondent experience. The presence of significant $R^2$ values from steps 2-4 in the analyses would suggest unique effects of the treatment conditions, experience, or the interactions of these on the dependent measures. To the extent that no such significant values were found using this procedure, the possibility existed that some higher order construct better accounts for scores on dissonance arousal and treatment acceptability. The results of these procedures are summarized in Tables 16 and 17. The $R^2$ values from this post-hoc procedure are depicted in Figure 13.

**Dissonance Arousal**

Results (see Table 16) showed an expected strong effect for treatment acceptability scores, which indicated that higher levels of dissonance arousal were associated with lower scores of treatment acceptability. The effects of individual treatment conditions were found to be nonsignificant. Higher levels of experience were associated with lower levels of dissonance arousal.
Table 16. Summary of post-hoc hierarchical regression analysis for variables predicting dissonance arousal scores

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>t</th>
<th>R² change&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Treat. Acceptability</td>
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<td>.04</td>
<td>-0.75</td>
<td>-15.76&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.55</td>
</tr>
</tbody>
</table>

Step 2

|        | Rationale             | -0.52 | .43 | -0.06 | 1.21  |
|        | Reactance             | .78   | .43 | -0.09 | 1.83  |

Step 3

|        | Experience            | -2.35 | .42 | -0.26 | -5.56<sup>*</sup> |

Step 4

|        | Rat X Exp             | .68   | .42 | .08   | 1.61  |
|        | React X Exp           | .44   | .42 | .08   | 1.06  |
|        | Rat X React           | .42   | .40 | .05   | 1.04  |

*Denotes p<.05.

Table 17. Summary of post-hoc hierarchical regression analysis for variables predicting treatment acceptability scores

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>t</th>
<th>R² change&lt;sup&gt;a&lt;/sup&gt;</th>
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</thead>
<tbody>
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<td>.05</td>
<td>-0.75</td>
<td>-15.76&lt;sup&gt;*&lt;/sup&gt;</td>
<td>.55</td>
</tr>
</tbody>
</table>

Step 2

|        | Rationale             | -0.21 | .49 | -0.52 | -0.43 |
|        | Reactance             | .52   | .49 | .05   | 1.05  |

Step 3

|        | Experience            | -0.42 | .56 | -0.04 | -0.75 |

Step 4

|        | Rat X Exp             | -0.17 | .53 | -0.02 | -0.33 |
|        | React X Exp           | 1.16  | .51 | .11   | 1.27  |
|        | Rat X React           | -0.12 | .50 | -0.01 | -0.24 |

*Denotes p<.05.
Figure 13. Diagram of $R^2$ values from post-hoc multiple regression procedures
Treatment Acceptability

Results (see Table 17) showed an expected strong effect for dissonance arousal scores, which indicated that higher levels of treatment acceptability were associated with lower scores of dissonance. The effects of individual treatment conditions, level of experience with paradoxical interventions, and interaction terms were each found to be nonsignificant.

Thus, individual conditions did not have significant effects on respondents' scores on either dissonance arousal or treatment acceptability. Level of experience with paradoxical interventions appears to be a relevant variable in accounting for respondents' ratings of paradoxical interventions, in that higher levels of experience were associated with lower levels of dissonance arousal. In the post-hoc analyses, the interactions between experience level and condition were found to be not significant.

Finally, simple effects tests were conducted to examine the influence of experience on the primary dependent variables (dissonance arousal and treatment acceptability) within each condition. These results are presented in Tables 18 and 19. Once again, dissonance arousal and treatment acceptability were each entered as the first block in a multiple regression procedure for the other in an attempt to control for the strong relationship between these two variables. Then, new variables were constructed that represented respondents' scores on experience for each of the four treatment conditions. These four newly constructed variables were then entered as the second block in the regression procedure.
The results indicated that the simple effects of experience within each of the conditions were statistically significant predictors of dissonance arousal scores, but were not statistically significant predictors of treatment acceptability scores. These results provide support for the hypothesis that dissonance arousal played a mediational role in the relationship between the primary predictors (treatment conditions and experience with paradoxical treatments) and treatment acceptability of paradoxical interventions in this study.
Table 18. Summary of post-hoc hierarchical regression analysis for variables predicting dissonance arousal scores (simple effects testing)

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
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<th>Beta</th>
<th>t</th>
<th>$R^2$ change$^a$</th>
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</thead>
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<td></td>
<td></td>
<td>.55</td>
</tr>
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<td>-0.66</td>
<td>-14.21*</td>
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<td>.07</td>
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<td>-5.12*</td>
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</table>

$^a$Denotes $p<.05$.

Table 19. Summary of post-hoc hierarchical regression analysis for variables predicting treatment acceptability scores (simple effects testing)

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<th>B</th>
<th>SE B</th>
<th>Beta</th>
<th>t</th>
<th>$R^2$ change$^a$</th>
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<td></td>
<td></td>
<td>.55</td>
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<td>-0.77</td>
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<td></td>
<td>.01</td>
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<td>-0.10</td>
<td>-0.90</td>
<td></td>
</tr>
</tbody>
</table>

$^a$Denotes $p<.05$. 
CONCLUSIONS

This study proposed a model to explain the effects that the therapeutic rationale, the level of psychological reactance potential and the level of experience with paradoxical interventions have on licensed psychologists' ratings of treatment acceptability of paradoxical interventions. This model was hypothesized to include cognitive dissonance arousal as a mediating variable, and dissonance reduction strategies to be endorsed when arousal levels became significant. Specific predictions were made regarding main effects and interactions, as well as the content and interrelationships of variables in a proposed overall model.

A sample of experienced, licensed psychologists reported generally favorable ratings of paradoxical interventions. The clinical case vignette used in the study was found to be credible, and with only one exception, the multi-item scales developed for use in this study appeared to have adequate psychometric properties for inclusion in this study. Psychologists' ratings of treatment acceptability for a variety of interventions were consistent with previous research in noting that paradoxical interventions were rated generally lower in acceptability than were other interventions (Hunsely, 1993; Betts & Remer, 1993; Cavell et al., 1986). Consistent with Dowd's (1995; 1986) conceptualization, respondents reported that the likely mechanisms of change for paradoxical interventions included a novel reframe as well as the use of a therapeutic double-bind.
Primary analyses revealed several significant predicted interactions, although predicted main effects for manipulated variables were not significant. It was found that the overall hypothesized model did fit the pattern of results, indicating that dissonance arousal did play a mediational role between primary predictor variables (rationale, reactance and experience) and treatment acceptability scores.

This chapter is organized into two sections, and begins with a summary of the results of this study, including a review of significant findings and potential reasons for nonsignificant findings that were hypothesized. This chapter concludes with a critique of the study, including a description of the strengths, unique aspects, and limitations of the study. Finally, suggestions for future research are offered.

Summary

Respondents

Respondents reported a broad range of clinical experience, the vast majority practicing at the doctoral level (primarily Ph.D.). Nearly half of the respondents reported primary practice settings in private or group practice. Although the nature of respondents' clientele, type of treatment and theoretical orientation was diverse, many indicated that the majority of their time was spent working with adults in individual treatment, with a preference toward eclectic/integrative, cognitive, and behavioral treatment approaches. In a general sense, cognitive and behavioral treatments were perceived to be more acceptable than symptom prescription. One
set of items asked respondents to indicate their belief about the mechanism of change in paradoxical interventions. Results showed that the sample of psychologists mean ratings were consistent with Dowd's (1995; 1986) aforementioned opinion that providing a novel reframe and a therapeutic double-bind are the most likely means by which paradoxical interventions affect client change.

In terms of experience with paradoxical interventions, the majority of respondents indicated that they had used paradoxical interventions, had received training and supervision in using paradoxical interventions, and believed that using such treatment approaches requires extensive training and supervision. Most disagreed that paradoxical interventions conflict with principles of informed consent, and reported that these interventions were ethically sound and can be effective in leading to client change. In general, this sample of licensed psychologists reported favorable ratings for this class of interventions, although a minority of respondents provided ratings indicating very limited experience using these interventions and strong negative ratings in terms of overall acceptability.

Response Rate

A response rate of 38.2% is certainly less than would have been desired for a project of this size, and indicated some limit to the external validity of the results. Weathers, Furlong and Solorzano (1993) reported that 43.5% of studies selected over a nine year period in The Journal of Counseling Psychology reported response
rates of less than 50%; just under 10% of those studies reported response rates of less than 40%. It was encouraging that response rates did not differ significantly by state or condition, nor did the gender ratios of respondents differ significantly from expected values.

Effectiveness of Manipulations and Instrument Development

The experimental manipulation of whether or not a rationale was to be given for the paradoxical intervention was generally effective, though more strongly for the rationale absent than for the rationale present condition. It is possible that the presence of a rationale is defined differentially by clinicians, contingent upon their own theoretical orientations, experiences, and particular case characteristics. It is noteworthy that some studies (Boettcher & Dowd, 1988) have provided several different levels of treatment rationale in an experimental study.

The other experimental manipulation (reactance level of the proposed client) was less successful. The effect for low reactance conditions was quite good, whereas the effect for high reactance conditions (though significantly different from low reactance conditions on the manipulation check item) was perceived rather ambiguously. Review of this manipulation suggests possible reasons that may account for this lack of strong effect.

First, the representation of a highly reactant client may have failed to portray a person who truly behaves in ways that are characterized as resisting interpersonal influence. It is possible that the highly reactant client was instead perceived to be
passively lacking in commitment to treatment, rather than oppositional and actively resistant. Secondly, the manipulation check item may have been an inadequate test to discriminate perceptions of this personality variable. A third possibility is the notion that it may be quite difficult to present high levels of psychological reactance in a brief vignette. The level of clarity and emotional impact that occurs when one is engaged in an interpersonal exchange with such a client, with the intent to establish trust and provide some level of professional influence, would certainly be expected to be a qualitatively different experience than can be obtained by reading a vignette.

Across conditions, the vignette was perceived to have good clinical credibility. There was some tendency for respondents to be better able to relate to the role of psychologist when the client in the vignette was low in reactance. This may be associated with the ambiguously perceived high reactance conditions, although the base rate of levels of psychological reactance in the general population may offer some additional insight into this result. If high levels of reactance are generally less commonly presented in clinical settings or in the general population, one would expect low ratings of perceived similarity between vignettes with highly reactant clients and everyday clinical practice.

In terms of the respondents' abilities to imagine themselves in the psychologist role, the results were consistent with previously defined compliance- and defiance-based theoretical notions about the use of paradoxical interventions (Rohrbaugh, Tennen, Press & White, 1981). Specifically, a significant interaction indicated that in conditions with no rationale, respondents were better able to
imagine themselves in the role with the client was high in reactance than with the client low in reactance (consistent with a defiance-based strategy). The opposite effect emerged in conditions with the rationale present. In these conditions, respondents were better able to imagine themselves in the role with the client low in reactance than with the client high in reactance (consistent with a compliance-based strategy).

Three multi-item scales (dissonance arousal, treatment acceptability, and dissonance reduction) were constructed to measure the effects of these experimental manipulations, and a fourth was constructed to measure level of experience with paradoxical interventions. With the exception of the dissonance reduction scale, these measures were found to have adequate psychometric properties to warrant their inclusion as variables in subsequent analysis. As predicted, a strong negative correlation was found between dissonance arousal and treatment acceptability.

This relationship was strong enough to warrant an examination of the discriminant validity of these two variables. The very high internal consistencies of both scales, the results of confirmatory factor analyses, and an examination of item and scale statistics appeared to establish adequate discriminant validity to justify the inclusion of these measures as distinct variables within the primary analyses. In addition to results which suggest a significant amount of unique variance prior to performing the primary analyses, the subsequent regression analyses revealed
somewhat different patterns of associations when scores on these scales were regressed on the set of predictor variables.

**Results of Primary Analyses and Test of the Model**

A number of demographic variables were hypothesized to have some predictive value in relation to the primary criterion variables. Statistical significance was the criterion for determining if a variable or set of variables was to be included as the first step in a hierarchical regression procedure. However, the results showed that none of these variables made a significant contribution to the proposed model. This result led to the decision to exclude all demographic variables from subsequent analyses.

Examination of these demographic variables provides some suggestions to explain this lack of significant findings. First, some of these hypothesized predictors may have lost some of their predictive power due to the need to convert the scale of measurement to a format suitable for meaningful analysis. For example, theoretical orientation items were written in such a way to obtain a level of emphasis on a variety of orientations for each individual respondent. Although this provides some interesting descriptive data that may capture more external validity for clinicians with multidimensional perspectives, these continuous, non-independent measures were not suitable for inclusion in these analyses. A conversion was conducted to establish independence of ratings (e.g., the "primary adherent" results reported earlier) and to categorize this variable. However, this process resulted in excluding
a significant number of respondents who may have otherwise been useful in enhancing the predictive power of the analyses. Also, the use of many single item measures with limited variance may have also d the ability to adequately test the demographic hypotheses. The inclusion of demographic predictors based on measures that have well-established psychometric properties is recommended for future studies.

Analyses were done separately for the dissonance reduction items, which lacked adequate internal consistency to be included as a multi-item measure, and so were subjected to a procedure targeted to evaluate the effects of the manipulated variables on each of the items individually as well as in a multivariate analysis. As was previously mentioned, due to very low internal consistency, the dissonance reduction items were subjected to their own analytic procedure (MANOVA) to evaluate the impact of manipulated variables on these dependent measures. The only significant multivariate effect that emerged indicated that respondents in conditions with clients low in reactance indicated more agreement with dissonance reducing strategies than did respondents in conditions with clients high in reactance. This is somewhat difficult to interpret, given the lack of a reactance main effect and two-way interactions on arousal scores. It might be that these dissonance reduction items do not in fact represent constructs that reduce a negative affective state, but instead some other construct associated with the reactance potential of the client. The limited impact of predicted variables on dissonance reduction strategies may simply be a product of the limited overall levels
of dissonance arousal on the part of respondents. That is, the reduction of negative affect presupposes the initial presence of such affect.

As predicted, a main effect on dissonance arousal and treatment acceptability scores for the variable measuring experience with paradoxical interventions was significant. This relationship indicated that as a clinician's level of experience with paradoxical interventions is greater, their ratings of dissonance arousal were lower and their ratings of treatment acceptability were higher. This result is certainly not surprising, but the inclusion of this variable was important to the extent experience was predicted have a moderating effect on the influence of the predictor variables.

For both dissonance arousal and treatment acceptability, no main effects were found for either of the experimental manipulations of rationale and reactance. Earlier, the discussion of the only partially effective manipulation of high levels of reactance was noteworthy in the implications that result would have on predictions about manipulated effects on the primary dependent measures. An ambiguously perceived vignette intended to portray high levels of reactance would be expected to diminish the power of that manipulation, whether measuring an affective state of discomfort or the acceptability of the treatment. The absence of a main effect for rationale is not well understood by merely examining the effectiveness of the experimental manipulation—a manipulation that appeared to have been successful.

The effect of the rationale manipulation seems to have occurred within the context of an interaction with the measure of psychologists' levels of experience.
with paradoxical interventions. The pattern of the interactions were found to be as predicted for both dissonance arousal and treatment acceptability, although the amount of variance these interactions explain in the dependent measures is in fact minimal.

The nature of these interactions suggested that, when compared to respondents with less experience, respondents when more experience reported lower levels of dissonance arousal in conditions with the rationale was absent than when the rationale was present. In addition, when compared to respondents with more experience, respondents with less experience reported lower levels of dissonance arousal in conditions when the rationale was present than when the rationale was absent.

With regard to treatment acceptability, when compared to respondents with less experience, respondents with more experience reported higher levels of treatment acceptability in conditions when the rationale was absent than when the rationale was present. Also, when compared to respondents with more experience, respondents with less experience reported higher levels of treatment acceptability in conditions when the rationale was present than when the rationale was absent.

The hypothesized prediction of a reactance X experience interaction was found for treatment acceptability scores, but not for dissonance arousal. The interaction for treatment acceptability indicated that, when compared to respondents with less experience, respondents with more experience reported higher levels of treatment acceptability in conditions when the client was high in reactance than in
conditions when the client was low in reactance. Also, when compared to
respondents with more experience, respondents with less experience reported
higher levels of treatment acceptability in conditions when the client was low in
reactance than in conditions when the client was high in reactance.

This reactance X experience interaction was consistent with predictions, but
accounted for a very limited amount of the variance in treatment acceptability
scores. The statistic for the dissonance arousal interaction did not approach
significance. The absence of the reactance X experience interaction for dissonance
arousal scores was not expected, and is especially interesting in that the predicted
interaction was significant for treatment acceptability.

Consider the hypothesis that, in general, the experience levels of clinicians
has a bearing on the relative importance of the manipulated variables. Perhaps,
within this context, varying levels of psychological reactance in patients was seen
as relevant in determining the appropriateness of a treatment (producing a
significant interaction with treatment acceptability), but not so important as to elicit
affective discomfort in the form of cognitive dissonance (the absence of a
dissonance arousal interaction). On the other hand, it may be that the presence or
absence of a therapeutic rationale is an even more salient consideration than is the
reactance potential of the client, particularly when considering the experience level
of the clinician. Under such circumstances, the manipulation of the rationale
construct may be significant enough to influence acceptability ratings as well as to
elicit changes in cognitive dissonance—accounting for the rationale X experience
interactions which were significant for both dissonance arousal and treatment acceptability.

One might also consider the notion that level of reactance potential is a construct obviously within the domain of the client's part of the therapy interaction. Meanwhile, the choice to withhold or disclose a rationale for treatment is within the domain of the psychologist. Perhaps the reason that dissonance arousal was predicted by an interaction involving the rationale manipulation and not reactance is due to some form of perceived responsibility over the rationale, whereas the relevance of reactance could be dismissed as an affective issue on the basis of reactance being a personality variable external to the psychologist and the responsibility of the client. Once again, it is worth noting that the ambiguously perceived manipulation of high levels of reactance may not have allowed for an adequate test of some of the hypotheses that involved that variable.

An unexpected three-way interaction for rationale X reactance X experience was found for dissonance arousal scores. The same general effect of higher levels of experience being associated with lower levels of dissonance arousal was evident in the conditions with clients designated as high in reactance. However, with clients low in reactance, the presence or absence of a rationale seemed to have a differential effect on the general relationship between experience and arousal. For clients low in reactance, higher levels of experience was very minimally associated with lower levels of arousal when the rationale was present. However, when the
rationale was absent, higher levels of experience were very strongly associated with

Taken together, this pattern of main effects and interactions seems to

suggest that the level of the psychologists' experience with paradoxical interventions

is an important variable in the process of evaluating treatment acceptability. With

regard to predicting the importance that client reactance potential and the role of the

rationale have on making such judgments, clinicians with varying levels of

experience may come to divergent conclusions.

A post-hoc set of regression analyses was conducted to include those

variables that did play a part in some predicted findings. The purpose of this

procedure was to simply determine what (if any) effect the manipulated variables

had on the primary dependent measures. A central distinguishing feature of this

analysis was the inclusion of treatment acceptability and dissonance arousal as

initial variables for entry into the other's respective regression analysis. This was

conducted in an attempt to control for the strong relationship between the two

variables.

This procedure demonstrated the expected strong relationship between
dissonance arousal and treatment acceptability. The effect of treatments on either
dissonance arousal or treatment acceptability were nonsignificant. The role of
experience with paradoxical interventions was determined via the aforementioned
post-hoc analysis, as well as via simple effects testing to examine the role of
experience in predicting dependent measures within each condition. Experience
was a significant predictor of dissonance arousal scores, but not of treatment acceptability scores. The overall pattern of these results indicated that a model that places dissonance in a role which mediates that effect of rationale and reactance on treatment acceptability ratings did fit the data.

Critique

This study proposed to offer insight into the process by which psychologists make decisions about the appropriateness of paradoxical interventions. The experimental nature of the study utilizing clinical vignettes provided a high level of internal validity that was beneficial in testing fairly specific hypotheses, but as is well understood in the literature, limits the external validity of the study.

The central premise of the study was to examine the role of cognitive dissonance in the rating of treatment acceptability of paradoxical interventions. As previously noted in this document, most studies of dissonance arousal involve attitude change secondary to the experience of arousal. This study was designed to measure the level of arousal, but not attitude change. However, it may be possible to consider the experience with paradoxical interventions variable as a pre-treatment measure of treatment acceptability, given the attitudinal nature of three of five of the items. This would allow for comparisons with treatment acceptability scores.

The results indicated that dissonance did mediate the relationship between primary predictor variables (rationale, reactance, and experience) and treatment
acceptability. This occurred despite the fact that the data demonstrated that dissonance arousal and treatment acceptability (as defined and measured in this study) were highly related constructs.

The current study surveyed licensed psychologists to assess their evaluation of treatment acceptability of symptom prescription, manipulating the presence or absence of a rationale and the degree of client psychological reactance. The conditions of the study were fully crossed (a problem in Hunsley & LeFebvre, 1991), and a number of respondents adequate for the proposed statistical analyses was targeted (Hunsley, 1993, reported that inadequate power may have compromised conclusions of his study). Measures were taken to enhance response rate (Weathers, Furlong, & Soloranzo, 1993). The measurement of theoretical orientation was more sophisticated than Hunsley and LeFebvre's (1991) distinction between "strategic/systemic" and "other," and reflected the current literature on measuring this important dimension of professional practice (Poznanski & McLennan, 1995). Compared to previous studies, a more detailed, behavioral description of psychological reactance potential (which includes current personality assessment research) was used in the vignette (Dowd et al., 1994).

This study offers new information in the form of a quantitative assessment of licensed psychologists' levels of experience with paradoxical interventions. Most respondents in this study reported that they indeed had used paradoxical interventions, that they had training and supervision in the use of such interventions, and that such training and supervision is an important condition for
the practice of utilizing paradoxical interventions. Most respondents believed that such interventions are ethically sound and can be effective strategies to facilitate client change. Although the presence of critical writings regarding the nature and use of paradoxical treatment strategies has been in the literature of the last two decades, these results suggest that a majority of clinicians do not endorse such criticisms.

Considering the previous statement within the context of the findings of this study (particularly the significant two-way interactions), one might also suggest that level of experience with paradoxical intervention can be a relevant variable in making finer distinctions about treatment acceptability when previously researched variables (e.g., rationale, reactance) are considered. This addresses the second purpose of the study: to gain an understanding of clinicians' decisions concerning whether to use paradoxical interventions. When compared to clinicians with less experience using these interventions, clinicians with more experience may be more likely to consider the reactance potential of clients and the potential impact of whether to include a therapeutic rationale. Clinicians with more experience seemed to be more accepting of using paradoxical interventions with clients higher in reactance, and more accepting of not disclosing the rationale.

Future researchers might enhance the efforts begun in this project by designing process research to better understand the specific decision rules about treatment acceptability that therapists employ when considering treatment options. The specificity of the interactions of experience with manipulated variables in this
study suggest that such decisions may well be very specific to a clinician's familiarity with a particular intervention. Conducting such studies in the context of actual treatment would certainly be of benefit to enhance the generalizability of this line of research.

Also, future studies in this area would clearly benefit from selecting well-defined, potentially robust predictor variables measured with scales of established psychometric soundness. For example, multi-item measures of theoretical orientation may capture some of the differences that distinguish persons who endorse paradoxical interventions under certain conditions more than others.

Qualitative research to elicit responses from clinicians regarding their own criteria for acceptable usage of paradoxical interventions would also be a recommended approach to identify salient variables to include in future studies. It would also be interesting to identify the extent to which clinicians truly experience some form of cognitive dissonance in the therapy process, when confronted with the choice to work paradoxically. If future studies were to use dissonance arousal as a potential mediator, assessment of clinician behaviors as rated by observers as a dependent measure rather than self-reports of attitudes should also be considered.
APPENDIX A

COVER LETTER FOR INITIAL MAILING
August 1, 1996

Dear Colleague:

We are requesting your participation in a study of psychologists' practices in the use of paradoxical interventions. You have been selected to receive this survey because you are in a unique position to help provide a better understanding of current professional attitudes and practices in this area of psychology. Your perspectives and responses are essential to this study and are highly valued.

Research studies have indicated that the use of paradoxical interventions has been associated with controversy among practicing psychologists who must strive to both meet the needs of their clients with effective therapeutic interventions while maintaining the highest ethical standards of practice. The controversy associated with treatment acceptability of paradoxical interventions substantiates the need for an accurate assessment of attitudes and practices within the profession.

This research project has been reviewed and approved by the University Committee on Participants in Research and meets applicable ethical standards and guidelines. Your completion and return of the anonymous survey will constitute modified informed consent for participation in this project.

Completion of this anonymous survey will likely take approximately 15 minutes. Your responses will be kept confidential. We request that you not put your name or any other identifying information anywhere on this survey.

The response card in this packet (to be returned separately) is coded with a number that does not appear on the survey or the return envelope. The coded response cards are used only so we can send surveys to individuals who did not respond to the first mailing. At no time will completed surveys be associated with the code number or any other identifying information.

After completing the survey, please mail it in the enclosed postage paid envelope. In addition, please return the attached postage paid response card separately so that your anonymity will be assured. We would appreciate a response by May 15.

We greatly appreciate your cooperation, and value your responses.

Sincerely,

Michael C. March, M.S.  
Principal Investigator

Norman A. Scott, Ph.D.  
Associate Professor

Camilla P. Benbow, Ed.D.  
Professor and Chair
APPENDIX B

COVER LETTER FOR FOLLOW-UP MAILING
September 12, 1996

Dear Colleague:

We are making a second request for your participation in a study of psychologists' practices in the use of paradoxical interventions. You have been selected to receive this survey because you are in a unique position to help provide a better understanding of current professional attitudes and practices in this area of psychology. Your perspectives and responses are essential to this study. Hence, we are following up on the request made to you during August, 1996 with a second, identical survey packet, as we *need* and *value* your responses.

This research project has been reviewed and approved by the University Committee on Participants in Research and meets applicable ethical standards and guidelines. Your completion and return of the anonymous survey will constitute modified informed consent for participation in this project.

Completion of this anonymous survey will likely take approximately 15 minutes. We realize that as a professional psychologist you already have many demands on your time. We hope that you will find time to assist us in this study, as your knowledge and experience are critical in understanding this area of professional practice.

Your responses will be kept confidential. We request that you not put your name or any other identifying information anywhere on this survey. At no time will completed surveys be associated with any identifying information. After completing the survey, please mail it in the enclosed postage paid envelope. If you have already completed and returned the prior survey, thank you.

We greatly appreciate your involvement, and look forward to your responses.

Sincerely,

Michael C. March, M.S.
Doctoral Candidate

Norman A. Scott, Ph.D.
Associate Professor

Camilla P. Benbow, Ed.D.
Professor and Chair
APPENDIX C

SURVEY (CONDITION 1)
SURVEY OF LICENSED PSYCHOLOGISTS

Please return the completed survey in the enclosed postage-paid envelope. In order to maintain the anonymity of your responses, please do not write your name or any other identifying information on the survey or the envelope. Your responses will remain anonymous and confidential. Due to the need to use research resources efficiently, clinical information in the case description is necessarily brief.

Thank you for your investment in this study.

We would value your perspectives on the following statements (please use the scale below):

- 1. strongly disagree
- 2. moderately disagree
- 3. slightly disagree
- 4. slightly agree
- 5. moderately agree
- 6. strongly agree

1. ___ I have used paradoxical interventions in my practice.
2. ___ I have received training and supervision in the therapeutic use of paradoxical interventions.
3. ___ Paradoxical interventions conflict with principles of informed consent.
4. ___ Paradoxical interventions can be effective treatment strategies.
5. ___ The use of paradoxical interventions requires extensive training and supervision.
6. ___ Paradoxical interventions are ethically sound treatment strategies.

Please read the following case vignette:

Imagine that you are employed by a mental health agency as a licensed staff psychologist. You provide outpatient psychotherapy and psychological assessment in addition to performing supervisory and administrative responsibilities. Your client Chris has been in therapy with you for a total of five sessions, and you would describe your relationship as “excellent.” Treatment has been focused on reducing Chris’s symptoms of anxiety associated with a major adjustment in job responsibilities; primary symptoms are excessive rumination and worrying, irritability, fear of losing control, and restlessness. You are scheduled to present your work with Chris at the next agency case conference.

Chris expressed a high degree of interest in therapy, but has shown less behavioral commitment. Chris has arrived late to several sessions and has failed to complete mutually agreed-upon assigned readings and journaling tasks. Chris’s behaviors within session are characterized with some reluctance in terms of taking risks. Personality assessment results suggested low concern for making a good impression, low concern for following social norms, low tolerance of other’s beliefs and values, and an inclination to express strong feelings and emotions.

At this point, it is the end of your fifth session with Chris. You have decided to administer a paradoxical intervention known as symptom prescription. Specifically, you formulate (with Chris’s assistance) the task of scheduling nightly homework sessions, one hour in duration, when Chris is to sit down in front of work brought home from the place of employment. Meanwhile, Chris is assigned to engage in and exacerbate previously described symptoms of anxiety. For example, behaviors should present restlessness and fidgeting, and avoidance of completing work-related tasks. Additionally, Chris has been instructed to ruminate extensively on the overwhelming nature of the new job, and to focus on previously described fears regarding the perceived inability to manage responsibilities.

In the process of assigning this intervention, you provide specific explanations of how you expect the paradoxical intervention to lead to the desired behavior change.
Please use the scale below for all of the items on this page:

<table>
<thead>
<tr>
<th></th>
<th>strongly</th>
<th>moderately</th>
<th>slightly</th>
<th>slightly</th>
<th>moderately</th>
<th>strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>disagree</td>
<td>disagree</td>
<td>disagree</td>
<td>agree</td>
<td>agree</td>
<td>agree</td>
</tr>
</tbody>
</table>

Please rate the extent to which you agree with the following statements about the vignette:

7. ____ Chris appears to be resisting my interpersonal influence as a therapist.
8. ____ Chris was given the rationale for this intervention.
9. ____ Chris's problem and behaviors are generally similar to those presented by clients in my clinical practice.
10. ____ I am comfortable working with Chris.
11. ____ I am able to imagine myself in this psychologist role.
12. ____ This is an acceptable choice of intervention for this case.
13. ____ The treatment should be effective in changing Chris's symptoms.
14. ____ Chris's symptoms are severe enough to justify the use of this intervention.
15. ____ I would be willing to use this treatment with one of my own clients.
16. ____ This intervention is likely to have bad side effects for Chris.
17. ____ I expect positive results from this particular intervention.
18. ____ Overall, this form of treatment will be helpful.
19. ____ I am confident that a paradoxical intervention would be appropriate with Chris.
20. ____ Given a successful outcome, I would consider using symptom prescription again in the future.
21. ____ The potential benefits of using a paradoxical intervention outweigh the potential risks.
22. ____ I provide only those treatments that have been empirically validated.

Please rate the extent to which you agree with the following statements about the vignette:

23. ____ I regret taking the risk of providing this intervention.
24. ____ I feel guilty about prescribing Chris's symptoms.
25. ____ I have deceived Chris with my choice of intervention.
26. ____ I feel tension after prescribing a paradoxical intervention with Chris.
27. ____ I am uncomfortable about the potential damage that may be done to my relationship with Chris.
28. ____ I have been unjustifiably manipulative toward Chris.
29. ____ I have no apprehension about administering a paradoxical intervention with Chris.
30. ____ I will be comfortable sharing this intervention choice with my colleagues.
31. ____ I am concerned that the clinical utility of paradoxical interventions has not been sufficiently demonstrated.
32. ____ The influence of managed care in psychotherapy encourages the use of provocative interventions.
33. ____ I am not personally responsible for any manipulation that Chris may perceive.
34. ____ The outcome of the symptom prescription is attributable to Chris's compliance, not to my own lack of skill.
35. ____ My ethical concerns about paradoxical interventions make this a poor choice for this client.

Please rate the extent to which you agree that the following interventions would be appropriate for Chris:

36. ____ Analysis of transference and countertransference
37. ____ Assertiveness training
38. ____ Relaxation training
39. ____ Symptom prescription
40. ____ Challenge cognitive distortions and irrational thinking

Please rate the extent to which you believe each option represents how paradoxical interventions produce client change:

41. ____ Placing the client in a therapeutic double bind
42. ____ Capitalizing on a client's tendency to resist the influence of the therapist
43. ____ Creating such a therapeutic ordeal that the client begins to avoid symptomatic behaviors
44. ____ Providing the client with a novel frame of reference for the problem and its solution
Please use the scale below to respond to the next two sets of items:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no</td>
<td>slight</td>
<td>moderate</td>
<td>strong</td>
<td>very strong</td>
</tr>
<tr>
<td>emphasis</td>
<td></td>
<td>emphasis</td>
<td>emphasis</td>
<td>emphasis</td>
<td>emphasis</td>
</tr>
</tbody>
</table>

In your clinical practice, indicate your emphasis on each of the following theoretical orientations:

45. ___ Cognitive/rational
46. ___ Behavioral
47. ___ Psychodynamic
48. ___ Existential
49. ___ Systemic
50. ___ Eclectic/integrative

In your clinical practice, indicate your emphasis on each of the following factors:

51. ___ Being directive as a therapist
52. ___ Being active and spontaneous as a therapist
53. ___ Maintaining personal distance from the client
54. ___ Attending to the client's objective, observable behaviors
55. ___ Attending to my subjective, intuitive elements of experience
56. ___ Focusing on conscious processes
57. ___ Focusing on unconscious processes

Please respond to the following:

58. What is your sex (please circle): M F
59. Please write in your age: _____
60. Please write in your number of years of post-doctoral clinical experience: _____
61. Highest academic degree (please check):
   ___ M.A./M.S.   ___ Ph.D.   ___ Ed.D.   ___ Psy.D.

62. Indicate the primary setting in which you practice (please check one):

   ____ Child facility
   ____ Community mental health center
   ____ Consortium
   ____ Health Maintenance Organization
   ____ Medical School
   ____ Military Medical Center
   ____ Private general hospital
   ____ Private psychiatric hospital
   ____ State/county hospital
   ____ University counseling center
   ____ VA Medical Center
   ____ Other ____________________

63. Indicate (by writing estimated percentages in columns that total 100%) the percentage of your clientele that are:

   Children _____  Individual _____ 100%
   Adolescents _____  Marital _____
   Adult _____  Family _____
   Geriatric adult _____  Group _____ 100%
APPENDIX D

RESPONSE CARD
Please return this response card *separately* from your completed survey. Thank you again for your investment in this study.
APPENDIX E

MASTER TABLE OF MEANS BY CONDITION
Master Table of Means by Condition

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
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REFERENCES


ACKNOWLEDGEMENTS

The completion of my time at Iowa State University is met with a variety of emotions. Certainly, the completion of formal coursework, practica and research projects is associated with satisfaction, a bit of relief and a great deal of pride. Yet the final stages of this project bring forth awareness of the transitions inherent in so many relationships during my doctoral program. Mentors, colleagues, friends and family have all shared in my professional development in meaningful ways.

First, I extend my appreciation toward the members of my doctoral program of study committee: Norm Scott, Fred Borgen, Carolyn Cutrona, Harve Joanning and Dan Russell have each made important contributions toward my training as a psychologist. A few of the respective qualities that these persons have modeled for me include sound judgment and precise forethought, the value of teaching with emphasis on both context and nuance, a passion for exemplary standards of scholarship and integrity, an appreciation for alternative epistemologies, and a talent for bringing clarity and pragmatism to seemingly elusive ideas. I hope to embody these principles in my future endeavors.

With regard to my close friends and classmates Ken Dodge and Marcy Halvorson, I eagerly anticipate continuing fellowship, consultation and reminiscing. I am appreciative for the true friendships that we’ve developed and proud of what each of us has been able to achieve with the benefit of mutual encouragement and support. To graduate with these two persons is indeed an honor.
Without question, the greatest treasures I have found in this town are the relationships with my wife Amy and our son Harrison. Through the richness and wonder of our experiences I have come to identify those aspects of being that are most deeply meaningful. Words are inadequate for the task of expressing my thanks for their presence and contributions to my life. The closure of my academic training provides greater opportunities to express gratitude to them (and all of the forthcoming members of our family) through actions.