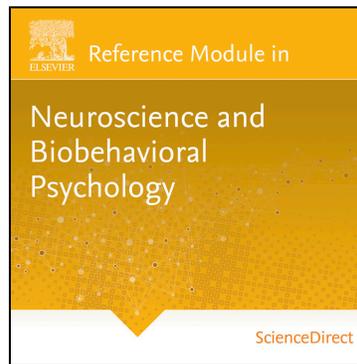


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Control-Mastery Theory[☆]

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Glossary

Anti-plan intervention An anti-plan intervention (including an interpretation), is an intervention that may impede patients in their efforts to carry out their unconscious plans. For example, a person who is working to become more independent may be set back by the interpretation that he or she is afraid of his or her dependency (see unconscious plan).

Pathogenic belief A belief that is in varying degrees unconscious and that underlies the patients' problems. It warns persons suffering from it that if they attempt to solve their problems, they will endanger themselves or others. For example, persons may be impeded in their quest for success by the pathogenic belief that if they are successful they may hurt others.

Pro-plan intervention An intervention (including an interpretation) that patients may use in their efforts to carry out their unconscious plan. For example, patients who want to be successful but believe that their success will hurt others may be helped by the interpretation that they are holding themselves back lest they hurt others.

Survivor guilt The kind of guilt felt by persons who believe they have surpassed others by obtaining more of

the good things of life than others. Pathogenic beliefs are often concerned with survivor guilt toward parents and siblings.

Unconscious plan The patient's unconscious plan (which in some cases may be partially conscious) specifies where patients want to go in their therapy and refers to the patient's wish to disconfirm pathogenic beliefs. The unconscious plan is usually broad, loosely organized, and opportunistic. It is not a blueprint. It takes account of the therapist's personality and of changing life circumstances. An example is a person's planning to overcome his or her fear of rejection so that he or she may develop closer ties to others.

Unconscious test An experimental action, ordinarily verbal, that the patient produces in relation to the therapist. The patient's purpose is to disprove his or her pathogenic beliefs. Patients hope that the therapist will pass their tests and so help them to disprove these beliefs. For example, patients who believe that they will be rejected may threaten to stop treatment, hoping unconsciously that the therapist will indicate or imply that the patient should continue.

Introduction

Control-mastery theory is a theory of the mind, of how psychopathology develops, and how psychotherapy works. The theory derives its name from two foundational premises: that a person's *control* over their mental life is regulated by perceptions of safety and danger and that patients come to therapy in order to achieve *mastery* over their problems and conflicts. It was introduced by Joseph Weiss (1952, 1967, 1971, 1986), and was further developed and investigated empirically by Weiss,

[☆]Change History: January 2016. G Silberschatz made some changes to the text and updated the Reference section.

Harold Sampson, and the San Francisco Psychotherapy Research Group¹ (Weiss et al., 1986; for an overview of the research, see Silberschatz, 2005).

Control-mastery theory assumes that patients are highly motivated both consciously and unconsciously to solve their problems, to rid themselves of symptoms, and to pursue important life goals such as a sense of well-being, a satisfying relationship, or a meaningful career. Patients are typically in conflict about wanting to accomplish these things because they suffer from pathogenic beliefs or schemas. These beliefs, which are often unconscious, warn the patient that moving toward their goals will endanger themselves or their loved ones. Patients work throughout therapy to change these beliefs and to reach their forbidden goals. They work to disconfirm their pathogenic beliefs by testing them in relation to the therapist, hoping that the therapist will pass their tests (i.e., disconfirm their pathogenic beliefs). In addition, patients use therapist interventions and interpretations to realize that their pathogenic beliefs are maladaptive and a poor guide to behavior. The therapist's primary task is to help patients in their efforts to disprove their pathogenic beliefs and to achieve their adaptive life goals.

Theory of Psychopathology

As our research and the results of numerous experimental psychology studies have demonstrated, people perform many of the same functions unconsciously that they perform consciously. They unconsciously assess reality, think, and make and carry out decisions and plans. They unconsciously ward off mental contents, such as memories, motives, affects, and ideas, as long as they consider them dangerous. They unconsciously allow such contents into awareness when they decide (consciously or unconsciously) that they may safely experience them.

A person's perception of danger and the pathogenic beliefs related to it typically stem from adverse or traumatic childhood experiences. According to control-mastery theory, traumatic experiences play a central role in the development of psychopathology. Weiss (1993) posited two types of traumatic experiences: (1) shock trauma: discrete catastrophic childhood events such as the death or serious illness of a parent that overwhelm the child's coping capacities; and (2) stress trauma: persistent traumatic experiences from which the child cannot escape, such as growing up in a dysfunctional family or being raised by a depressed parent. Children develop theories as part of their efforts to cope with trauma and in their theorizing they are prone to draw irrational or false conclusions, which typically lead to self-blame and guilt (Shilkret and Silberschatz, 2005).

Weiss (1993) argued that self-blaming pathogenic beliefs are frequently the cornerstone of later psychopathology. This is because for the infant and young child, parents are absolute authorities whom the child needs in order to survive. Young children are highly motivated to maintain their all-important attachments to their parents. In order to do this they must believe their parents' teachings are valid and that the ways their parents treat them are appropriate. For example: a child who had been mistreated by her parents developed the pathogenic belief that she deserved mistreatment. That unconscious belief led to psychopathology later in her life including depression, disturbed relationships, and substance abuse (Silberschatz, 2008). The strength of children's attachments to their parents, and of the pathogenic beliefs acquired in their relations to their parents, is shown by the observation that adults, who in therapy are attempting to give up their pathogenic beliefs, often feel disloyal to their parents. If adult patients believe they have surpassed their parents by giving up the maladaptive beliefs and behaviors that they learned from their parents, and are there by able to enjoy better lives than their parents, they are likely to experience survivor guilt (surpassing guilt) toward their parents.

The Therapeutic Process

Psychotherapy is the process by which patients work with their therapists to change their pathogenic beliefs and to pursue the goals forbidden by these beliefs. Pathogenic beliefs are internalized cognitive-affective representations of traumatic experiences. Typically, they are extremely painful, constricting, and debilitating (Silberschatz and Sampson, 1991). Control-mastery theory assumes that psychotherapy patients are highly motivated to disconfirm or relinquish pathogenic beliefs. This fundamental motivation to solve problems and master conflicts is embedded in the concept of the patient's plan (Silberschatz, 2005; Weiss, 1993). According to control-mastery theory, patients come to therapy to get better and they have a plan for doing so: by disconfirmation of their crippling pathogenic beliefs. In therapy—as in other aspects of a person's life—plans are frequently unconscious or not consciously articulated; nonetheless, the plan organizes the patient's behavior and plays an important role in evaluating and filtering information. Patients work in therapy to disconfirm pathogenic beliefs by testing the therapist and/or by using new knowledge or insight developed during therapy. One of the primary ways that patients work in psychotherapy is by testing their therapist. Patients test their pathogenic beliefs by trial actions (usually verbal) that according to their beliefs should affect the therapist in a particular way. They hope that the therapist will not react as the beliefs predict. If the therapist does not, they may take a small step toward improving the beliefs. If patients experience the therapist as passing their tests—i.e., disconfirming their pathogenic beliefs—they will feel safer with the therapist, less anxious, and generally more productive in the therapy session.

¹This group was formerly known as the Mount Zion Psychotherapy Research Group because it originated and was based for many years at Mount Zion Hospital University of California Medical Center in San Francisco.

The therapist's primary task is to help patients disprove their pathogenic beliefs and move toward their goals. The therapist's attempts to accomplish this are case-specific. They depend on the therapist's assessments of the patient's particular beliefs and goals, and the patient's ways of testing his or her pathogenic beliefs. For example, if a patient's primary pathogenic belief is that he or she will be rejected, the therapist might be helpful (disconfirm the pathogenic belief) by being friendly and accepting. If the patient's primary pathogenic belief is that he or she will be intruded upon or possessed by the therapist, the therapist may be most helpful by being unobtrusive and even somewhat distant.

Understanding a patient's plan is vitally important to the clinician treating the patient. Consider, for example, the following clinical vignette (Silberschatz, 2017) of a 28 year old married woman who sought therapy with a psychoanalyst. Her presenting problem was that she had difficulty feeling close to her husband, did not enjoy sex, and had a hard time going along with his suggestions or wishes. She was puzzled by this because she loved him and wanted to feel closer to him. Here is an interchange that occurred in an early session:

Patient: I had an interesting dream last night[pause]. I also had an upsetting fight with my husband[long pause]. Which would you like me to talk about?

The patient knows that many psychoanalysts are very interested in dreams and she also made it known that she is very interested in why she fights with her husband. Thus, without knowing anything else about this woman one could speculate that the patient may be trying to figure out whose interests will prevail. There are a variety of ways that the therapist could respond to the patient: he could, for example, explore the meaning of the patient's asking him, or suggest that it would be useful to discuss the dream, or make a resistance interpretation. However, control-mastery theory suggests that the therapist would be most helpful to the patient by relying on a plan formulation, which could be developed by utilizing information that the patient revealed in prior sessions about her childhood. She had previously told the therapist that she grew up with an extremely narcissistic father who needed his children to always see things his way and she recounted several examples from her childhood. These adverse experiences with her father led to the pathogenic belief that in order to maintain a relationship—particularly with a man—she needed to subjugate herself and her wishes.

In therapy, the patient worked to disconfirm her pathogenic schema. One way she could do so was by trying to find out (test) if she would need to subjugate herself to her therapist as she had to with her father—"which would you like me to talk about?". With this rudimentary formulation the therapist would know, with a high degree of certainty, how to respond to the patient in that moment: saying something like "You should talk about whatever is most important to you" would enhance the patient's feeling of safety and represent a step in the direction of disconfirming her pathogenic belief. It is important to point out that this same response could be detrimental to a different patient with different childhood traumas and pathogenic beliefs. For instance, a patient whose parents were overwhelmed by her turning to them for help or guidance and frequently lashed out at her, saying "We don't know what to do why don't you figure it out?" would interpret the above response very differently. Such a patient experienced different childhood traumas and developed different pathogenic beliefs than the patient who fought with her husband. Consequently even though the test seems on the surface to be identical in both cases ("what would you like me to talk about") the identical therapist response would have very different meanings: in one case letting the patient decide would disconfirm a key pathogenic belief while in the other it would confirm the patient's pathogenic belief.

Empirical Studies of Control-Mastery Theory

In this section four decades of research on various aspects of control-mastery theory are summarized. Most of these studies are case-specific (idiographic), but a few studies that are nomothetic (research emphasizing generalization) are included at the end of this section. For conciseness and ease of exposition, the research studies are grouped (somewhat arbitrarily) into the following categories: the emergence of warded-off mental contents, reliability studies of the plan, research on the process and outcome of therapy, nomothetic measures used to test control mastery hypotheses.

The Emergence of Warded-Off Mental Contents

The Mount Zion Psychotherapy Research Group was founded in 1972 by Harold Sampson and Joseph Weiss to investigate and develop the control-mastery theory by formal empirical research methods. The Group's first study was designed to test the hypothesis that an increase in a person's sense of safety facilitates the emergence of warded-off mental contents. The focus in this study was on changes in defensive structures, or what Weiss (1967) termed the integration of defenses. A person who has little control over a defense is likely to feel endangered by the affects, ideas, or memories that the defense is warding off. If a person is able to develop control over one's defenses (e.g., through successful therapeutic work) then he/she can use the defense to regulate the emergence of unconscious contents. Sampson et al. (1972) carried out an empirical study of a psychoanalytic case that investigated the relationship between a patient's developing greater control over his defenses (in this particular case, the defense of undoing) and the emergence of previously warded-off affects. A strong, statistically significant relationship was found between the patient's developing

control over undoing and his capacity to tolerate previously repressed affects. These results support the hypothesis that the patient's increased capacity to control his defenses made it possible to regulate previously warded-off emotion and, hence, made it safe to experience the affect. The patient's capacity to regulate his defensive functioning makes it safe to experience previously warded-off mental contents because "he can control the experience, turning away from it at will if it becomes too painful or threatening. In this way, the patient can dose the new experience (the warded-off content), and can reassess the danger associated with it" (Sampson et al., 1972, p. 525).

Most of the Research Group's subsequent studies were carried out on the transcripts of a patient named Mrs. C, a psychoanalytic case conducted in New York which had been recorded and transcribed for research purposes. Several of these studies were designed to test the control-mastery assumption that patients unconsciously regulate the coming forth of unconscious mental contents, bringing them to consciousness when they unconsciously decide that they may safely do so. In one such study Horowitz et al. (1978) investigated the relationship between the patient's ability to distance herself from others (referred to as Type D behaviors and feelings) and her ability to express positive, loving feelings and to be close to others (Type C feelings). The patient, Mrs. C, sought psychoanalysis because of a chronic inability to feel close to her husband and to enjoy sexual relations with him. Horowitz et al. suggested that her difficulty feeling close to others was related to an inability to distance herself from others. They reasoned that this difficulty in distancing herself, led her to experience intimacy as dangerous because she would not be able to disengage from closeness when she wanted to and would thus run the risk of feeling stuck or entrapped. They hypothesized that once the patient gained the capacity to distance herself, she would have more confidence in her ability to regulate intimacy and consequently feelings of closeness would not be as threatening. Indeed, they found strong empirical support for this hypothesis: As the patient became more comfortable disagreeing with others and expressing critical (type D) feelings, she progressively felt less vulnerable. As a result, she could allow herself to experience her previously warded-off feelings of closeness, affection, and intimacy (type C feelings).

Another study (Gassner et al., 1986) tested the control-mastery theory of how warded-off contents emerge against two alternative hypotheses. According to one alternative—the "frustration-thrust" hypothesis—the patient brings forth repressed unconscious contents (in this case, repressed impulses) when the contents are frustrated and thus intensified to the point that they push (thrust) through the patients' defenses to consciousness. According to the other alternative—the "stealth disguise" hypothesis—the patient brings forth repressed contents when they are disguised to the point that they evade or escape the forces of repression. The three hypotheses may be tested against one another because they make fundamentally different predictions about what patients feel while previously repressed contents that have not been interpreted are becoming conscious. According to the control-mastery hypothesis, patients work to overcome their anxiety about repressed contents *before* they come forth; consequently, the patient will not feel particularly anxious while they are emerging. Moreover, because they have overcome their anxiety about the contents, they will not need to defend themselves against them as they are coming forth and will experience them fully. By contrast, the "frustration-thrust" hypothesis predicts the patient will come in conflict with repressed contents that are forced into consciousness, and will thus feel increased anxiety while they are coming forth. Finally, the "stealth disguise" hypothesis suggests that previously warded-off contents emerge because they are disguised; consequently, the patient will not feel anxious about them as they emerge (since they are disguised) but, the model predicts, the patient will not be able to experience them fully (i.e., they emerge with little or no emotion).

Gassner et al. (1986) located a number of mental contents that had been repressed in the first 10 sessions of Mrs. C's analysis, but which came forth spontaneously (without being interpreted) after session 40. Using a variety of rating scales, the investigators measured the patient's degree of anxiety and her level of experiencing in the segments in which the contents were emerging. The results of this study strongly support the control-mastery hypothesis and refute the "frustration-thrust" and the "stealth disguise" hypotheses. The patient was not anxious in these segments (indeed by one measure, she was *significantly less* anxious than in random segments). Moreover, her level of experiencing in the previously warded-off segments was significantly higher than in random segments—the patient showed more emotion, not less as the stealth disguise model predicted. This study provides empirical support for the proposition that a patient is able to bring forth previously inaccessible material when they feel that it is safe to do so and as a result they do not feel increasingly anxious when doing so.

Plan Formulation Reliability Studies

Many of the research studies designed to empirically evaluate control-mastery hypotheses about change processes in psychotherapy start with a reliable plan formulation for each patient in the study and then use the formulation as a standard for evaluating how suitable or responsive the therapists' interventions are to the particular patients' problems, needs, and goals. Consequently a critical requirement for carrying out psychotherapy research is a reliable plan formulation method—i.e., evaluating whether trained judges could agree on formulations of patients' plans. The method was initially developed by Caston (1986) and modified in subsequent research (Curtis et al., 1988, 1994; Curtis and Silberschatz, 1997, 2005). Plan formulations include the following elements: the patient's adaptive goals (conscious as well as unconscious), the pathogenic beliefs that have impeded the patient, the traumas or adverse experiences that led to the development of pathogenic beliefs, the tests that the patient is likely to pose in order to disconfirm pathogenic beliefs, and the insights that would be particularly helpful for the patient to obtain (for illustrations of the plan formulation method, see Curtis and Silberschatz, 2007; Rappoport, 1996; Silberschatz, 2010; Silberschatz et al., 1989). Research has shown that clinical judges familiar with control-mastery theory routinely achieve high levels of interjudge reliability in their ratings of plan formulations. In other words, reliability studies have shown that appropriately trained judges do in fact agree on the formulation of patients' plans. Moreover, these studies have been carried out on a variety of different treatments: psychoanalysis,

psychodynamic therapy, brief psychodynamic therapy, cognitive-behavior therapy, and emotion focused therapy (for review, see [Curtis and Silberschatz, 2007](#)).

Research on the Process and Outcome of Therapy

Research studies have shown that when a therapist's behaviors and interpretations "pass the patient's tests"—that is, disconfirm a key pathogenic belief and thereby increasing the patient's sense of safety—the patient shows improvement and the therapy progresses. In an initial study of process notes of a psychoanalytic case, [Horowitz et al. \(1975\)](#) found that the patient's level of anxiety consistently dropped and that new contents (previously warded off) tended to emerge when the therapist passed a test. A subsequent study was carried out by [Silberschatz \(1978, 1986\)](#) using the verbatim transcripts of the first 100 h of Mrs. C's tape-recorded psychoanalysis. Judges read through the transcripts and identified all episodes in which the patient made some kind of demand (implicitly or explicitly) of the analyst. Trained clinical judges read each of these episodes and reliably identified 46 as key tests. Correlations between ratings of the degree to which the therapist passed or failed these key tests and changes in a variety of patient measures indicated that the patient became significantly more involved, more productive, and more relaxed when the therapist passed a key test. These results were subsequently replicated on brief (16-session) psychotherapy cases ([Silberschatz and Curtis, 1993](#)).

Another study of the Mrs. C sessions ([Silberschatz, 1978](#); [Silberschatz et al., 1986](#)) tested competing hypotheses about how therapy helps. The control-mastery theory suggests that the patient's demands of the analyst represent efforts to test a pathogenic belief. For example, the patient may demand advice from the therapist to test the distressing pathogenic belief that the therapist, like a parent in childhood, wishes to run the patient's life. If the therapist does not accede to this demand, the patient is likely to feel reassured, more relaxed, and more productive in the therapy session. Another model (based on early psychoanalytic theory), the Automatic Functioning (AF) model, suggests that the patient's transference demands represent an effort to gratify unconscious wishes. When the analyst does not accede to the patient's demand, the patient's unconscious wish (transference longing) is frustrated. As a result, the wish is intensified and is pushed into awareness. The AF model predicts that the patient would become *more tense* and anxious when the analyst did not yield to her demands, while the control-mastery theory model predicts that she would become *less anxious* or tense.

In order to compare the AF and control-mastery hypotheses it was necessary to identify instances of the patient making transference demands which fit the criteria of both models—that is, instances which psychoanalysts who utilize AF concepts would identify as the patient seeking to gratify a key unconscious wish, and which control-mastery therapists would identify as the patient posing a key test of the analyst. The analyst's responses to Mrs. C's transference demands were rated by a group of AF judges for the degree to which they were neutral in the sense of frustrating the patient's wish and by a group of control-mastery judges for the degree to which they passed or failed the patient's tests (i.e., the degree to which the response disconfirmed the pathogenic belief the patient was testing). In order to empirically evaluate the predictions of each model, the patient's behavior immediately before and after each response was compared using a variety of relevant patient measures.

Results from this study showed that the control-mastery predictions were supported while predictions of the AF model were not. All of the correlations were in the direction predicted by the control-mastery theory and were opposite to the direction predicted by the AF model. These findings indicate that when the analyst did not accede to the patient's transference demands the patient did not feel frustrated or upset; rather, Mrs. C became more relaxed and spontaneous, bolder in tackling issues, and expressed more positive emotion. These results support the view that when the patient expressed a transference demand, she was testing a pathogenic belief. By not acceding to these demands, the analyst's behavior provided reassurance against the danger associated with her pathogenic belief.

The studies on patients testing the therapist focused on patient initiated events in the session (patient tests). Similar research methods have been employed to study therapist initiated events such as therapist interpretations. Control-mastery theory proposes that all therapist interventions should aim to help patients carry out their plans to disconfirm pathogenic beliefs; those interventions that are in accord with the patient's plan—plan compatible or "pro-plan" interventions—will be more effective than plan discordant (anti-plan) interventions. Research on interpretations has compared the effects of interpretations that increase patients' feeling of safety by following the patient's plan—that is, interventions that are pro-plan (disconfirm unconscious pathogenic beliefs)—with those that are anti-plan. In studies of the Mrs. C case ([Caston, 1986](#); [Bush and Gassner, 1986](#)) researchers found that interventions that were plan compatible were predictive of therapeutic progress. In subsequent studies of brief psychotherapies, [Silberschatz et al. \(1986\)](#) found that ratings of the degree of plan compatibility of interpretations were predictive of therapeutic progress while a general technique measure—transference vs. non-transference interpretation—was not predictive ([Silberschatz et al., 1986](#)). These results lend strong support to the control-mastery proposition that interventions are helpful only to the extent that they are compatible with the patient's plan and disconfirm key pathogenic beliefs.

Systematic process studies of how therapist interventions affect patient in-session behaviors are very useful for elucidating change mechanisms in psychotherapy. However, a convincing account of how therapy works would also require demonstrating that changes within sessions contribute to changes at the conclusion of therapy—that is, demonstrating the connection between process and outcome. Our research group invested an enormous amount of time and effort demonstrating that the plan compatibility of therapist behaviors significantly predicts therapeutic progress during therapy sessions. In these process studies we focused on many instances of significant events in a small number of cases (the sample size reflected the number of instances of process events, not the number of patients). We were also interested in seeing how well these therapist ratings predict outcome. A recent

process-outcome study (Silberschatz, 2017) tested the hypothesis that the plan compatibility of therapist interventions is predictive of treatment outcome. To put it most simply, patients who receive more plan compatible interventions have better outcomes. We also hypothesized that there would be a statistically significant relationship between plan compatibility of interventions and patients' overall feelings about therapy as reflected in the post-therapy questionnaire.

Data for this process-outcome study were obtained from the Mount Zion Brief Therapy Research project, which focused on brief (16-session) psychodynamic therapy (Silberschatz et al., 1991). There were a total of 39 patients—predominantly anxiety and depressive disorders—in the study. The therapists were experienced, psychodynamically-oriented psychiatrists and psychologists with specialized training in brief psychodynamic therapy. Patients were screened by an independent clinical evaluator prior to treatment and following treatment. All therapy and evaluation sessions were audio-recorded and transcribed. Clinical evaluators, patients, and therapists independently completed a variety of measures pre- and post-therapy. The study began long after the therapies had been completed and consequently the patients and treating therapists were unaware of the purpose of the study or of our hypotheses. Outcome data included symptom based measures, individualized measures, and global change ratings from the patient's, therapists, and evaluator's perspectives. At the conclusion of therapy, patients completed a post-therapy questionnaire that asked about their feelings about the therapy.

Judges previously trained in the plan formulation method read the verbatim transcripts of the intake interview and prepared a plan formulation for each case. A brief summary of the intake interview and the plan formulation served as the basis for rating the Plan Compatibility of the therapist's interventions. All of the therapist comments from the session—without any patient material—were read and judges independently rated the level of plan compatibility of the therapist's interventions for the *session as a whole*. A 7-point Likert scale ranging from -3 (strongly incompatible) to $+3$ (strongly compatible) was used (this is the same scale used in the Silberschatz et al., 1986 study). A total of 4 sessions for each case were rated, including session 3 (early), 7 (early-middle), 11 (late-middle) and 14 (late). One overall plan compatibility score for each of these sessions was computed.

Correlations between ratings of the plan compatibility of therapist interventions and various outcome measures were all statistically significant and generally substantial in that they accounted for approximately 25% of the outcome variance (the range is from 12% to 42% of variance explained). The results were consistent across all three outcome domains. The plan compatibility ratings were predictive of symptomatic improvement, ideographically assessed change measures (improvement in severity of target complaints and in goal attainment), and in overall (global) improvement ratings. We also found a substantial correlation between how patients felt about their therapy and the plan compatibility of the therapist ratings. Patients who were treated by therapists that received high plan compatibility ratings tended to view their therapies more positively, achieved greater self-understanding and self-control, and reported feeling more supported by their therapists (29%–44% of variance explained). Both of the study hypotheses were confirmed.

These findings suggest that the plan compatibility of therapist interventions is a strong predictor of treatment outcome and of patients feeling positively about their therapy experience. When therapists disconfirm the patient's pathogenic beliefs (act in accord with the patient's plan) treatment generally goes well and patients report feeling good about their experience. It is important to emphasize that the plan formulations in this study were done long after therapies had been completed, which insured that neither patients nor therapists could be influenced in any way by our hypotheses. The aim of this process-outcome research was to study psychotherapies carried out by experienced therapists in order to investigate whether therapists who are more responsive to their patients' particular plans have better outcomes than therapists who are less responsive. We deliberately chose to avoid focusing on a specific diagnostic group of patients or to instruct therapists to follow a particular treatment manual, and instead identified each patient's specific problem (plan formulation) and then assessed the degree to which the therapist helped the patient (plan compatibility). This study is the first large scale process-outcome study carried out by our research group and the results are consistent with those in the process studies of psychoanalyses and psychotherapies. Our research findings clearly show that the degree of plan compatibility of therapist interventions is significantly correlated with progress within sessions (process studies) as well as with treatment outcomes.

Nomothetic Measures and Studies of Control Mastery Theory

In contrast to the case-specific psychotherapy research described above, in this section we briefly review more generic measures that have been used to test control-mastery hypotheses. Some of these have focused on psychotherapy (e.g., Pole et al., 2008; Snyder and Silberschatz, 2017), but our emphasis here is on studies of non-clinical populations using self-report measures.

Based on clinical work with psychotherapy patients, Weiss observed that pathogenic beliefs are often concerned with survivor guilt (Bush, 2005). The research group developed a new self-report measure, the Interpersonal Guilt Questionnaire (IGQ), designed to assess various forms of guilt and to assess the role of guilt in the development of psychopathology (O'Connor et al., 1997, 1999). Their studies demonstrated that survivor guilt is highly correlated with feelings of shame, fraudulence, submissiveness, pessimism, and depression. High IGQ scores were also found in recovering addicts and children of alcoholics. Recent research using the IGQ found high levels of guilt in pathological gamblers (Locke et al., 2013) and in substance abusing college students (Locke et al., 2015).

In our research group, we have recently been working to develop generic (nomothetic) versions of some of our case specific (idiographic) measures. Examples include the pathogenic belief scale (Silberschatz and Aafjes-van Doorn, 2016), therapists' retrospective accounts of their own experiences in therapy (Bush and Meehan, 2011), the patient's experience of attunement and responsiveness scale (Snyder and Silberschatz, 2017), and a therapeutic preferences measure (Silberschatz, 2015) in which we ask patients

and therapists to rank order their preferences based on the three factors identified in the working alliance scale (bond, tasks, goals). None of these are intended or designed to substitute for the precise, individualized methods reflected in our previous psychotherapy research studies. Rather, these nomothetic approaches provide additional avenues for testing useful hypotheses about how psychopathology develops and how psychotherapy works.

Summary

The control-mastery theory assumes that patients' problems stem from grim, frightening, unconscious, maladaptive beliefs. These pathogenic beliefs impede the patient's functioning and prevent the patient from pursuing highly adaptive goals. Patients suffer from these beliefs, and they are highly motivated both to disprove them and to pursue the goals forbidden by them. The patient works throughout therapy in accordance with an unconscious plan to accomplish these things. The therapist's basic task, which follows from the above, is to help patients to disconfirm their pathogenic beliefs and to pursue their goals. The theory has been supported by numerous formal quantitative research studies on a variety of psychotherapies as well as by research findings from non-clinical populations.

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