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REFLECTIVE-FUNCTIONING DURING THE PROCESS IN BRIEF PSYCHOTHERAPIES

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Reflective-functioning (RF) is the ability to recognize the existence and nature of mental processes taking place in the self and in others (e.g., intentions and wishes). RF was investigated here as a patient variable during the process in two studies of brief psychotherapy. The first study investigated cognitive–behavioral therapy (CBT) and interpersonal psychotherapy (IPT) in the TDCRP sample. The second study investigated psychodynamic psychotherapy (BPDT). The Psychotherapy Process Q-set (PQS) was implemented to identify process correlates associated with high and low RF in order to distinguish which specific components in the psychotherapeutic process are related to RF. Process correlates defining high RF had good outcome, and process correlates defining low RF had poor outcome. RF remained stable or decreased during treatments and was linked with personality characteristics in the patients.

Keywords: relative-functioning, mentalizing, interpersonal psychotherapy, cognitive-behavior therapy, brief psychodynamic therapy, psychotherapy-process Q-set, TDCRP

Psychotherapy researchers continue to struggle with the question of how to define psychological change and what constitutes an effective treatment. Comparative studies of different schools of psychotherapy repeatedly support the "dodo bird" hypothesis, which suggests that all treatments are equally effective (Luborsky, Singer, & Luborsky, 1975; see also Wampold, 2001). However, over time, such studies have been criticized for relying primarily on symptomatic measures to define change, while overlooking more fine-tuned changes in mental processes (Roth & Fonagy, 1996; see also Gladis, Gosch, Dishuk, & Crits-Christoph, 1999). On the other hand, quality measures of mental processes that are fit for use in psychotherapy research are lacking (Roth & Fonagy, 1996).

Recently, Fonagy and his colleagues have developed the reflective-functioning scale, which attempts to measure mental processes (Fonagy et al., 1998). Fonagy (1999) defines reflective functioning (RF or mentalizing) as the ability to recognize the existence and nature of mental processes taking place in both the self and in others (e.g., thoughts, feelings, desires, intentions, and wishes). This ability guides the individual in forming coherent and integrated mental representations of the self and the other. Fonagy postulates that one's level of RF plays a central role in

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our ability to predict and explain the behavior of ourselves and others, and, thus, is promoting the understanding of social causality (Fonagy et al., 1998).

Researchers in many disciplines of science have expressed interest in mental processes and have promoted concepts that essentially converge with Fonagy's concept of RF. For example, in the philosophy of the mind literature, Dennett (1987) argued for the notion of an intentional stance, defined as the ability to treat an object (e.g., another human) as if she or he has a mind and therefore has intentions. Mental processes are also implied in the notion of folk psychology, or theory-theory, which is championed by many philosophers and cognitive scientists (e.g., Gopnik & Meltzoff, 1997; Lewis, 1972). Folk psychology theorists claim that our everyday understanding of mental states constitutes a theory of mind where we make interpretations that link sensory experiences to mental states, mental states to other mental states, and mental states to behavior.

Reflective functioning possesses many similarities with the concept of metacognition, although RF is not limited to cognitions. For example, Flavell (1979) refers to metacognitive knowledge as acquired knowledge about cognitive processes, knowledge that can be used to control and monitor cognitive processes. Developmental psychologists often assess metacognition in children by using various experimental tasks that require the child to consider another person's perspective (e.g., Flavell, 1979). A central aspect of metacognition is the appearance-reality distinction. Without a distinction between appearance and reality, the subject is not able to imagine that some propositions are, in fact, void of all validity (e.g., not understanding that they might have false beliefs or have had false beliefs in the past; see Flavell, 1979). More recently, Main (1991) suggested in her seminal paper that an infant's ability for metacognition might guide his or her experience of the attachment relationship with the primary caregiver and that there is a relation between secure attachment and a well-developed ability for metacognition. Subsequently, attachment researchers have begun to assess metacognition in adults through discourse analyses of narratives (e.g., Main, Goldwyn & Hesse, 2003).

In the past century, psychoanalysts have described similar aspects of mental processes in their patients. For example, Flavell's (1979) appearance-reality distinction is comparable with Freud's (1911/1958) notion of primary and secondary process thinking, or Segal's (1955/1988) theory of symbol formation versus symbolic equation. Perhaps the best way to explain the concept of RF in psychoanalytic terminology would be to perceive RF as the mental process that helps integrate and synthesize self and object representations, which often can be observed through developmental shifts in mental functioning (see, e.g., Fonagy, 1999; Karlsson, 2004; Steiner, 1993). Thus, a low level of RF would facilitate the paranoid-schizoid position, which is characterized by part-object relationships, splitting of the self and the objects into all good or all bad, and defensive utilization of projective identification. Conversely, a high level of RF would be evident in the depressive position, which is characterized by whole-object relationships, the self and the object as seen as both good and bad at the same time, tolerance of ambiguity, repression, guilt, and reparation attempts (e.g., Klein, 1975/1993).

The Relation Between Reflective Functioning and Some Similar Measures in Psychotherapy Research

There are many established measures in the field of psychotherapy research that, although similar to RF, are also different in some important ways. For example, psychological mindedness is a related concept that features a more elusive conceptualization, for example, it has been equated with insight, introspection, intraception, self-awareness, self-reflection, and the capacity for self-observation (McCallum & Piper, 1997). Also, in contrast to RF, which has consistently been measured through discourse analysis, psychological mindedness has been measured with a wide array of methods, for example, self-report, questionnaires, appraisals based on clinical interviews, and by combination scores from conceptually related variables (McCallum & Piper, 1997). Perhaps the most marked similarity between psychological mindedness and RF can be found in the work by Barry Farber (e.g., Farber & Golden, 1997), in which the definition of psychological mindedness includes the understanding of intentions in *both* the self and others with respect to both cognitions and emotions (most studies of psychological mindedness focus on self-knowledge). However, Farber and his co-

workers are using self-report questionnaires to measure the construct rather than discourse analyses.

Reflective functioning also resembles empathy in the sense that both concepts include the attempt to understand what it means to be the other person (Rogers, 1980). However, Carl Rogers' definition of empathy overemphasizes the emotional over the cognitive aspects and deemphasizes the reflection upon how one's *own* values and attitudes affect the other person and the interaction with that person (Rogers, 1980). The Buddhist concept of mindfulness also shares similarities with RF. Mindfulness has been defined as directing attention in order to become aware of one's mental processes and how they take place in the present moment. Thus, we become aware of the habitual ways in which we structure our experience, and we understand that the structure is constructed by the mind and is not the same as reality (e.g., Hayes, Follette, & Linehan, 2004; Safran & Muran, 2000; Segal, Williams, & Teasdale, 2002; Teasdale et al., 2000; see also Kabat-Zinn, 2003). The participants in mindfulness training learn to observe their thoughts and feelings in a nonjudgmental fashion and to treat them as mental events that come and go. Such training might include facilitating a detached or decentered view of one's thoughts by promoting statements such as "thoughts are not facts" or "I am not my thoughts" but could also be applied to emotions or bodily sensations (Segal et al., 2002; Teasdale et al., 2000). Mindfulness in this definition also has a strong resemblance to the Gestalt therapy tradition promoted by Fritz Pearls, emphasizing the here and now, awareness of the now, staying with feelings and so forth (e.g., Perls, Hefferline, & Goodman, 1951/1980). Some researchers have also suggested that mindfulness might be related to Freud's (1912/1953) concept of even-hovering attention (Beitel, Ferrer, & Cecero, 2004). However, mindfulness and RF are not overlapping constructs. While mindfulness primarily focuses on the awareness of the mental processes within the self, RF equally emphasizes the understanding of mental processes in others. In addition, in contrast to the focus on the present time in mindfulness, RF also includes the understanding of how divergences and convergences in mental processes between the self and the other affect the interpersonal interaction in the past, present, and perhaps also the future. Finally, mentalization is not a skill that can be learned by high-level mental functioning but happens mostly outside of consciousness in the interpersonal interaction with other minds that are benign, and it takes a "mentalizing position" toward the dyadic experience (Bateman & Fonagy, 2004).

RF also has some resemblance to the concept of insight. Freud described the goal of psychoanalysis as obtaining insight into the dynamics and contents of the unconscious, for example, how unconscious conflicts are expressed in symptoms. An increasing level of insight would result in more ego-strength and better reality testing. Perhaps this was best described in his famous quote: "Where id was, there ego shall be." (Freud, 1933/1964, p. 80) However, while both RF and Freudian insight share the goal of obtaining a better understanding of the unconscious, RF is a concept limited to the understanding of self-other interactions while the Freudian conceptualization is broader and might include the understanding of dreams or symptoms. In fact, the clear and more specific conceptualization of RF might make it more appealing for systematic empirical research than insight, although there are methods developed in how to study insight during treatments (see, e.g., Crits-Christoph, Barber, Miller, & Beebe, 1993).

Assessing Reflective Functioning in Psychotherapy

The reflective-functioning scale was originally constructed to rate narratives describing self-other interactions in transcripts from the Adult Attachment Interview (AAI; Main et al., 2003). The reflective-functioning scale is operationalized on a level from 1 to 9. The higher the number, the more advanced the mentalizing (Fonagy et al., 1998). An ordinary population is expected to be capable of mentalizing at a mean level of RF 5. Although high RF could result from a fairly elaborate narrative on self-other interactions, ordinary RF does not need to be elaborate.

Moderate to high RF might include characteristics such as (a) an awareness of the nature of mental states, (b) an explicit effort to tease out mental states underlying behavior, (c) recognizing developmental aspects of mental states, and (d) recognizing mental states of the interviewer (Fonagy et al., 1998). On the other hand, low RF might includes characteristics such as (a) the re-

jection of mental states; (b) unintegrated, bizarre or inappropriate awareness of mental states; (c) distorted or self-serving understanding of mental states; (d) naïve or simplistic awareness of mental states; and (e) overly analytical or hyperactive usage of RF (Fonagy et al., 1998; see also Bateman & Fonagy, 2004). Although the RF scale was developed to rate narratives from the AAI, Fonagy, Steele, Steele, Moran, and Higgitt (1991) suggested that the RF scale may be applicable outside the scope of the AAI.

The following is a fictitious example of how high RF could be expressed in psychotherapy. The patient discusses a dinner engagement that she had with her parents earlier in the week, thus, a significant self-other interaction involving the primary attachment figures:

> I was so mad at them for bringing up this issue again about my boyfriend. I think they have no right to intrude into my private life and start up a fight with me like this. I understand completely that parents are probably always worried about their children and that they have a hard time sitting back and just letting it happen when they think their child is about to make a mistake. But that doesn't mean it is right! I mean, I am 35 years old. . . I have the right to make mistakes sometimes. My mother always thinks my boyfriends are not good enough for me, but that is her opinion based on her own anxiousness and does not mean that it is true. I was so mad at them, but now afterward I feel guilty for yelling at them and I feel sad that they can't accept me as an adult. I guess I also contribute to their behavior by allowing them to supply me with money. They probably then feel worried about me and think that I can't take care of myself.

In this fictitious example, the patient demonstrates a well-developed sense of what is present in the minds of her parents and herself. Hence, she is highly aware of mental states and, consequently, exhibits a high level of reflective functioning. For example, she realizes that although her parents communicated with her in an intrusive and aggressive manner, they are in fact concerned for her well-being. She can also perceive that her parents possess certain mental constructs that influence how they behave (e.g., being worried for their child despite her status as an adult). Thus, she attempts to tease out the mental states that are underlying behaviors and perceives a difference between appearance and reality with respect to the emotions of her parents. In other words, she can appreciate that there might be a difference between how a person construes reality and the objective properties of reality. She also recognizes the existence of several emotional states inside of her own mind and acknowledges that she has changed her emotional state since the dinner (these are further examples of a developmental understanding of mental states). Finally, she feels that she might encourage her parents' behavior by accepting money from them, which would be rated as another attempt to tease out mental states that are underlying behaviors.

The following fictitious example will demonstrate the reasoning in an individual with a low level of reflective functioning. The same self-other interaction (a recent dinner with the patient's parents) is used as the starting point for the discussion in order to elucidate comparisons with high RF:

> I was so mad at them for bringing up this issue again regarding my boyfriend. I think they have no right to intrude into my private life like this and start up a fight with me. Why can't they stop treating me like a child? Why can't they accept the fact that I am 35 years old now, and I'm not their little baby anymore? I told my mom that she could f*** off and she started to cry. I think she had it coming. I am sick and tired of her involvement in my life. She is crazy. Borderline personality is probably a better name for her than calling her "mom." She obviously has nothing better to do with her life than harass me! No matter who I meet she claims that there is something wrong with them! Thank god they at least give me money when I visit them. That is the least they can do to make up for their harassment!

In this example, the low level of reflective functioning can be assessed based on the fact that she shows no sign of understanding that her parents may have other intentions beyond attacking her and making her feel bad. Although she recognizes that she felt angry, and she links that mental state to the discussion of her boyfriend, she still exhibits a low level of RF. For example, she shows no reflection upon her own mental states except that she is "mad." Although she suggests her mother suffers from borderline personality disorder, the diagnosis is not used as an effort to understand her mother's state of mind but is instead used as a pejorative label that allows her to further justify her anger. Additionally, there is no recognition of the mother as a person who has beliefs, desires, or intentions that are different from the patient's idiosyncratic interpretation of the situation. For example, in contrast to the previous speaker, the mother's behavior is not seen as a product of mental states such as concern over her child. Instead the person interprets the whole interaction as being based on her own negative emotions, which were elicited during the interaction. Hence, she is exhibiting a self-serving understanding of mental states in which the presence of other minds is not taken

into account and the parents are only viewed as being aggressive and intrusive.

Validation of the Reflective-Functioning Scale

The reflective-functioning scale has good interjudge reliability ($r = .89$) and has been extensively validated in research (see overview in Fonagy et al., 1998). For example, associations have been established between RF and mental health, including the understanding of psychiatric disorders as rifts in mentalizing (Fonagy et al., 1995). The level of RF could differentiate psychiatric patients from a control group in a sample of 82 nonpsychotic inpatients matched with the control group of 85 participants in age, gender, socioeconomic status, and verbal IQ (Fonagy et al., 1996). The mean RF in the psychiatric group was 3.7 ($SD = 1.8$) and the mean RF in the control group was 5.2 ($SD = 1.5$) (Fonagy et al., 1996). Moreover, research has shown that hospitalized depressed patients have a lower RF than a matched control (Ivarsson, Broberg, & Gillberg, 1998). It has also been shown that patients with a borderline personality disorder have a significantly lower level of RF than a matched comparison group (Fonagy et al., 1996; see also Bateman & Fonagy, 2004). Research has suggested that a low level of reflective functioning could be a consequence of early trauma but is also responsible for perpetuating the experience of the trauma, a process that is particularly prominent among individuals with borderline personality disorder (Fonagy, Gergely, Jurist, & Target, 2002).

The Rationale for Studying Reflective Functioning in Psychotherapy

As the research findings described above demonstrate, there is a relation between mentalizing and mental health. Conversely, there is no research showing whether RF prevents the development of mental disorders or if mental disorders prevent the development of RF. However, if mentalizing works as an inoculation against mental disorders, teaching the ability to mentalize would presumably be a valuable preemptive mental health measure. Although there is no validated technique in how to teach someone to mentalize as of yet, there is a long-standing tradition among psychotherapists who claim that good outcome is related to the growth of various mental skills that resemble mentalizing (e.g., insight, mindfulness, psychological mindedness, and more empathy). For example, there is an increasing body of research suggesting that increases in mindfulness are reducing stress, increasing the quality of life (Shapiro, Astin, Bishop, & Cordova, 2005), and can prevent relapses in patients with depression (Segal et al., 2002). Considering that psychotherapy is supposed to promote mental health, the assessment of mentalizing during psychotherapy might constitute an added dimension in how to understand improvement throughout treatment.

This present work, which includes two independent studies, is one of the first attempts to apply the RF scale in psychotherapy process and outcome research (see also previous work in the same project: Karlsson & Jones, 2000, 2001, 2002). However, working in conjunction with this study, Bernbach, Muran, Slade, and Tuber (2000) investigated the development of RF during the process in 30 sessions of Brief Relational Therapy (Safran & Muran, 2000). Their study focused on changes in RF during ruptures in the therapeutic alliance, which were assumed would increase the patients' awareness of mental states. Their sample included 10 therapeutic dyads with good outcome and 10 therapeutic dyads with bad outcome. They rated RF from both videotapes and session transcripts in 3 preselected sessions from each treatment that had previously been identified as containing therapeutic ruptures by either the patients or the therapists. Bernbach et al. (2000) found that RF decreased during the process in patients with good outcome, and remained stable in patients with poor outcome. Bernbach et al. (2000) suggested that the decline in RF with good outcomes could be related to termination issues. Also, they discussed whether their focus on exclusively examining sessions with ruptures in therapeutic alliance might have been problematic.

In another study, Brin Grenyer and Jane Middleby-Clements (Middleby-Clements, 2002) investigated RF as an outcome measure of 36 patients with cannabis dependency randomized to either 16-session supportive-expressive psychodynamic psychotherapy (Luborsky, 1984) or control group condition (self-help intervention). Despite the small sample size, they found a statistical trend ($p < .07$) comparing pre- and post-assessments of RF, supporting that patients in treatment increased their RF in comparison to

control group. Grenyer and Middleby-Clements also found a higher RF in patients with good outcomes. They concluded that the findings supported the notion of RF as an important mental quality that can develop in psychodynamic psychotherapy and has positive associations with outcome (Middleby-Clements, 2003).

Theoretical Overview of the Development of Reflective Functioning in Psychotherapy

According to Fonagy, the ability to mentalize develops from mutual interactions during a significant interpersonal bond between attachment figure and infant (e.g., Fonagy, 1999; Fonagy et al., 2002, 1998). However, later in life, psychotherapy may also function as such a relationship by providing a secure base via a secondary attachment relationship (e.g., Bowlby, 1988; Fonagy et al., 1995, 1998). In such a relationship, an environment can be created wherein thinking about feelings and ideas can be experienced as safe, perhaps for the first time (Fonagy & Target, 1999). Increases in mentalizing and improved understanding of social causality are therefore expected to be especially prominent in psychotherapies that allow the patient to explore his or her own mind as well as the mind of the other, including that of the therapist (e.g., Fonagy et al., 2002). Theorists have also suggested that a mutual exploration of affect-laden interactions between therapist and patient might in particular facilitate increases in mentalizing (e.g., Fonagy, 1999; Jones, 2000).

Theoretical suggestions regarding which specific psychotherapeutic techniques might facilitate RF are sparse, with the exception of Bateman and Fonagy's (2004) manual on the treatment of borderline personality disorder, which uses a multidisciplinary team model and integrates multiple treatments methods (e.g., individual and group). There is to our knowledge no published work focusing on how to facilitate RF during brief therapies. However, both Jones (2000) and Fonagy (Bateman & Fonagy, 2004; Fonagy, 1999; Fonagy et al., 2002) suggest that the therapist's own ability to mentalize about the patient's experiences is a crucial component. For example, Fonagy and Target (1999) address the importance of the therapist's ability to remain aware of the patient's mental state, so that the therapist may address and challenge the patient's mental capacity. For example, the therapist must be adept at verbalizing internal states, differentiating feelings, and breaking down unmanageable, anxiety-provoking experiences into simpler and more manageable entities. Fonagy and Target (1999) argue that when the therapist, in his or her therapeutic technique, is focusing on aspects of the internal world that are neither unconscious nor overly complex, the patient is aided in developing an "as if" attitude where ideas can be thought about as ideas rather than as reality. Hence, the patient is guided into developing what Flavell (1979) might have considered an appearance-reality distinction and Segal (1955/1988) would perhaps have called symbol formation. More concretely, Jones (2000) suggests that the therapist can promote the level of RF in the patient by making clarifications and confrontations, identifying themes in the patient's experience or conduct, using memories or reconstructions of the past, and linking perceptions or feelings with past experience.

Theoretical Overview on Reflective Functioning in Different Schools of Psychotherapy

Psychoanalytic treatment approaches are believed to especially facilitate RF because of their emphasis on understanding the therapist-patient relationship and the nature of defensive processes (Bateman & Fonagy, 2004; Fonagy et al., 2002; Jones, 2000). Such approaches are expected to facilitate awareness of the distinction between representations of objects (e.g., self and others), which are fantasy-based, and external object representations, which are in closer contact with the outside reality (Jones, 2000).

On the other hand, supportive techniques are suggested to inhibit the understanding of important aspects of the interaction between therapist and patient and, hence, to limit increases in RF (Jones, 2000). Jones (2000) argues that most once-a-week brief psychotherapies are supportive in nature, and consequently, quite limited in improving RF. He listed as examples of such brief, supportive psychotherapies interpersonal psychotherapy (IPT; Klerman, Weissman, Rounsaville, & Chevron, 1984) and cognitive–behavioral psychotherapy (CBT; Beck, Rush, Shaw, & Emery, 1979). He argued that even though CBT theorists emphasize errors in logic and thinking, they do not work from a developmental perspective toward the understanding of these errors, nor do

they consider how these errors are expressed in the psychotherapeutic situation. Instead these errors are corrected by testing them against reality in homework assignments (Jones, 2000).

Concurrently, Jones (2000) claimed that the focus in IPT is to expose recent patterns in the patient's interpersonal relations and link them to the psychopathology. He contended that in spite of the supportive nature of the two treatments, patients in IPT could be expected to a greater degree than patients in CBT to reflect on self-other interactions and work toward the understanding of their own and other's mental states. Moreover, brief psychodynamic psychotherapy (BPDT) might facilitate mentalization more than CBT and IPT because of its emphasis on developing reflection, analyzing intrapsychic conflicts and defenses, and understanding self-other interactions within the therapeutic relationship by means of transference (Jones, 2000). It is, however, not clear whether the short-term focus of BPDT might hamper the development of RF throughout the course of treatment.

The Objective of the Current Studies

The primary objective of the current studies is to investigate whether there are changes in RF during brief IPT, CBT, and BPDT. A second goal is to explore which specific correlates in the psychotherapeutic process describe high and low RF and whether these process correlates are associated with outcome. In considering specific RF correlates and their relations to outcome, we are extending our investigation of RF during the therapeutic process beyond Bernbach et al.'s work (2000) by conceptualizing the research endeavor in a different manner. While they used RF as a direct and global descriptor of the process, we will focus on identifying specific components of the therapeutic situation that are related to high and low RF in patients' narratives of self-other interaction, and investigate whether these components are related to outcome.

Study 1: Method

Participants

The sample in this first study was based upon archival records from the NIMH-sponsored randomized clinical trial Treatment of Depression Collaborative Research Program (TDCRP; further description of procedures and methods beyond what is presented here is available in Elkin et al., 1989). The participants in this study are a subsample of the 155 participants in the TDCRP that completed at least 12 sessions of treatment and at least 15 weeks of treatment in either of the four treatment conditions (CBT, IPT, Imipramine Clinical Management, and Placebo Clinical Management). The TDCRP participants were all diagnosed with major depressive disorder. The average age of the participants was 35 years, and 70% of the sample were females.

The length of the therapies that are included in this study ranged from 12 to 20 sessions per participant, with an average length of 16.2 sessions ($SD = 2.5$). The therapies in the TDCRP were delivered in accordance with detailed manuals (e.g., Beck et al., 1979; Klerman et al., 1984) by well-trained therapists, and certain procedures were carried out to insure adherence to treatment protocols (Elkin et al., 1989). The sample in this study contained one session at the beginning of treatment (on average Session 4) and one session from the later part of treatment (on average Session 12), with a total of 128 sessions, including 35 cases of interpersonal therapy (IPT; Klerman et al., 1984) and 29 cases of cognitive–behavioral therapy (CBT; Beck et al., 1979). Each one of these 128 sessions was transcribed and the verbatim transcripts were used in this study.

Measures

The *Reflective-Functioning Manual* (Fonagy et al., 1998) was used for rating verbatim from the treatment sessions describing self-other interactions. The manual defines RF and provides guidelines on how to rate RF on an 11-point scale, ranging from repudiated (rating of -1) to exceptional levels (rating of 9) of RF. The Psychotherapy Process Q-set (PQS; Jones, 2000) was used to identify which specific components of the process are associated with low and high RF. The PQS consists of 100 items describing specific actions, behaviors, and statements that can illuminate the psychotherapy process from a pantheoretical viewpoint. The instrument has demonstrated both reliability and validity across a wide variety of studies and treatments (Jones, 2000). Each session was rated with the PQS by two independent, clinically experienced raters who maintained a minimum interjudge reliability of .50 (see Jones, 2000 for an extensive descrip-

tion of the procedures). Measures of outcome in this study were generated from standard outcome instruments used in the TDCRP. They measure a wide spectrum of symptomatology, attitudes, and interpersonal functioning. The majority of the measurements are based on self-report and include the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978), the Hopkins Symptom Check List (HSCL-90; Derogatis, 1993), and the Social Adjustment Scale (SAS; Weissman & Bothwell, 1976). The Hamilton Rating Scale for Depression (HRSD; Hamilton, 1967) and the Global Assessment Scale (GAS; Endicott, Spitzer, Fliess, & Cohen, 1976) measured change as rated by the clinical evaluators.

Procedure

In an attempt to ensure validity for the RF construct, the RF manual was applied as closely as possible to the original rating procedures when used for rating AAIs. However, a few modifications of the original guidelines were necessary to adapt the procedures for the rating of psychotherapy transcripts (presented in Appendix A). The judges included clinicians, graduate students, and advanced undergraduate students in psychology. All transcripts were rated by two independent judges, and one of the judges was always an experienced clinician (usually the first author). The judges were blind toward the modality of treatment and order of sessions. The highest rating of RF in each session was used in the data analysis. Disagreements between judges in the RF rating of one RF scale point or less were resolved by averaging, whereas disagreements of more than one point were resolved through discussion until consensus was reached. In total, fewer than 15% of the transcripts underwent such consensual agreement procedure. The interjudge reliability in this study was acceptable ($r = .83$) and comparable to the reliability obtained when scoring RF from AAI transcripts ($r = .89$; Fonagy et al., 1998).

Data Analysis

First, planned comparisons were performed to determine whether the level of RF changed across the sessions, and whether the level of RF was different between the two treatments. Second, the PQS was used for an item-by-item analysis to determine which aspects of the therapeutic process constitute high versus low RF. In order to decrease the probability of Type I errors, only items with a two-tailed p value of $< .001$ are reported. The identified PQS items were thereafter used as "process correlates" (cf. Ablon & Jones, 1999) to determine whether or not they were related to treatment outcome.

Results and Discussion

To measure the general change in RF during the treatments, the means for the entire sample ($N = 64$) were calculated for RF in Session 4 and in Session 12 (see Figure 1). In accordance with the theoretical suggestions of specific differences between the two treatments presented by Jones (2000), planned comparisons were conducted. An ANOVA showed that the average level of RF decreased significantly during the course of treatments (M Session 4 = 4.52; SD = 1.48; M Session 12 = 3.73; SD = 1.33; F = 10.23, two-tailed $p < .002$). The level of RF was overall also significantly higher during IPT than CBT (F = 12.47; two-tailed $p < .001$). More specifically for each treatment, the results showed that the level of RF did not change in CBT from Session 4 (M = 3.79; SD = 1.29) to Session 12 (M = 3.41; SD = 1.26) (F = 2.09; *ns*.). However, the level of RF decreased significantly in IPT across the sessions (M Session 4 = 5.13; SD = 1.37; M Session 12 = 3.99; SD = 1.35; F = 12.39; two-tailed $p < .001$). The level of RF was greater in IPT than in CBT during Session 4 (F = 15.88; two-tailed $p < .000$), but not in Session 12 (F = 3.03; *ns*.).

These findings support the theoretical overview of CBT as having less RF than IPT (Jones, 2000), but only during Session 4 of the treatments. Considering the participants in the TDCRP were randomized to the treatment conditions, the result cannot be explained by group differences prior to the start of the treatments. However, the observed decrease in RF during IPT is a surprising finding not suggested by the theoretical overview above and warrants additional explanation. This issue will be discussed further in the general discussion section.

Post Hoc Analysis

Identifying process correlates related to RF. An item-by-item analysis of the PQS was calcu-

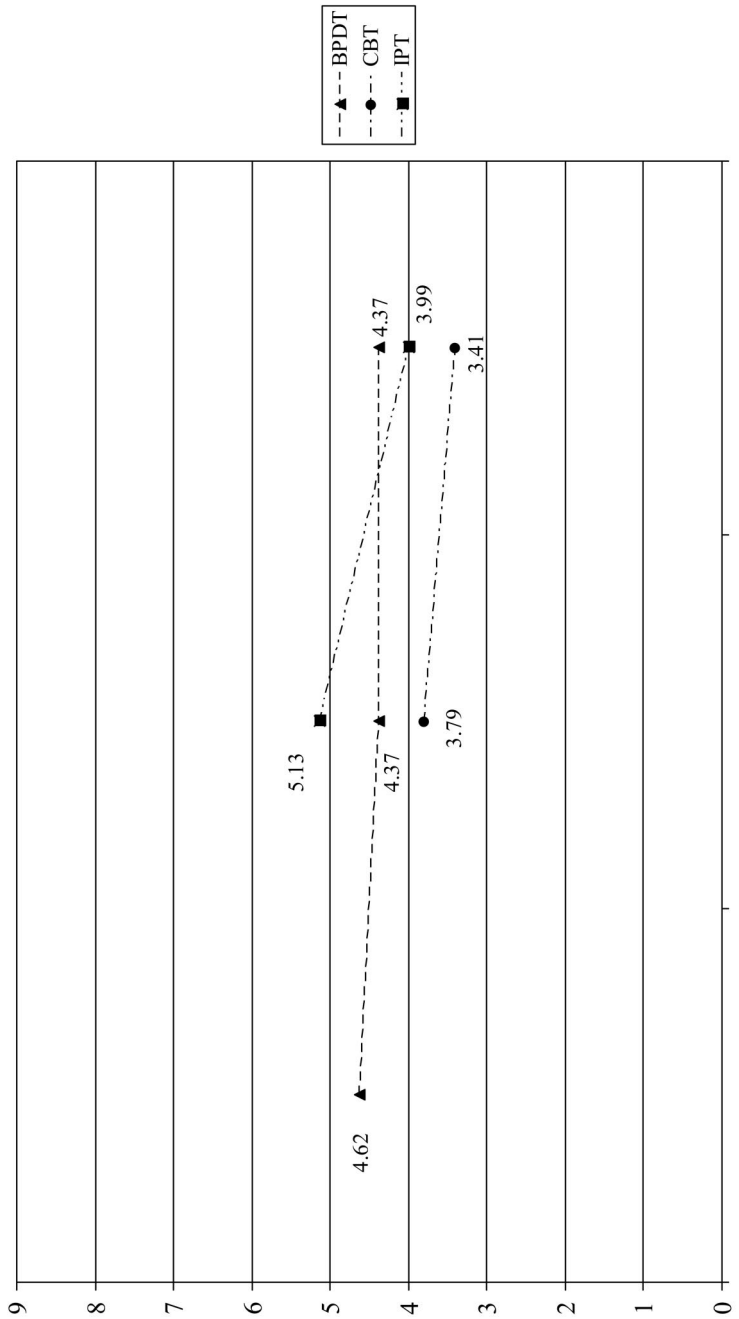

FIGURE 1. Reflective-functioning in three types of brief psychotherapy. BPDT = psychodynamic psychotherapy; CBT = cognitive–behavioral therapy; IPT = interpersonal psychotherapy.

lated with all 128 sessions combined to understand which specific process components are associated with high versus low RF during treatments. To decrease the probability of Type I errors, only items with a two-tailed p value of $< .001$ were included in the results. Such a conservative exclusion criteria, of course, increases the probability of Type II errors, but is nevertheless deemed necessary at this exploratory stage of investigating the process of RF during psychotherapy. The results for the positive correlations between RF and PQS are presented in Table 1. Positive relations were found between high RF and Q 28 (therapist accurately perceives the therapeutic process), Q 88 (patient brings up significant issues and material), and Q 73 (patient is committed to the work of therapy). These items are probably not associated with a specific psychotherapy school but are more related to therapists' skills and patients' motivations for treatment. In addition, two items describing specific psychotherapeutic technique were also linked to high level of RF: Q 50 (therapist draws attention to feelings regarded by the patient as unacceptable) and Q 6 (therapist is sensitive to the patient's feelings, attuned to the patient, empathic). This suggests that high RF is related to a therapeutic style characterized by working with unacceptable feelings in an empathic manner. Such a therapeutic style has been suggested to facilitate mentalization (Fonagy et al., 2002; Jones, 2000). Finally, high RF seems to be related to patients who show signs of insight or new understanding.

With regard to PQS items that are associated with low RF (see Table 2), links were found between items describing patient characteristics that are often seen as typical of unproductive treatments. For instance, the following items were all associated with low RF: patient does not feel understood by therapist (Q 14), patient does not initiate topics; patient is passive (Q 15), patient rejects therapist's comments and observations (Q 42), and patient feels wary or suspicious (toward the therapist) (Q 44). In addition, Q 17 (therapist actively exerts control over the interaction) was also found to be associated with low RF. That last particular item might be associated with many forms of brief, supportive treatments that do not specifically aim toward exploring psychic reality (Fonagy et al., 2002).

Process correlates and outcome. In order to determine whether the PQS items that were identified above as characterizing high versus low RF were associated with patient improvement, we calculated partial correlations (controlling for pretreatment) between outcome scores and the PQS items across both treatments (see results in Tables 1 & 2). The analysis indicated that many of the previously identified PQS items characterizing high versus low RF during the treatment process had a significant correlation with outcome. The findings suggest that high RF and good outcome is related to a treatment process where the patient is committed to the treatment (Q 73) and gains insight (e.g., a new perspective/attitude) during the treatment (Q 32). Such a

TABLE 1. Process Correlates Describing the Most Characteristic PQS Items Related to Reflective-Functioning in the NIMH TDCRP and Their Relationship With Outcome

PQS#	Item description	BDI	HSCL-90	SAS	HRSD	DAS	GAS
6	T is sensitive to the patient's feelings, attuned to the patient; emphatic	−.21	−.08	−.09	−.15	−.03	.09
88	P brings up significant issues and material	−.33**	−.24	−.18	−.15	−.23	.16
28	T accurately perceives the therapeutic process	−.33**	−.06	−.16	−.13	−.13	.19
73	P is committed to the work of therapy	−.46***	−.24	−.30*	−.29*	−.29*	.29*
32	P achieves a new understanding or insight	−.43***	−.22	−.32**	−.27*	−.13	.32**
50	T draws attention to feelings regarded by the patient as unacceptable (e.g., anger, envy, or excitement)	−.17	−.10	−.12	−.11	−.01	.09

Note. PQS = Psychotherapy Process Q-set; T = therapist; P = patient; BDI = Beck Depressive Inventory; HSCL-90 = Hopkins Symptom Check List-90; SAS = Social Adjustment Scale; HRSD = Hamilton Rating Scale for Depression; DAS = Dysfunctional Attitude Scale; GAS = Global Assessment Scale. Partial correlations were calculated with outcome (controlling for pretreatment scores). A negative correlation between the PQS items and BDI, HSCL-90, HRSD and DAS suggests a link between good outcome and the process correlates identified with high RF. A positive correlation between the PQS items and GAS suggests a link between good outcome and process correlates identified with high RF.

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

TABLE 2. Process Correlates Describing the Least Characteristic PQS Items Related to Reflective-Functioning in the NIMH TDCRP and Their Relationship With Outcome

PQS#	Item description	BDI	HSCL-90	SAS	HRSD	DAS	GAS
17	T actively exerts control over the interaction (e.g. structuring and/or introducing new topics)	.12	−.08	.04	−.04	−.07	.01
44	P feels wary or suspicious (vs. trusting and secure)	.46***	.31**	.35**	.38**	.29*	−.32**
14	P does not feel understood by therapist	.54***	.33**	.40**	.46***	.28*	−.45***
42	P rejects (vs. accepts) T's comments and observations	.55***	.37**	.53***	.46***	.36**	−.58***
15	P does not initiate topics; is passive	.36**	.15	.28*	.21	.16	−.22

Note. PQS = Psychotherapy Process Q-set; T = therapist; P = patient; BDI = Beck Depressive Inventory; HSCL-90 = Hopkins Symptom Check List-90; SAS = Social Adjustment Scale; HRSD = Hamilton Rating Scale for Depression; DAS = Dysfunctional Attitude Scale; GAS = Global Assessment Scale. Partial correlations were calculated with outcome (controlling for pretreatment scores). A positive correlation between the PQS items and BDI, HSCL-90, HRSD and DAS suggests a link between poor outcome and the process correlates identified with low RF. A negative correlation between the PQS items and GAS suggests a link between poor outcome and process correlates identified with low RF.
* $p < .05$. ** $p < .01$. *** $p < .001$.

patient brings up significant issues or material during the treatment (Q 88) and the therapist appears competent in perceiving the patient's experience of the therapeutic relationship (Q 28). Somewhat surprisingly, the process correlates that described the therapist's handling of emotive material during the treatment (Q 50, therapist draws attention to feelings regarded by the patient as unacceptable; and Q6, therapist is sensitive to the patient's feelings, attuned to the patient, empathic) have no significant relation with the outcome measures. Concurrently, process correlates associated with low RF predicted, in general, poor outcome. Thus, patients who feel wary or suspicious of the therapist (Q 44), do not feel understood by the therapist (Q 14), reject the therapists' comments or observations (Q 42), and lack initiative and appear passive (Q 15) had a poor outcome of the treatments. Surprisingly, a therapist's active control over the structure and the interaction (Q 17) was not related to outcome.

Summary of Findings Investigating RF in IPT and CBT

The findings from this study, as assessed between the two data points, indicate that (a) the mean RF was higher in IPT than CBT; (b) IPT had a higher level of RF than CBT in Session 4 but not during Session 12; (c) RF decreased during the course of IPT, but remained stable in CBT; and (d) process correlates describing high RF during the process were related to positive outcome, whereas process correlates describing low RF during the process were related to negative outcome. The PQS analysis demonstrated that process correlates related to high RF and good outcome described an active, highly motivated patient who gained insight into his or her problems and a competent therapist who perceived the patient's experience of the therapeutic relationship. Concurrently, the PQS analysis suggested process correlates characterizing low RF and linked with poor outcome were associated with patients who were passive, wary, and suspicious of the therapist, rejected the therapist's comments, and did not feel understood by the therapist.

Overall, the process-based descriptions of low versus high RF and their respective relation to outcome were in alignment with theoretical suggestions (e.g., Fonagy et al., 2002; Jones, 2000). Thus, the TDCRP sample included IPT and CBT treatments, which are suggested to not facilitate the development of RF (cf. Jones, 2000). These findings led to the question of whether BPDT might provide a different trajectory of RF development during the process of treatment and resulted in an additional investigation that will be described next.

Study 2: Method

Participants

The sample in this second study was based upon archival records from 30 brief psychodynamic psychotherapy (BPDT) treatments obtained from the Mount Zion Psychotherapy Research Group in San Francisco (for a more

elaborate description of the sample see Jones & Pulos, 1993). Patients in this archival sample had a range of classical "neurotic" diagnoses, such as depression, dysthymia, and generalized anxiety disorder. The mean age of the patients was 50 years (range: 20–81 years), and the patients came from a broad educational background that ranged from high school to doctoral degrees. Sixty percent of the patients were female, and the average length of treatments was 15.8 sessions (SD = 1.35), ranging from 11 to 20 sessions. Fifteen well-trained therapists with specialized training in BPDT and an average of 6 years in independent practice (range: 1–19 years) delivered the treatments. Five therapists treated 3 patients each, 5 treated 2 patients each, and another 5 treated 1 patient each. The sample in this study consisted of transcripts from the 1st, 5th, and 14th session of each treatment, which resulted in a total of 90 sessions.

Measures

Again, the *Reflective-functioning Manual* (Fonagy et al., 1998) was used for rating verbatim transcripts from the psychotherapy sessions, and the Psychotherapy Process Q-set (PQS; Jones, 2000) was used to investigate which specific components of the process are associated with low and high RF. Measures of patients' self-reported outcome included the Hopkins Symptom Check List and the Global Severity Index (HSCL-90; GSI; Derogatis, 1993). The clinical evaluators measured outcome with the Brief Psychiatric Rating Scale (BPRS; Overall & Gorham, 1962). Unfortunately, the GSI and HSCL-90 were based on 12 patients out of the 30 and BPRS was based on 18 out of the 30 patients. This will inevitably reduce the statistical power in finding significant results. However, the number of dropouts must be viewed as one of the clinical realities when conducting research.

Procedure

The rating procedure for RF for the second study was identical to that of the first study. At least two independent judges rated all transcripts and were blind with regard to the order of the sessions. One of the raters was always an experienced clinician (usually the first author). Again, the highest rating of RF in each session was used in the data analysis. Disagreements were resolved in the same manner as in the first study, and fewer than 20% of the transcripts underwent such a consensual agreement procedure. The interjudge reliability of RF rating in this study was acceptable (r = .84) and comparable to that of the first study.

Data Analysis

The data analysis of the second study followed the procedures described in the first study in order to replicate the findings. First, an ANOVA was calculated to determine whether the level of RF changed across the sessions. Second, the PQS was used for an item-by-item analysis to determine what specific components of the therapeutic process were related to high versus low RF. As in the first study, in order to decrease the chance of Type I errors, only items with a two-tailed p value of $< .001$ are reported. The identified PQS items were subsequently used as process correlates to determine whether they were related to treatment outcome.

Results and Discussion

To measure the general change in RF during the treatments, the mean RF in Sessions 1, 4, and 14 were calculated for the whole sample (N = 30) (see Figure 1). The mean level of RF in Session 1 was 4.62 (SD = 1.39); 4.37 in Session 5 (SD = 1.13); and 4.37 in Session 14 (SD = .82). A one-way ANOVA showed that the differences across the sessions were not significant (F = .48, *ns*.). The result suggests that RF is stable during the course of BPDT in this sample. Again, this lack of improvement of RF might be interpreted in alignment with theoretical positions regarding the relation between brief treatments and mentalizing (e.g., Fonagy et al., 2002; Jones, 2000), but is surprising considering that one of the suggested objectives of BPDT is to generate skills that facilitate mentalizing (e.g., Jones, 2000).

Post Hoc Analysis

Identifying process correlates related to RF. As in the first study, an item-by-item analysis was conducted with the PQS for all 90 sessions in order to reveal which specific process components are associated with high versus low RF during the treatment. As was the case with the

first study, only items with a two-tailed p value of $< .001$ were included in the results to decrease the probability of Type I errors (see results with the identified PQS items in Table 3). There was a positive relation between process correlates associated with high RF and discussions about patients' interpersonal relationships (Q 63), when patients are expressing angry or aggressive feelings (Q 84), and when patients are introspective or readily explore inner thoughts and feelings (Q 97). Process correlates associated with low RF were related to patients who resist examining thoughts, reactions, or motivations related to problems (Q 58) and patients who are passive and do not initiate topics (Q 15).

Process correlates and outcome. In order to determine whether the PQS items that distinguished high RF from low RF were associated with patient improvement, we calculated partial correlations (controlling for pretreatment scores) between outcome scores and the PQS items across the treatments (see the results in Table 3). The analysis indicated that many of the relations between PQS items characterizing high versus low RF during the treatment process and outcome generated a substantial effect size without always being statistically significant. The lack of significance in these findings was arguably related to the small sample size with a subsequent reduction of statistical power in many of the measures (the BPRS data were based on only 18 of the 30 patients, while both GSI and HSCL-90 were based on only 12 patients). Nevertheless, the result suggests that the identified PQS items that described high versus low RF in this second study have some validity in that they converge with the results from the previous study that describe patient characteristics. For example, process correlates linked to high RF and good outcome are related to a treatment process where the patient is introspective, readily explores inner thoughts and feelings (Q 97), and expresses angry or aggressive feelings (Q 84). It is possible that this introspection combined with anger is focused on the patient's interpersonal relationships (Q 63), although this later PQS item has nonsignificant correlations with outcome. Process correlates describing low RF and poor outcome is associated with patients who are resistant to examining thoughts, reactions, or motivations related to problems (Q 58), do not initiate topics, and are passive (Q 15).

Summary of Findings Investigating RF in BPDT

Reflective functioning remained stable during the course of treatment in this study, as assessed with the three data points. This supported the theoretical overview of BPDT as being too brief to promote the development of RF, but the result is still surprising considering BPDT is suggested to facilitate the development of RF (e.g., Jones, 2000). Process correlates characterizing low and high RF had a relation with outcome, although many correlations were not significant due to the low statistical power that resulted from the small sample size. Nevertheless, process correlates in-

TABLE 3. Process Correlates Describing the Most and Least Characteristic PQS Items Related With Reflective-Functioning in Brief Psychodynamic Psychotherapy (BPDT) and Their Relationship With Outcome

PQS#	Item description	HSCL-90	BPRS[a]	BPRS[b]	GSI
Relationships between process correlates describing high RF and good outcome (negative *r* equals good outcome)					
63	P's interpersonal relationships are a major theme	.18	−.06	.07	−.24
84	P expresses angry or aggressive feelings	−.62*	−.32	−.15	.33
97	P is introspective, readily explores inner thoughts and feelings	−.64*	−.57*	−.39	−.40
Relationships between process correlates describing low RF and poor outcome (positive *r* equals poor outcome)					
58	P resists examining thoughts, reactions, or motivations related to problems	.47	.46*	.21	.25
15	P does not initiate topics; is passive	.54*	.52*	.16	.27

Note. PQS = Psychotherapy Process Q-set; T = therapist; P = patient; HSCL-90 = Hopkins Symptom Check List; BPRS = Brief Psychiatric Rating Scale; GSI = Global Severity Index Partial correlations were calculated with outcome (controlling for pretreatment scores). The outcome data for GSI and HSCL-90 was based on 12 out of the 30 patients and the BPRS data was based on 18 out of the 30 patients.

[a] Evaluator, post-treatment. [b] Evaluator, 1st follow up.

* $p < .05$.

terrelated with high RF and good outcome in this study were associated with patients who were introspective, explored inner thoughts and feelings, and expressed negative emotions. Concurrently, process correlates describing low RF and negative outcome were associated with a patient who was resistant toward exploring internal states and appeared passive during the therapy.

General Discussion

Why Did RF Not Increase Between the Data Points During the Course of the Treatments?

Although it might be tempting to collapse the TDCRP sample and the BPDT sample in the data analysis, we refrained from doing so due to the fact that the samples were substantially different from one another. For example, while the TDCRP had a randomized assignment of patients to treatment conditions, the BPDT sample is from a naturalistic study of psychotherapy. There are also substantial differences in demographic variables between the samples, especially in the areas of average age and gender frequency. Even more crucial are the differences between the last data points in each sample: Session 12 in the TDCRP versus 14 in BPDT. In brief treatments, these differences may reflect the fact that the two samples were at different phases in the treatments. Thus, any discrepancies between CBT/IPT versus BPDT might be due to differences in treatment phases and/or design, rather than variations in schools of psychotherapy. The two samples were therefore analyzed separately in an effort to achieve better statistical integrity and, because the findings largely converge, they provide a stronger support for the findings. Hence, despite variability in type of treatment, differences in research design, and, perhaps, differences in treatment phases when RF was assessed, the findings conclude that there was no increase of RF in the process between the data points in any of these three brief psychotherapeutic treatments.

The findings from the TDCRP suggested that both IPT and CBT significantly relieved depression during the course of the study, but they did not yield any large differences in effect size between the treatment conditions (Elkin et al., 1989), nor did they produce any substantial long-term effects after termination of treatment (Shea et al., 1992). Ablon and Jones (1999, 2002) concluded in their PQS analysis of the TDCRP sample that the psychotherapeutic processes of CBT and IPT that were utilized in the study were very similar in that they both prescribed to supportive techniques. Thus, the reason that RF did not increase in either treatment might be explained by the fact that both treatments were largely supportive in nature, rather than insight oriented. In addition, the previously conducted process analysis of the BPDT sample in this study suggested the presence of a substantial amount of supportive techniques (Jones & Pulos, 1993), which could explain why BPDT also showed a stable level of RF throughout the treatment.

These findings support the theoretical arguments by Jones (2000) and Fonagy (Fonagy et al., 2002), which maintain that brief treatments, in general, are not promoting increases in RF. Considering that RF is supposed to promote a mental image of a whole-object relation (Fonagy et al., 1998), improvements in this fundamental mental function might only be attained by insight-oriented long-term treatment (Fonagy et al., 2002). In fact, recent studies of treatment outcome have demonstrated that both treatment duration and session frequency are significant predictors of outcome (e.g., Lamb, 2005; Salekin, 2002; Sandell et al., 2000).

In Fonagy's (1999) discussion of the process of change in therapy, he suggests that the initial phase of treatment may be characterized by symptom reduction, without concomitant changes in RF. This phenomenon is the classical psychoanalytic notion of the transference cure (Greenson, 1967) and is, according to Jones (2000), the characteristic outcome of brief treatments (cf. Shea et al., 1992). Fonagy (1999) argues that long-term treatments, thereafter, enter a phase where symptomatology might increase because of the disinhibition of mental processes that have taken part in the therapeutic interaction (Fonagy, 1999). In the final phase, a reorganization or restructuring of the representational system might be generated through enhanced ability for mentalizing (Fonagy, 1999). Subsequently, Fonagy (1999) argued that more sessions and longer treatments result in better outcome, especially in long-term follow up, and when particular respect is paid to the development of mentalization. However, this hypothesis warrants further validation by systematic investigation of the relation between long-term treatment and RF.

Why a Decrease of RF in IPT?

As expected, IPT had a higher level of RF than CBT during the treatments but only during Session 4. Considering that the participants in the TDCRP were randomized to the treatment conditions, this difference in Session 4 could not be explained as a group difference present before the start of the treatments. Instead, the difference is most likely related to differences in therapeutic technique. This finding was, thus, partially congruent with the theory of IPT as focused on the understanding of interpersonal relations, especially in the early phase of the treatment when an extensive interpersonal history is obtained (Klerman et al., 1984), while CBT treatment is focused on corrections of dysfunctional thoughts (Beck et al., 1979).

However, the significant drop in RF over the course of IPT is perhaps the most surprising finding in this study. We suggest that the drop in RF during IPT is related to the therapists becoming more structured after the initial phase of obtaining an extensive interpersonal history. Thus, after the extensive interpersonal history was obtained, the patient's desire to understand their self and others during interpersonal exchanges decreased due to the fact that the therapists promoted more structured, supportive techniques (cf. Ablon & Jones, 1999, 2002). Such an interpretation of this finding is supported by another study of the TDCRP sample by Crits-Christoph et al. (1999). They investigated interpersonal narratives in the early sessions of the TDCRP sample and found that IPT sessions, in general, contained more narratives than CBT sessions. Considering that interpersonal narratives are necessary for rating RF, this finding might partially explain the large difference in RF ratings between IPT and CBT in Session 4.

The differences between the treatments with respect to RF are also determined by the quality of the narratives, as defined in the RF manual (Fonagy et al., 1998). The quality may, in turn, be partially affected by how often the participants had an opportunity to expand on the narratives without being interrupted. In this respect, Crits-Christoph et al., (1999) argued that CBT therapists were more talkative than their IPT counterparts when participants were presenting narratives. The authors showed in their study how the IPT therapists listened more attentively and allowed the participants to develop their narratives, whereas the CBT therapists tended to interrupt the participants to correct their presumed dysfunctional beliefs. This was also our clinical impression when we returned to the transcripts in a nonblind format to see if we saw any differences between the treatments in the early phase. For example, there were many examples of how patients in CBT tried to present narratives about some significant interpersonal event that they believed to be related to their mental disorder, but the therapists usually interrupted them and explained why they needed to focus on their homework assignments instead. The IPT therapists, however, appeared to be more open to discussing interpersonal interactions during the early phase of treatment, and allowed the patients to hypothesize about the causes of their mental disorders in the context of self-other interactions.

Is RF in Brief Psychotherapies a Patient Characteristic?

The PQS-based process correlates of RF during the process of the three brief psychotherapies suggest that the relation between RF and outcome is, first and foremost, a patient characteristic. Thus, process correlates describing low RF and poor outcome are related to patients who are defensive, resistant, passive, wary, or feel poorly understood. In contrast, process correlates describing high RF and good outcome are associated with patients who are committed to treatment and raise significant issues and material, explore inner thoughts and feelings, and gain insight into their problems. It is, of course, possible that the therapists' skills and level of empathy and sensitivity affect the development of RF during the treatments, although the results from these two present studies do not support such a notion. In addition, the results from the two present studies found that no items describing interpersonal interaction between the therapist and patient had a significant relation with RF. This finding, combined with the absence of an increase of RF in general, suggests that RF is not primarily a relational phenomenon in these three forms of brief psychotherapy. These results raise a question as to how patient characteristics, which might be present even before the treatment, affect the level of RF and the outcome of brief psychotherapies. Based on these findings, the assessment of RF in patients prior to treatment could perhaps be implemented to determine

whether brief psychotherapy is a feasible treatment option for a particular patient.

Limitations

The reflective-functioning scale was used in this work to rate narratives that occurred in the therapy context as *mutual constructions* between patient and therapist. In contrast to the AAI interviewer, who is primarily an observer, a therapist is an active participant whose impact on the patient's expressed RF needs to be addressed in future work. For example, the relation between the RF ratings based on verbatim AAI, which would be obtained pre- and posttreatment, and verbatim from psychotherapy sessions, should be investigated. Findings from such research would increase the construct validity when using RF as a measure in psychotherapy research. In addition, what we measured was the participants' ability for RF expressed in narratives from the therapy sessions. It was not possible for us to determine whether the level of RF in the narratives reflected the "true" level of RF in the participants. Hence, the question of whether the patient's level of RF affected the therapeutic process, or whether the therapeutic process affected the patient's level of RF, remains unanswered. For example, it is possible that some patients intentionally exhibited low RF in an attempt to provoke a "rescue mission" from the therapist. Such transference reactions might have diluted our findings in unknown directions, but at this point, we are not aware of any research methods that can reliably distinguish "truthful" narratives from narratives that are tinged by transference.

Also, the data in these two studies were based on two to three sessions from each treatment. What took place in the other treatment sessions remains unknown and unexplored, including the level of RF in the very last sessions of the treatments. Thus, future research would benefit from including a larger sample size that contains more data points throughout all phases of psychotherapeutic treatment, including the very last sessions. Considering that the lack of statistical power was apparent in several of the calculations in this study, especially when relating process correlates with outcome during BPDT, a study with a larger sample size would also possess greater potential to find more significant results. Finally, this study did not include substantial data from long-term follow up. It is possible that the importance of RF in psychotherapy research cannot be fully understood until long-term follow-up data are included in the research designs.

It should also be noted that these process correlates were identified while imposing a stringent level of statistical significance in order to decrease the chance of Type I error. Although such an arrangement is necessary during studies of exploratory nature, such as the two presented in this work, it has a risk of producing Type II errors. Thus, there is a risk that some very meaningful process correlates have been left out in these two studies. Future work might therefore find additional dimensions of RF during the process in addition to the personality dimension described in this present work.

Finally, it is important to keep in mind that the practice of psychotherapy is an evolutionary enterprise that continuously changes in the light of zeitgeist and new research findings. Both of the samples in this study were conducted over 25 years ago, and even though both samples are considered stellar in their own right (e.g., the TDCRP study is often referred to as the "gold standard" of psychotherapy research with respect to research design, training of therapists, and consistent implementation of treatment manuals; Ablon & Jones, 1999), the practices of IPT, CBT, and BPDT are most likely different today in comparison to how they were conducted in that period of time. Thus, there might be some limitations in generalizing the findings to the contemporary practice of these treatments. For example, it is possible that the recent emphasis on mindfulness in CBT (e.g., Hayes et al., 2004; Segal et al., 2002) has changed the exclusive focus in such treatment of modifying behaviors and cognitive schemas through homework assignments and didactic techniques into an additional focus on relational, contextual, and experiential change (which in many ways is a step toward integrating CBT techniques with the theoretical framework of contemporary psychoanalysis/psychodynamics, see, c.f., Safran & Muran, 2000). For example, some promising research suggests that CBT combined with training in mindfulness might result in fewer relapses for some patients (e.g., Teasdale et al., 2000).

Conclusions and Future Directions

Despite impressive findings on the importance of RF in psychological development and mental

health, the concept has scarcely been investigated in the realms of psychotherapy. Therefore, the results presented here substantially contribute to the limited knowledge on the subject matter. The two studies showed that RF, in general, did not increase during the process in brief psychotherapy, as assessed between several data points along the treatments. In fact, a decrease of RF in IPT during the course of treatment was found, while the level of RF remained stable in CBT and BPDT. Process correlates characterizing high RF and positive outcome appeared to occur in committed patients who worked toward insight and understanding of their problems. In contrast, process correlates linked with low RF and poor outcome were associated with patients who were passive, resistant, and wary of the therapist.

The findings from these two studies converge in suggesting that RF is a patient characteristic that does not increase during brief BPDT, CBT, and IPT treatments. However, further work is needed to both replicate and clarify whether it is possible to generalize these results to all schools of brief therapy and across psychological disorders. Depending on whether findings from this study will be replicated, they suggest that RF could be used as a screening device to determine which patients are most likely to benefit from brief psychotherapies. In addition, the patient groups in these two samples were mostly suffering from depression and anxiety. It is possible that an improvement in mentalizing is a more pertinent factor in psychotherapeutic treatment of more severe psychopathology. For example, Fonagy's theorizing regarding RF in treatments has mostly revolved around borderline personality disorder (e.g., Batemen & Fonagy, 2004; Fonagy, 1999; Fonagy et al., 1995, 2002). Improvements in RF might also be a crucial process measure in Kernberg and Clarkin's research on transference-focused psychotherapy for borderline personality disorders (John Clarkin, personal communication, August, 2000). On the other hand, we must also be open to the possibility that any treatment that is theoretically well-defined, and consistently applied, will result in good outcome, independent of the concept of RF. However, considering the identified process correlates describing low and high RF were associated with outcome, the finding from these two studies does not support such a notion.

On a final note, we suggest that further work in investigating RF is needed to validate its usefulness in psychotherapy. For example, the convergence between RF ratings during psychotherapy sessions and ratings from AAI verbatim needs to be investigated. Also evident is the future prospect of developing an empirically derived RF-oriented psychotherapy based on process/outcome research studies of treatments. Such a research endeavor might have a fundamental impact on how psychotherapy will be practiced in the future by identifying particular RF-promoting techniques. If future research will show that RF can inoculate against stressors and, hence, promote mental health, it can be expected that this present investigation will be repeated across different schools of psychotherapy, with different frequencies of treatment and different diagnostic populations. Nevertheless, the results from these two studies suggest that patients in these three types of brief treatments do not demonstrate a general increase in RF during the therapy process and, thus, they support theorists' views that most brief psychotherapies are supportive in nature. As such, despite its exploratory nature, these two studies mark one basic step in the understanding the course and importance of RF during the process of psychotherapy.

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Appendix A

Modifications of the Reflective-Functioning Manual for rating psychotherapy verbatim

1. The conceptualization of an attachment object was expanded beyond primary attachment figures by including other significant persons in patients' current lives (e.g., partners, children, close friends and colleagues, the therapist, supervisor at work etc.). Pets were not included, despite the fact that many relationships between humans and their pets are, without doubt, significant.
2. The criteria used in the RF manual for rating the interaction with the AAI interviewer were applied to the interaction with the therapist (e.g., the patient acknowledged that the therapist might have a different perception of reality than the patient or the patient comments that the therapist might have difficulty in following the patient's stream of thought etc.).
3. Transcripts in which patients did not present narratives on self-other interactions received a RF rating of 1 (absent RF).
4. The data analysis of RF was based on the highest rating from each session. This is different from the manual in which an aggregated score of RF is used in data analysis. Such modification was deemed necessary to reduce error variance, because the rules in the manual that stipulate how to aggregate RF scores into an overall score were difficult to apply for psychotherapy sessions.