The collaborative interactions scale: A new transcript-based method for the assessment of therapeutic alliance ruptures and resolutions in psychotherapy

Antonello Colli a b; Vittorio Lingiardi a b

a Department of Education, University “Carlo Bo” of Urbino, Urbino
b Faculty of Psychology 1, “Sapienza” University of Rome, Rome, Italy

First Published on: 09 September 2009

To cite this Article Colli, Antonello and Lingiardi, Vittorio (2009)'The collaborative interactions scale: A new transcript-based method for the assessment of therapeutic alliance ruptures and resolutions in psychotherapy.' Psychotherapy Research, 99999:1,

To link to this Article: DOI: 10.1080/10503300903121098

URL: http://dx.doi.org/10.1080/10503300903121098

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.informaworld.com/terms-and-conditions-of-access.pdf

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.
The collaborative interactions scale: A new transcript-based method for the assessment of therapeutic alliance ruptures and resolutions in psychotherapy

ANTONELLO COLLI & VITTORIO LINGIARDI

Department of Education, University “Carlo Bo” of Urbino, Urbino & Faculty of Psychology 1, “Sapienza” University of Rome, Rome, Italy

(Received 13 July 2008; revised 8 June 2009; accepted 11 June 2009)

Abstract
The authors present a new transcript-based method for the assessment of therapeutic alliance ruptures and resolutions in psychotherapy—the Collaborative Interaction Scale (CIS)—and discuss the structure and theoretical background of the scale and the rating procedure. To assess interrater reliability, three raters independently evaluated 32 psychotherapy sessions (2,984 patient utterances and 2,984 therapist utterances) using the CIS, which demonstrated good interrater reliability (average $k = .66 - .81$). In evaluating the relationship between therapist interventions and patient alliance rupture and collaborative processes, the authors found significant correlations between therapist negative interventions and patient alliance ruptures and among therapist positive interventions, patient collaborative processes, and indirect rupture markers. Results indicate that the CIS is a reliable rating system, useful in both empirical research and clinical assessments.

Keywords: therapeutic alliance; alliance ruptures; alliance resolutions; collaborative interaction scale; assessment

The concept of therapeutic alliance emerged historically from psychodynamic literature (Freud, 1912/1958; Greenson, 1965; Zetzel, 1956) but has been found to be crucial in various psychotherapeutic approaches. Much of the original research on therapeutic alliance focused on providing empirical evidence of its relationship to the outcome of psychotherapy. Although research findings show that a strong positive therapeutic alliance is quite consistently related to a positive outcome (Horvath & Bedi, 2002; Martin, Garske, & Davis, 2000; Wampold, 2001), the exact nature of this relationship needs further investigation.

Some authors suggest that therapeutic alliance is an active agent of the psychotherapy change process (Bordin, 1979; Horvath, 1994) and that shifts in the collaboration levels can be considered fundamental change keys (Safran, Crocker, McMain, & Murray, 1990; Safran & Muran, 2000a). These fluctuations were conceptualized in various terms: strains in the alliance (Bordin, 1994), weakenings and repairs of the alliance (Lansford, 1986), impasses in the therapeutic relationship (Elkind, 1992), and therapeutic alliance ruptures and repairs (or resolutions; Safran & Muran, 2000a).

Several studies have confirmed the existence of a rupture-repair pattern and its relationship to improved therapy outcome (Kivlighan & Shaughnessy, 2000; Stiles et al., 2004; Strauss et al., 2006). Other research found local rupture-repair patterns in 50% of the cases but no relationship with outcome (Stevens, Muran, Safran, Gorman, & Winston, 2007).

Some studies compared the efficacy of treatments focused on alliance rupture and resolution with that of other forms of intervention. One study comparing a specific alliance-focused intervention, brief relational therapy, with short-term psychodynamic therapy and cognitive-behavioral therapy found significant differences in two areas: Brief relational and cognitive-behavioral models produced more clinically significant change while brief relational therapy had significantly lower dropout rates (Muran, Safran, Samstag, & Winston, 2005). Other researchers evaluated the efficacy of an integrative form of cognitive therapy (ICT) for depression that incorporates specific strategies for addressing alliance ruptures and compared it with a traditional cognitive therapy (CT): Effect size estimates revealed that ICT patients evidenced greater...
posttreatment improvement and more clinically significant change than CT patients (Constantino et al., 2008). Moreover, a number of studies indicate that alliance improves when therapists are able to focus on the relationship and address ruptures nondefensively (for a review, see Safran et al., 2002). In a recent study, based on a sample of 128 patients randomly assigned to three different time-limited psychotherapies for personality disorders (cognitive-behavioral, brief relational and short-term dynamic) results indicate that lower rupture intensity and higher rupture resolution are associated with better ratings of the alliance and session quality, and lower rupture intensity predicts good outcome on measures of interpersonal functioning, while higher rupture resolution predicts better retention (Muran, Safran, Gorman, Samstag, Eubanks-Carter, & Winston, 2009). Finally, based on available empirical evidence, the repair of alliance ruptures has been included in a list of promising and probably effective treatment principles (Norcross, 2002).

The history of alliance research is linked to the development of many different measures for its assessment (Elvins & Green, 2008; Horvath & Bedi, 2002), such as the Penn Helping Alliance Scales (Alexander & Luborsky, 1987; Luborsky, Crits-Christoph, Alexander, Margolis, & Cohen, 1983), the Vanderbilt Scales (Suh, Strupp, & O’Malley, 1986), the Working Alliance Inventory (WAI; Horvath, 1982; Horvath & Greenberg, 1989), and the California Alliance Scales (CALPAS; Gaston & Marmor, 1994). These tools have demonstrated their reliability, with fair to good convergent validity (Tichenor & Hill, 1989).

Although we have a proliferation of instruments to assess therapeutic alliance, there is a shortage of measures assessing in-session therapeutic alliance fluctuation. Only two scales were specifically developed for this purpose: the Rupture and Resolution Scale (RRS; Samstag, Safran, & Muran, 2000; Samstag, Safran, Muran, & Stevens, 2002) and the Menninger Alliance Rating Scale (MARS; Allen, Newsom, Gabbard, & Coyne, 1984). Although both of these measures proved quite reliable (Allen et al., 1984; Samstag et al., 2002), they have not been further validated. Moreover, the MARS, a transcript-based measure, only furnishes information regarding shifts in patient collaboration. It does not describe typologies of collaboration/noncollaboration, and therapist interventions are evaluated only considering their form (e.g., confrontation, interpretation) and focus (therapeutic relationship or not). The RRS does not specifically address therapist interventions that contribute negatively to the psychotherapy process, nor does it quantify the level of collaboration of patient and therapist. Finally, as described in its coding manual (Samstag et al., 2000), RRS needs both transcribed and videotaped sessions.

A number of studies used self-report alliance measures to assess alliance fluctuations and alliance ruptures (Kivlighan & Shaughnessy, 2000; Stiles et al., 2004; Strauss et al., 2006; Stevens et al., 2007). However, as has been pointed out (Westen & Shedler, 1999a, 1999b), these kinds of measures can be faulty (a) because of poor self-reflection or any type of bias on either the patient’s or the therapist’s part and (b) because they use a retrospective (postsession) recollection of the session. For example, using self-reports, patients could not remember the effort made by the therapist to overcome a rupture because they were in an angry state after the session; other patients could acknowledge with difficulty the idea that the therapist did his or her job in creating a negative atmosphere; others might simply dissociate emotionally marked relational episodes after the session.

Traditionally, therapeutic alliance measures such as WAI and CALPAS (including in the observer versions), which evaluate the therapeutic alliance at a macrolevel, seem more suitable for assessing therapeutic alliance as a general factor related to the outcome than for “depicting the idiosyncratic interactional patterns that unfold between patient and therapist” (Charmann, 2004, p. 18). Because these measures can only study shifts between sessions rather than within the session itself, some rupture events may go undetected (Stevens et al., 2007). In short, these methodologies “described shifts in alliance but did not directly examine in-session transactions. We can only infer that ruptures were captured by our quantitative method” (Strauss et al., 2006, p. 344).

Studying in-session transactions through a microanalytic investigation of the way patient and therapist coconstruct their alliance could be a way to detect clinically useful guidance regarding the therapeutic relationship (Horvath, 2006). Such indicators could increase our knowledge of how interventions can affect therapeutic alliance (Ackerman & Hilsenroth, 2001, 2003).

In this study, we present a new transcript-based method to assess therapeutic alliance ruptures and resolutions in psychotherapy along with preliminary data on its reliability. Before describing scale structure, rating procedure, and research results, we present the theoretical and empirical framework on which we based the scale construction and development procedure.
**Theoretical and Empirical Framework**

*Alliance Ruptures and Two-Person Psychology.* “Alliance rupture” is a “very slippery concept” (Safran & Muran, 2006, p. 288). An alliance rupture has been defined in various ways: as an impairment or fluctuation in the quality of the alliance between therapist and client (Safran et al., 1990), a tension or breakdown in the collaborative relationship between patient and therapist (Safran et al., 2002), a deterioration in the relationship (Safran & Muran, 2000b), a problem in the quality of “relatedness” or a “deterioration in the communicative process” (Safran & Muran, 2006). The term has also been used to indicate severe disruptions in the therapeutic alliance or even momentary and subtle fluctuations in the quality of the therapeutic relationship (Safran et al., 1990). In our opinion, a particularly clear and useful definition of the construct identifies the alliance rupture as “an impairment or fluctuations in the quality of the alliance between the therapist and client” (Safran et al., 1990, p. 154). The quality of the therapeutic alliance can be defined as “a function of the degree of agreement between therapist and client about the goals and tasks of psychotherapy that is mediated by the quality of the relational bond between therapist and patient” (Safran et al., 1990, p. 154).

The concept of alliance rupture and repair implies a conceptualization of the therapeutic alliance as “an important dimension of the therapeutic relationship that involves an on-going process of intersubjective negotiation” (Safran & Muran, 2000a, p. 165). This “highlights the fact that the alliance is not a static variable that is necessary for the therapeutic intervention to work but rather a constantly shifting, emergent property of the therapeutic relationship” (Safran & Muran, 2006, p. 288). This kind of conceptualization was already present in the work of Bordin (1994), who, in contrast to traditional psychoanalytic authors, emphasized the “negotiation of task and goals as important steps in alliance building and attaining the strength to overcome strains and ruptures” (p. 15).

Safran and Muran (2000a) also provided an empirically derived process model of therapeutic alliance negotiation in which alliance ruptures are codetermined by therapist and patient. This model is based on a definition of psychotherapy processes and therapeutic impasses and resistances in light of a two-person psychology. From this point of view, any “apparent obstruction in the therapeutic process must be understood as a function of the interaction between the patient and the therapist”. For example, “a patient who has difficulty accessing painful emotional material is having difficulty accessing it in a specific relational context” (Safran & Muran, 2000a, p. 80). From a relational and interpersonal perspective, resistance is interpreted not only as a client character issue but also as the product (at conscious and unconscious levels) of the interpersonal matrix in which it is produced. Similarly, therapist negative contributions to the relationship are interpreted not only as a therapist problem but also as the product of the interpersonal matrix in which they are produced.

More generally, it should be emphasized that therapeutic alliance ruptures (of patient and therapist) are inevitable aspects of the therapeutic process. From an intersubjective perspective, the process of ruptures and repairs characterizes all relationships and thus the therapeutic relationship as well (Beebe & Lachmann, 2002). Although this process can even assume the form of severe disruptions in the relationship, it must be considered as an unavoidable and natural feature of the relationship. Of course, the features of this process are influenced by, for example, patient and therapist personality organizations, relational patterns, and interpersonal schemata.

**Patient Contribution to Alliance Ruptures and Resolutions.** Safran and Muran (2000a), in accordance with Harper's work, have organized patient ruptures into two main subtypes: withdrawal and confrontation (Harper, 1989a, 1989b). In withdrawal ruptures, “the patient withdraws or partially disengages from the therapist, his or her own emotions, or some aspect of the therapeutic process” (Safran & Muran, 2000a, p. 141). Withdrawal markers include patient behaviors such as verbal disengagement (e.g., changing topic, long silences, or use of vague, abstract language) or a mismatch between affective expression and narrative content. In this kind of marker, the patient indirectly expresses disaffection or disagreement about the tasks or goals of therapy or about the relationship.

Withdrawal markers also include patient avoidance maneuvers, such as skipping from topic to topic in such a way as to prevent therapist interventions in order to reduce patient anxiety associated with a rupture in the alliance. Another maneuver involves self-esteem-enhancing operations, in which the client may attempt to justify or defend him- or herself during the process of a rupture as a means of boosting a deflated sense of self-worth. As observed by Safran et al. (1990), avoidance maneuvers and self-esteem-enhancing operations can be considered as reflections of what Sullivan (1953) termed “security operations.” Conversely, in confrontation ruptures, “the patient directly expresses anger, resentment, or disaffection with the therapist or
some aspect of the therapy” (Safran & Muran, 2000a, p. 141). Examples of this kind of marker are most evident in the patient’s verbal criticisms of the therapist, either as a person or in terms of his or her professional qualifications. These generally appear as hostile or dismissive manners of communication.

Although Safran and Muran (2000a) highlighted and explicitly formalized the role of the therapist in the process of addressing ruptures, they did not view the resolution process as a one-sided enterprise: “It invariably includes the patient willingness to participate in a process of collaborative inquiry about the nature of the interactive matrix. In some way the patient must also be willing and able to step out of the enactment in order to begin an exploration of what is going on in the therapeutic relationship” (Safran & Muran, 2000a, p. 145). Other authors define patient collaboration as the extent to which the patient is bringing in significant issues and making good use of the therapist’s efforts (Allen et al., 1984) or as “the patient’s capacity to self-disclose intimate and salient information, to self-observe one’s reactions, to explore contributions to problems, to experience emotions in a modulated fashion, to work actively with the therapist’s comments, to deepen the exploration of salient themes” (Gaston & Marmar, 1994, p. 89). These definitions share the importance of patient expressions of feelings and thought, of significant issues, and of reflections or self-observations of his or her conflicts and feelings.

**Therapist Contribution to Alliance Ruptures and Resolutions.** As Strupp pointed out, “Major decrements to the foundation of a good working alliance are not only the patient’s character distortions and maladaptive defenses but—at least equally important—the therapist’s personal reactions” (Strupp, 1980, p. 953). For example, the therapist may explore patient negative feelings, such as hostility or flirting, in a collaborative way but can also respond to these feelings in a complementary way or avoid their exploration entirely by shifting the focus of investigation. The therapist’s contribution to the therapeutic alliance may be divided into two main discernible but interdependent components: relational (e.g., empathy, attunement, warmth) and technical (e.g., type of intervention, focus of the intervention).

Several studies suggest that key elements of empathy (such as warmth/friendliness, affirming, helping, and understanding) are positively associated with therapeutic alliance (Ackerman & Hilsenroth, 2001). Conversely, there is a consensus among studies that a poor alliance is related to therapists who are not confident in their ability, tired, rigid, critical, distant, bored, defensive, or blaming (Ackerman & Hilsenroth, 2001), and that these characteristics evoke more hostile resistances in patients (Marmar, Weiss & Gaston, 1989). Such negative therapist states were also present in therapist behaviors related to ruptures in the alliance (Ackerman & Hilsenroth, 2001). These results have been confirmed by other research using structural analysis of social behavior (Benjamin, 1984). These studies demonstrated that successful outcome cases are characterized by a high proportion of therapist statements that express understanding, attentive listening, and receptive openness (Henry, Schact, & Strupp, 1986; Watson, Enright, & Kalogerakos, 1998). Critical, hostile, and controlling statements, on the other hand, are negatively associated with good outcomes (Henry et al., 1986; Watson et al., 1998).

The strategic interventions used by the therapist may be considered another component of the overall alliance. In a review on the relationship between therapist interventions and therapeutic alliance, several therapist techniques (e.g., exploration, depth, accurate interpretation, facilitating expression of affect, reflection, attending to patient’s experience, supporting) were found to contribute positively to the therapeutic alliance (Ackerman & Hilsenroth, 2003).

As observed by Ackerman and Hilsenroth (2003), “It is interesting to note that the ... therapist’s significant contributions to the development and maintenance of the alliance are similar to the features identified as useful in the identification and repair of ruptures in the alliance” (p. 29). These interventions were identified and categorized by Safran and Muran (2000a) in general principles of intervention and specific principles of communication. Some of the general principles are to (a) establish a sense of “we-ness,” (b) emphasize one’s own subjectivity, and (c) focus on the here and now. Some of the specific communication principles are to (a) disclose experience or acknowledge one’s own actions and (b) provide feedback regarding subjective experience or perceptions of patient. These principles may help therapist and patient resolve a therapeutic impasse, stepping outside of the negative relational cycle that is occurring. For example, by establishing a sense of we-ness and framing the impasse as a shared experience, the therapist begins transforming a rupture into a collaborative effort; for example, focusing on concrete and specific aspects instead of on general and abstract instances promotes experiential awareness.

Therapists may also contribute in a negative way to the psychotherapy process through misapplication
of the techniques. Misapplication can take the form of unyielding attempts to link a patient’s inappropriate reactions toward the therapist to earlier conflicted relationships with parental figures (Marmar et al., 1989), inflexibility and destructive behaviors (Eaton et al., 1993), or a lack of responsiveness to explore the patient’s feelings (Piper et al., 1999). Several studies have investigated therapist behaviors in cases of unresolved misunderstandings: for example, inflexible adherence to strategies, being hypercritical or unresponsive, giving unwanted advice.

From a different point of view, the therapist degree of collaboration may be defined as the quality of his or her use of previous patient communications. Waldron et al. (2004) consider several variables to evaluate therapist activities (e.g., type of intervention, focus of the intervention). What is important for our discussion here is that the quality of the intervention is evaluated as the degree to which the therapist “follows the patient’s immediate emotional focus, intervenes in a way that shows psychological continuity with previous contributions, is apt in content, timely and tactful, and comments in a way that makes psychological appeal to the patient” (Waldron et al., 2004, p. 449).

In summary, evaluation of therapist activities must take in consideration at least two aspects: the quality of the intervention (timing, attunement, tactfulness, comprehensibility) and the form of the intervention (e.g., clarification, confrontation, interpretation).

**Scale Development and Item Derivations**

The Collaborative Interaction Scale (CIS) is the result of 8 years of ongoing research and transcript-based investigation of therapeutic alliance and rupture-repair processes. The first version of the scale, formerly known in Italian as IVAT (Indice di Valutazione dell’Alleanza Terapeutica [Therapeutic Alliance Evaluation Index]), was presented at the 2001 conference of the Italian Society for Psychotherapy Research (Colli & Lingiardi, 2001). The scale has been revised and tested in several pilot studies (Colli & Lingiardi, 2002, 2003, 2005, 2006). Initially, the structure of the scale was defined and then single items were selected.

In light of the theoretical and empirical findings reported in the previous section, we structured the scale into two main scales: one for the evaluation of patient contributions to the process (CIS-P) and one for therapist contributions (CIS-T), each with subscales. The CIS-P is composed of three subscales evaluating patients’ positive and negative contributions: the Collaborative Processes scale, the Direct Rupture Markers scale, and the Indirect Rupture Markers scale. Similarly, the CIS-T is composed of two subscales evaluating therapists’ contributions to the psychotherapeutic process: the Positive Interventions scale and the Negative Interventions scale. We labeled the two main categories of patient ruptures “direct” and “indirect” (and not withdrawal and confrontation as proposed by Safran and Muran) because we wanted to stress their descriptive and easily recognizable dimension. We give a more detailed description of the scale in the next section.

Items and rating criteria have been derived from several sources: empirical and clinical literature on alliance ruptures, measures of therapeutic alliance, qualitative evaluations of psychotherapy session transcripts, and comments and suggestions of expert clinicians. The list of rupture markers has been derived in large part from Safran and Muran studies (Safran et al., 1990; Safran, Muran, & Samstag, 1994), in particular from a list of behaviors associated with rupture states contained in Samstag, Safran, and Muran (2004).

Patient collaborative processes levels were inspired by the CALPAS definition of patient working capacity as “the patient’s capacity to self-disclose intimate and salient information, to self observe one’s reactions, to explore contributions to problems, to experience emotions in a modulated fashion, to work actively with the therapist’s comments, to deepen the exploration of salient themes” (Gaston & Marmar, 1994, p. 89). The concept of collaborative process was organized according to Horowitz et al.’s (1993) categories of patient elaboration (convey facts, convey emotionality, convey significance). A large part of therapist positive interventions were derived from Safran and Muran’s (2000a) specific principles of intervention and their related clinical examples. These have been included because they prove to be particularly useful in managing ruptures and building therapeutic alliance.

Negative therapist interventions were inspired by the Vanderbilt Negative Indicator Scale (Suh, Strupp, & O’Malley 1986). Others were formulated “reversing” Safran and Muran’s principles of interventions (2000a), for example, a therapist who distances from the emotional content by minimizing, intellectualizing, or talking in a technical jargon instead of exploring patient’s feelings and focusing on his or her concrete experience.

We obtained a preliminary set of 56 items. Then we asked a pool of expert clinicians to code the patient rupture items into two major rupture types: direct and indirect (Safran & Muran, 2000a). Using this preliminary set of items, five expert clinicians (two cognitive and three dynamic) coded 16 transcripts each from 16 different patients. On the basis of this first application, and considering item reliability, we
prepared a second version of the scale. This was tested on a sample of 65 junior psychotherapists, who coded two transcripts of two different patients (one session per patient). Finally, we prepared a third version of the scale and a new coding manual. This last version was tested by three raters, who coded six sessions each of three different patients.

At the end of this process, we selected the most salient and reliable items to obtain the present 41-item version of the scale. A pilot study with three experienced raters showed a good reliability of the present version of the scale, with mean $k$ values of .85 for direct rupture markers (DRMs), .71 for indirect rupture markers (IRMs), .73 for collaborative processes (CPs), .81 for positive interventions (PIs), and .74 for negative interventions (NIs; Colli & Lingiardi, 2007).

### Collaborative Interaction Scale

The CIS is a rating system for the assessment of alliance ruptures and repairs in psychotherapy (for a complete item list, see Table I). External raters conduct their evaluation on transcripts. The coding procedure and manual are tailored for transcript evaluations, but audiotapecs, if available, can be very useful for a more detailed evaluation. The CIS is composed of two main scales: one for the evaluation of patient rupture and collaborative processes, CIS-P, and one for the evaluation of therapist positive and negative contributions to the therapeutic relationship, CIS-T.

The CIS-P Direct Rupture Markers scale comprises nine items; the Indirect Rupture Markers Scale, nine items; and the Collaborative Processes Scale, three items. DRMs are characterized by an aggressive and accusatory statement of resentment or dissatisfaction in regard to the therapist or some aspect of the therapy process (Safran et al., 2008). Examples of DRMs are when the patient acts in a hostile or sarcastic manner, complains heatedly about lack of progress, questions or rejects the tasks or the goals of therapy, and so on. Examples of IRMs are when the patient indirectly expresses a form of emotional disengagement from the therapist, from some aspect of the therapy process, or from his or her internal experience (Safran et al., 2008). For example, the patient may skip from topic to topic in a manner that prevents the therapist from exploring the issue in depth, may respond in an overly intellectualized fashion, or may be overcompliant or submissive.

Patient CPs include when the patient brings salient and significant themes, shares intimate and salient information with the therapist, self-observes his or her reactions, or works actively with the therapist’s comments. The patient could give a positive contribution to the psychotherapeutic process in various ways: speaking of new and significant facts, reflecting on personal feelings, having an insight about his or her history, relationships, and so on.

Further descriptions and exemplifications of DRMs, IRMs, and CPs are provided in the coding manual and also reported next in the Rating Procedure section. In conclusion, we wish to stress that when a patient communicates in a collaborative way that he or she disagrees with or does not understand a therapist comment, this clearly must not be considered a rupture marker. Table II shows examples of different patient responses to and codings for the same therapist intervention.

The CIS-T Positive Intervention scale is composed of 12 items that evaluate collaborative and repairing therapist interventions. The eight-item CIS-T Negative Intervention scale evaluates negative contributions of the therapist. We define a PI as a therapist intervention that, in relation to previous patient communications, is emotionally attuned, focused on patient experience, and linguistically clear. Quality of the intervention is a necessary condition for rating it as positive. We do not consider a priori an intervention as positive simply because of its form. To be evaluated as positive, a therapist intervention may take various forms, such as when the therapist focuses attention on the here and now of the relationship, reframes tasks/goals of therapy, self-discloses countertransference feelings, and so on. We define an NI as a therapist intervention that is not emotionally attuned, not focused on patient concrete experience, or not linguistically clear. Therapist NI can assume several forms, such as when the therapist shows hostility, talks in technical jargon, seems to “impose” his or her worldview about ethical problems, is critical, and so on.

Although the CIS is rooted in the psychodynamic relational and cognitive-interpersonal approaches, its items are written in a transtheoretical language, which makes it useful for researchers from a variety of backgrounds.

### Rating Procedure.

The basic evaluation unit of the CIS is the individual speaking turn of either the patient or the therapist. The rater assesses the presence, in each patient utterance, of a DRM, IRM, or CP and, in each therapist utterance, of a PI or NI. Each patient and therapist utterance is also assessed according to the quality of the intervention as positive or negative. We define a PI as a therapist intervention that, in relation to previous patient communications, is emotionally attuned, focused on patient experience, and linguistically clear. Quality of the intervention is a necessary condition for rating it as positive simply because of its form. To be evaluated as positive, a therapist intervention may take various forms, such as when the therapist focuses attention on the here and now of the relationship, reframes tasks/goals of therapy, self-discloses countertransference feelings, and so on. We define an NI as a therapist intervention that is not emotionally attuned, not focused on patient concrete experience, or not linguistically clear. Therapist NI can assume several forms, such as when the therapist shows hostility, talks in technical jargon, seems to “impose” his or her worldview about ethical problems, is critical, and so on.

Although the CIS is rooted in the psychodynamic relational and cognitive-interpersonal approaches, its items are written in a transtheoretical language, which makes it useful for researchers from a variety of backgrounds.
Table I. Mean Interrater Reliability (Kappa), Presence, and Intensity Values for Each Item

<table>
<thead>
<tr>
<th>Item</th>
<th>(\kappa^a)</th>
<th>P</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct rupture markers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRM1: Patient doesn’t agree with therapist about therapy tasks or goals</td>
<td>.75</td>
<td>4.33</td>
<td>2.92</td>
<td>0.41</td>
</tr>
<tr>
<td>DRM2: Patient criticizes therapist as a person or for his/her competence</td>
<td>.89</td>
<td>10.33</td>
<td>2.92</td>
<td>0.35</td>
</tr>
<tr>
<td>DRM3: Patient strongly refuses a therapist intervention or feels uncomfortable</td>
<td>.84</td>
<td>15.13</td>
<td>2.87</td>
<td>0.61</td>
</tr>
<tr>
<td>DRM4: Patient complains about lack of progress</td>
<td>.88</td>
<td>4.77</td>
<td>2.55</td>
<td>0.71</td>
</tr>
<tr>
<td>DRM5: Patient doubts about current session</td>
<td>.71</td>
<td>5.33</td>
<td>2.87</td>
<td>0.62</td>
</tr>
<tr>
<td>DRM6: Patient doubts about being in therapy</td>
<td>.79</td>
<td>4.33</td>
<td>2.61</td>
<td>0.45</td>
</tr>
<tr>
<td>DRM7: Patient complains about parameters of therapy (e.g., session time, fee)</td>
<td>.92</td>
<td>5.66</td>
<td>2.71</td>
<td>0.44</td>
</tr>
<tr>
<td>DRM8: Patient doubts about feeling better</td>
<td>.86</td>
<td>4.33</td>
<td>2.63</td>
<td>0.45</td>
</tr>
<tr>
<td>DRM9: Patient is sarcastic toward therapist</td>
<td>.68</td>
<td>3.66</td>
<td>2.51</td>
<td>0.35</td>
</tr>
<tr>
<td><strong>DRM</strong></td>
<td>.81</td>
<td>3.33</td>
<td>2.91</td>
<td>0.35</td>
</tr>
<tr>
<td><strong>Indirect rupture markers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRM1: Patient talks in wordy manner and/or spends inordinate amount of time talking about other people and their doings or overly elaborates nonsignificant stories and so on</td>
<td>.69</td>
<td>36.33</td>
<td>1.06</td>
<td>0.26</td>
</tr>
<tr>
<td>IRM2: Patient changes topic or tangentially answers to therapist intervention</td>
<td>.72</td>
<td>87.00</td>
<td>1.33</td>
<td>0.45</td>
</tr>
<tr>
<td>IRM3: Patient short answers to therapist open question</td>
<td>.75</td>
<td>89.00</td>
<td>1.66</td>
<td>0.45</td>
</tr>
<tr>
<td>IRM4: Patient denies evident feeling state (e.g., anger, fear, shame)</td>
<td>.61</td>
<td>32.33</td>
<td>1.13</td>
<td>0.24</td>
</tr>
<tr>
<td>IRM5: Patient intellectualizes about his/her inner experience</td>
<td>.62</td>
<td>115.25</td>
<td>1.25</td>
<td>0.27</td>
</tr>
<tr>
<td>IRM6: Patient alludes to negative sentiments or concerns about therapeutic relationship through a thematically linked discussion of out-of-session events or relationships</td>
<td>.67</td>
<td>6.33</td>
<td>1.66</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>IRM</strong></td>
<td>.66</td>
<td>69.66</td>
<td>1.07</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Collaborative processes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CP1: Patient talks about new significant fact, introduces a topic or elements within a topic</td>
<td>.69</td>
<td>1578.33</td>
<td>1.01</td>
<td>0.31</td>
</tr>
<tr>
<td>CP2: Patient talks about his/her feeling and/or thoughts, makes clear intensity or quality of his/her feelings or attitude</td>
<td>.73</td>
<td>654.33</td>
<td>1.92</td>
<td>0.42</td>
</tr>
<tr>
<td>CP3: Patient talks about meaning of events or connects topic to a topic or to a schema, etc.</td>
<td>.76</td>
<td>34.66</td>
<td>2.87</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>CP</strong></td>
<td>.72</td>
<td>171.33</td>
<td>1.01</td>
<td>0.31</td>
</tr>
<tr>
<td><strong>Positive interventions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI1: Therapist focuses on the here and now of the relationship</td>
<td>.66</td>
<td>43.22</td>
<td>2.87</td>
<td>0.34</td>
</tr>
<tr>
<td>PI2: Therapist explores different patient states</td>
<td>.65</td>
<td>234.66</td>
<td>1.11</td>
<td>0.33</td>
</tr>
<tr>
<td>PI3: Therapist provides a feedback to the patient</td>
<td>.62</td>
<td>91.66</td>
<td>1.13</td>
<td>0.34</td>
</tr>
<tr>
<td>PI4: Therapist suggests a patient emotion</td>
<td>.61</td>
<td>236.13</td>
<td>1.13</td>
<td>0.31</td>
</tr>
<tr>
<td>PI5: Therapist believes that patient is indirectly talking about relationship</td>
<td>.69</td>
<td>6.33</td>
<td>2.83</td>
<td>0.27</td>
</tr>
<tr>
<td>PI6: Therapist furnishes an empathic sustain to patient</td>
<td>.63</td>
<td>82.00</td>
<td>2.11</td>
<td>0.56</td>
</tr>
<tr>
<td>PI7: Therapist makes a clarification</td>
<td>.62</td>
<td>636.13</td>
<td>1.11</td>
<td>0.21</td>
</tr>
<tr>
<td>PI8: Therapist makes a confrontation</td>
<td>.61</td>
<td>431.11</td>
<td>1.13</td>
<td>0.34</td>
</tr>
<tr>
<td>PI9: Therapist admits his/her participation in rupture process</td>
<td>.75</td>
<td>9.33</td>
<td>2.87</td>
<td>0.31</td>
</tr>
<tr>
<td>PI10: Therapist self-discloses countertransference feelings</td>
<td>.74</td>
<td>14.33</td>
<td>2.89</td>
<td>0.24</td>
</tr>
<tr>
<td>PI11: Therapist explains or redefines tasks/goals of therapy</td>
<td>.81</td>
<td>83.33</td>
<td>2.89</td>
<td>0.23</td>
</tr>
<tr>
<td>PI12: Therapist makes an interpretation</td>
<td>.64</td>
<td>39.67</td>
<td>2.11</td>
<td>0.44</td>
</tr>
<tr>
<td><strong>PI</strong></td>
<td>.67</td>
<td>996.37</td>
<td>1.00</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Negative interventions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NI1: Therapist seems to impose his/her worldview or gives unwanted advice</td>
<td>.61</td>
<td>4.33</td>
<td>1.25</td>
<td>0.45</td>
</tr>
<tr>
<td>NI2: Therapist seems to compete with patient</td>
<td>.62</td>
<td>11.66</td>
<td>2.18</td>
<td>0.44</td>
</tr>
<tr>
<td>NI3: Therapist seems to press patient on specific topic</td>
<td>.66</td>
<td>12.33</td>
<td>1.80</td>
<td>0.67</td>
</tr>
<tr>
<td>NI4: Therapist seems doubtful about strategies</td>
<td>.61</td>
<td>8.11</td>
<td>1.25</td>
<td>0.91</td>
</tr>
<tr>
<td>NI5: Therapist changes offhand topic</td>
<td>.71</td>
<td>4.66</td>
<td>1.60</td>
<td>0.45</td>
</tr>
<tr>
<td>NI6: Therapist intellectualizes or is not focused on patient experience</td>
<td>.70</td>
<td>14.66</td>
<td>1.46</td>
<td>0.45</td>
</tr>
<tr>
<td>NI7: Therapist talks in technical jargon</td>
<td>.72</td>
<td>10.66</td>
<td>1.6</td>
<td>0.46</td>
</tr>
<tr>
<td>NI8: Therapist is hostile</td>
<td>.68</td>
<td>14.33</td>
<td>2.66</td>
<td>0.35</td>
</tr>
<tr>
<td><strong>NI</strong></td>
<td>.66</td>
<td>5.33</td>
<td>1.16</td>
<td>0.32</td>
</tr>
</tbody>
</table>

Note. \(P = \text{mean presence}; \ M = \text{mean intensity scores}; \ SD = \text{mean SD of intensity scores}.\)

\(a\) Mean kappa values of the three raters on a total of 2,984 patient utterances and 2,984 therapist utterances. Kappas have been calculated considering only the agreement on the categories and not on the intensity score. Kappa values were rated as follows: <0 = poor; 0–20 = slight; 21–40 = fair; 41–60 = moderate; 61–.81 = substantial; .81–1.00 = almost perfect (Landis & Koch, 1977).
for collaboration processes: +1 = low collaboration; +2 = mid collaboration; +3 = high collaboration). The mean intensity scores are called, respectively, patient collaboration level (PCL) and therapist collaboration level (TCL).

Every patient utterance is evaluated in consideration of both the previous therapist intervention and the previous patient–therapist interactions. To rate a patient utterance, the coder first has to look for the broader category that is occurring (DRM, IRM, or CP). Once the category is identified and coded, the rater looks for the specific occurring behavior (within the broader category that is being rated). Once a category is coded, all the other behaviors automatically become coded as not occurring. If the specific patient behavior that is occurring is not clearly recognizable, the rater assesses only the presence of the broader category. First, the rater has to check for a DRM; if not present, the rater will consider an IRM and only at the end a CP. We tested several rating algorithms over the years, and this one proved to be the fastest and most reliable rating procedure.

After the utterance is coded, raters assess the level of collaboration. If the utterance has been coded as a rupture, the rater will assign a negative evaluation, and if coded as a resolution, a positive intensity score. We suggest the following assignments: −3 when the patient is verbally attacking the therapist or the therapy, showing distress in the relationship; −2 when the patient adopts a passive/aggressive way to manifest hostility, for example, using sarcasm or adopting avoidance measures in response to therapist attempts to explore problems in the relationship; −1 when the patient partially disengages from the psychotherapy process or relationship through minimizing strategies, such as intellectualization, avoidance measures, or shifting from relevant topics to more peripheral ideas; +3 when the patient relates a topic to a topic or a schema to others situations, discusses problems in the relationships in a collaborative and reflexive fashion, connects problems in the therapeutic relationship with other significant relationships; +2 when the patient clarifies the intensity or quality of his or her feelings, discloses feelings in relation to a problem in the relationship, or brings a new significant topic related to a therapist exploration of problems in the relationship; +1 when the patient clarifies or reports significant new topics, explores several elements regarding a significant issue, or introduces elements within a topic.

The evaluation of each therapist intervention is made in consideration of both the previous patient utterance and the previous patient–therapist interactions. To rate a therapist utterance, the coder must first look for the broader category that is occurring (NI or PI). The main criteria for the evaluation of the quality of an intervention (negative vs. positive) are (a) emotional content (e.g., aggressive vs collaborative, as when a therapist responds in a complementary manner to patient hostility); (b) focus on the concrete experience of the patient (vs. intellectualization, as when the therapist minimizes the emotional content of an interaction to avoid overly intense feelings); (c) clarity (vs. vague, incomprehensible interventions, as when the therapist is pressed by the patient and this affects the clarity of the intervention and its formulation).

Once the category is identified and coded, the rater looks for the specific occurring intervention (within the broader category that is being rated). If the specific therapist intervention that is occurring is not clearly recognizable, the rater assesses only the presence of the broader category. First, the rater has to check for an NI; if not present, the utterance will be automatically rated as a PI.

After the utterance is coded, the rater must rate the level of collaboration of the therapist intervention. We suggest the following assignments: −3 when the therapist clearly manifests hostility toward the patient, is sarcastic or devaluing; −2 when the therapist avoids exploring patient “negative” feelings (e.g., hostility or inappropriate erotization) if they seem to be directed toward him or her or disengages through intellectualization during rupture processes;
–1 when the therapist partially disengages from the psychotherapy process or relationship through intellectualization of patient’s suffering or communicates in an insufficiently clear way; +3 when the therapist focuses attention on the here and now of the relationship, responds in a collaborative manner to patient hostility, stimulates a sense of we-ness; +2 when the therapist explores different patient’s states and feelings about the relationship during a resolution process, clarifies patient’s experience, or works on patient’s emotions after the process of resolution; +1 when therapist interventions are not explicitly addressed to therapeutic alliance but nonetheless contribute in a positive way to the psychotherapy process.

Codes are mutually exclusive. A patient utterance cannot be rated both as a rupture (DRM or IRM) and as a collaborative process (CP), nor can a patient rupture be rated at the same time as direct or indirect. In the same way, a therapist intervention cannot be rated as both negative and positive. If a patient sentence contains both elements of collaboration and rupture—in our experience a not very common event—the rater is asked to make a choice, considering the relevance of the two aspects in the sentence, their sequence, and, if necessary, the intention of the previous and the following utterances. Rarely, in different parts of long sentences or in very animated interactions, it is possible to detect two categories of the same type (e.g., DRM1 and DRM4); in these cases, we suggest rating both categories. In this study, however, to stress scale reliability for each single item, we asked raters to code only the category that was most representative of the sentence.

The time needed for the rating process of a 45- to 50-min transcript depends on the complexity of the case and rater experience. The procedure (including a preliminary reading of the transcript) takes approximately 2½ hr per session transcript. A junior rater may need 3 hr for a complete evaluation, while a senior rater (with at least 30–40 rated sessions with CIS) may require about 2 hr.

**Qualitative and Quantitative Analysis.** The CIS furnishes a great deal of information about the way patient and therapist construct their collaboration. Once the transcript is rated, we have information for each therapist–patient interaction about the intensity of the collaboration of both patient and therapist (PCL and TCL) as well as information about the typologies of collaboration (patient and therapist use of specific rupture markers and interventions).

The analysis of patient and therapist moment-by-moment collaboration levels furnishes information about the intensity of the collaboration (negative from –1 to –3; positive from +1 to +3), the trend of the collaboration during the session, and its positive or negative fluctuations. A graphic representation (Figure I) is useful for an immediate understanding of PCL and TCL.

The scale also furnishes information about the characteristics of the collaboration: the use by the patient of specific typologies of rupture or a particular therapist style of intervention, the occurrence of specific rupture markers in response to therapist intervention, and so on. This kind of data can be analyzed in different ways, but dynamic factor analysis and sequential analysis seem to be the most useful because these methodologies provide the means to describe the idiosyncratic interaction of every patient-therapist dyad.

Once the evaluation is completed, it is also possible to divide the session into several main rupture and collaborative interactions. Rupture interactions are characterized by the presence at least of one patient rupture marker or one therapist negative intervention. Collaborative interactions are

---

![Figure I](attachment:figure.png)

Figure I. Graphic representation of patient and therapist collaboration level for each interaction during a session. PCL = patient collaboration level for each therapist–patient interaction; TCL = therapist collaboration level for each therapist–patient interaction; therapist rupture = interaction in which a therapist negative intervention is present; patient rupture = interaction in which a patient rupture marker (direct or indirect) is present; y-axis: therapist–patient interaction; x-axis: rupture (–3, –2, –1) and collaboration (+1, +2, +3) intensity scores.
characterized by the presence at least of one patient collaborative process and one therapist positive intervention (see Figure I for graphic exemplifications). The consecutive occurrence of these kind of interactions determines the presence, respectively, of rupture phases (with more than one rupture interaction) and collaborative phases (with more than one collaborative interaction). The two phases may vary in both duration (from small phases of two interactions to larger phases of many interactions) and intensity (from subtle shifts to more significant fluctuations in the collaboration level). They can also alternate during the session; some sessions may present a rapid, ongoing alternation of rupture and collaborative interactions that are not organized in phases.

Using a quantitative approach, it is also possible to select session interactions in which the collaboration level (patient, therapist, or both) shows a significant positive or negative shift (e.g., a 1.5 SD) and to analyze patient and therapist interaction sequences that precede these shifts.

Although the CIS has been developed to assess collaboration fluctuations within sessions, we also developed global indexes that can be helpful for a quantitative analysis of change over time (e.g., comparing different phases of a treatment): Index of Direct Ruptures, Index of Indirect Ruptures, Index of Collaborative Processes, Index of Negative Interventions, and Index of Positive Interventions (IPI; see Table III). All these indexes take into consideration the mean frequency (in relation to the number of therapist-patient interactions) and the mean intensity (mean of the intensities rated for the specific categories in the whole session) of a specific category (DRM, IRM, PI, and NI). These formulas, based on the mean frequency and intensity of specific categories within the session, can inform us about the main characteristics of the session (e.g., patient and therapist rupture style, global patient and therapist collaboration).

Coding Manual. The coding manual explains the scale structure and the rating procedure. Coding rules, at least two clinical examples, and the rating differential criteria are presented for each item. In drafting this manual, we took inspiration from a number of other manuals. For example, the

Table III. Global indexes for Quantitative Analysis

<table>
<thead>
<tr>
<th>Index</th>
<th>Formula</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDR</td>
<td>$\Sigma$ DRM/$\Sigma$ TP interactions $\times$ mean intensity of DRM $\times 10$</td>
<td>This formula is based on the mean frequency of DRM in a session (total number of DRM/total number of interactions) multiplied for the mean intensity of DRM. The result must be a multiple of 10 to have a more useful and practice range of scores and to increase variance. The scores range from 0–30.</td>
</tr>
<tr>
<td>IIR</td>
<td>$\Sigma$ IRM/$\Sigma$ TP interactions $\times$ mean intensity of IRM $\times 10$</td>
<td>This formula is based on the mean frequency of IRM in a session (total number of IRM/total number of interactions) multiplied for the mean intensity of IRM. The result must be a multiple of 10 to have a more useful and practice range of scores and to increase variance. The scores range from 0–30.</td>
</tr>
<tr>
<td>ICP</td>
<td>$\Sigma$ CP/$\Sigma$ TP interactions $\times$ mean intensity of CP $\times 10$</td>
<td>This formula is based on the mean frequency of CP in a session (total number of DRM/total number of interactions) multiplied for the mean intensity of CP. The result must be a multiple of 10 to have a more useful and practice range of scores and to increase variance. The scores range from 0–30.</td>
</tr>
<tr>
<td>IPI</td>
<td>$\Sigma$ PI/$\Sigma$ TP interactions $\times$ mean intensity of PI $\times 10$</td>
<td>This formula is based on the mean frequency of PI in a session (total number of PI/total number of TP interactions) multiplied for the mean intensity of PI. The result must be a multiple of 10 to have a more useful and practice range of scores and to increase variance. The scores range from 0–30.</td>
</tr>
<tr>
<td>INI</td>
<td>$\Sigma$ NI/$\Sigma$ TP interactions $\times$ mean intensity of NI $\times 10$</td>
<td>This formula is based on the mean frequency of NI in a session (total number of NI/total number of TP interactions) multiplied for the mean intensity of NI. The result must be a multiple of 10 to have a more useful and practice range of scores and to increase variance. The scores range from 0–30.</td>
</tr>
</tbody>
</table>

Note. IDR = Index of Direct Ruptures; IIR = Index of Indirect Ruptures; ICP = Index of Collaborative Processes; IPI = Index of Positive Interventions; INI = Index of Negative Interventions. $\Sigma$ DRM: total number of direct rupture markers in the whole session; $\Sigma$ TP interactions = total number of therapist-patient interactions; $\Sigma$ IRM = total number of indirect rupture markers in the whole session; $\Sigma$ CP = total number of collaborative processes in the whole session; $\Sigma$ PI = total number of positive interventions in the whole session; $\Sigma$ NI = total number of negative interventions in the whole session; mean intensity = mean intensity of each category (DRM, IRM, PI, NI) is the result of the sum of the intensity scores assigned to the category in the whole session divided by the number of occurrences of the category.
formulation of the rating criteria for IRM4 (Patient denies an evident feeling state) and IRM5 (Patient intellectualizes about his/her inner experience) was inspired by the Defense Mechanism Rating Scales coding manual (Perry, 1990). The rating procedure for IRM6 (Patient alludes to negative sentiments or concerns about the therapeutic relationship through a thematically linked discussion of out-of-session events or relationships) was partially derived from the Patient Experience of the Relationship with the Therapist measure (Gill & Hoffman, 1982). The reflective functioning coding manual (Fonagy, Target, Steele, & Steele, 1998) helped us to clarify the distinction between a high collaboration process of the patient (CP3) and a sophisticated intellectualization or use of mental states as cliché. Some therapist intervention rating criteria were also derived from the Psychodynamic Interventions Rating Scale (Cooper & Bond, 1992).

A large part of the coding manual is dedicated to training exercises. These are presented according to an increasing level of difficulty, from short sentences to whole sessions. Our manual also includes three sessions rated and commented on by the authors.

**Method**

**Patients.** We evaluated 32 session transcripts (2,984 patient utterances and 2,984 therapist utterances) of 16 patients (six men, 10 women; mean age = 29.91 years, SD = 10.12) in psychotherapy. Patients and sessions were chosen randomly from our database. First, we randomly selected the cases and then randomly selected two sessions for each case. All patients were recruited from private practice. We did not have information about outcome (outcome evaluations were not performed or available). Before entering psychotherapy, all patients received a *Diagnostic and Statistical Manual of Mental Disorders* (fourth edition, text revision; American Psychiatric Association, 2000) diagnosis. Ten patients had at least one Axis II diagnosis: four met criteria for borderline personality disorder, two for borderline personality disorder and dependent personality disorder, one for histrionic personality disorder, and three for narcissistic personality disorder with dysthmic features. Six patients had only one Axis I diagnosis (three with dysthymia; two with obsessive-compulsive disorder; one with major depression). All patients signed informed consent to participate in the research.

**Therapists.** Sixteen therapists (seven cognitive, nine psychodynamic), each with at least 10 years of clinical experience, participated in the study. The 10 men and six women were a mean age of 44 years (SD = 8.5). All the psychotherapies were adminis-

<table>
<thead>
<tr>
<th>Rating</th>
<th>Presence M</th>
<th>Presence SD</th>
<th>Intensity M</th>
<th>Intensity SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRM</td>
<td>1.86</td>
<td>3.15</td>
<td>2.75</td>
<td>0.47</td>
</tr>
<tr>
<td>IRM</td>
<td>17.79</td>
<td>8.55</td>
<td>1.25</td>
<td>0.38</td>
</tr>
<tr>
<td>CP</td>
<td>73.37</td>
<td>9.23</td>
<td>1.11</td>
<td>0.49</td>
</tr>
<tr>
<td>PI</td>
<td>90.72</td>
<td>9.03</td>
<td>1.93</td>
<td>0.32</td>
</tr>
<tr>
<td>NI</td>
<td>2.69</td>
<td>1.47</td>
<td>1.66</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Note. Mean presence and intensity have been evaluated calculating the mean presence and intensity rated by every rater for every session (n = 32). DRM = direct rupture maker; IRM = indirect rupture marker; CP = collaborative process; PI = positive intervention; NI = negative intervention.

**Results**

**Occurrence and Intensity of Ruptures and Collaborative Processes.** Mean frequency and intensity for each category (DRM, IRM, CP, PI, NI) were calculated. Means were calculated by averaging the ratings of the three raters across the 32 sessions. Table IV shows the frequency and mean intensity for each category.

Patient CPs and therapist PIs were the most frequently rated. One hundred percent of the sessions contained at least one IRM compared with 43% for DRMs. NIs were rated in 31% of the sessions. The intensity rated for DRMs was greater than for IRMs, whereas mean intensity ratings for NI were lower than for PI.

** Interrater Reliability.** Overall interrater agreement between the three raters for PCL and TCL was...
evaluated. The data matrix was formed by six columns: two for every rater (one for PCL and one for TCL). Rows represented therapist–patient interactions. Interrater reliability was evaluated in 2,984 patient utterances and 2,984 therapist utterances. To evaluate the agreement on collaboration level, we used the intraclass correlation coefficient (Shrout & Fleiss, 1979). The mean overall interrater agreement of the three raters was 0.73 (range: 0.68–0.78): 0.76 for PCL (range: 0.73–0.78) and 0.68 for TCL (range: 0.68–0.70).

We were also interested in studying interrater reliability for each CIS category (DRM, IRM, CP, PI, NI), taking into consideration only the presence of the evaluation, not its intensity. Interrater reliability in this case was evaluated in 2,984 utterances (2,984 for patient and 2,984 for therapist) using Cohen’s kappa (Fleiss, 1981). The analysis was performed on a classical confusion matrix, using one for patient ratings and one for therapist ratings. Kappa values were given the following ratings: <0 = poor; 0–.20 = slight; .21–.40 = fair; .41–.60 = moderate; .61–.81 = substantial; .81–1.00 = almost perfect (Landis & Koch, 1977). The average interrater agreement was rated as almost perfect for the Direct Rupture Marker scale (.81) and as substantial for both the Indirect Rupture Marker scale (.66) and the Collaborative Process scale (.72). Interrater reliability was also substantial for Positive Intervention and Negative Intervention scales (.67 and .66, respectively). Detailed reliability estimates are presented in Table I.

### The Relationship between Therapist and Patient Collaboration

We evaluated the relationship between therapist intervention (positive and negative) and patient rupture markers and CPs (Table V). Results indicated a positive correlation between therapist PIs and patient CPs as well as between therapist NIs and patient ruptures (direct and indirect). These are correlational data, however, and at this level of analysis we are unable to indicate the causal direction of correlations.

To calculate correlations, we used a data matrix in which each row represented a therapist–patient interaction and each column a CIS item (e.g., NI1, NI2, DRM1, DRM3). Each cell contained a number indicating the intensity of each single item (ranging from 0 [not coded] to 3). In this way, we simultaneously considered the presence and intensity of each rating. For easier interpretation of the results, we changed the sign of the intensity scores of all patient ruptures and therapist negative interventions (-3 to +3, –2 to +2, –1 to +1).

PIs were positively correlated with CPs, whereas NIs were positively correlated with DRMs and IRMs. NIs also correlated negatively with CPs. Furthermore, results indicated a positive correlation between therapist PI and patient IRMs. For a deeper understanding of this correlation, we calculated the correlations between all the typologies of therapist PIs and patient DRM, IRM, and CP (Table VI).

As shown in Table VI, some therapist PIs correlated exclusively with patient CPs, whereas other therapist PIs correlated with patient CPs and DRM and/or IRM. Expressive interventions such as PI8 (Therapist makes a confrontation) and PI12 (Therapist makes an interpretation) were more correlated with IRM than with CP. Moreover, PI11 (Therapist explains or redefines tasks/goals of therapy) appeared highly correlated with patient DRM.

### Discussion

In this study, we (a) presented the CIS for the first time, (b) assessed the occurrence of patient ruptures and CPs and therapist PIs and NIs, (c) tested scale reliability, and (d) evaluated the relationship among therapist interventions, patient rupture markers, and CPs. In all sessions, at least one IRM was present whereas DRMs did not always appear. The mean presence per session of IRM was greater than for DRM. This result is quite similar to that of another study investigating the occurrence of withdrawal and confrontation ruptures in session transcripts (Sommel, Orbach, Zim, & Mikulincer, 2008). The mean intensity score of the Direct Rupture Markers scale was higher than that of Indirect Rupture Markers: DRMs are stronger strains in the alliance than IRMs. Finally, patient CPs and therapist PIs were the most frequent categories. The study did not aim to analyze the relationship between CIS ratings and other fundamental variables such as therapy outcome and patient personality organizations. Nevertheless, these are crucial issues for future research investigating the relationship among

### Table V. Pearson Correlations between Therapist Positive and Negative Interventions and Patient Rupture Markers and Collaborative Processes

<table>
<thead>
<tr>
<th>Variable</th>
<th>DRM</th>
<th>IRM</th>
<th>CP</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI</td>
<td>.217</td>
<td>.512*</td>
<td>.676*</td>
</tr>
<tr>
<td>NI</td>
<td>.781*</td>
<td>.642*</td>
<td>.621*</td>
</tr>
</tbody>
</table>

Note. N = 2,984 utterances. Correlations have been calculated using Pearson correlation coefficient. We evaluated the correlations considering the intensity score (from 0–3) for each item of the scale. We reversed the intensity scores of all patient ruptures and therapist negative interventions (-1 to +1). DRM = direct rupture marker; IRM = indirect rupture marker; CP = patient collaborative process; PI = positive intervention; NI = negative intervention.

*p < .05
outcome, therapeutic approach, diagnosis and ruptures frequency, intensity, and so on.

Overall reliability was good and in line with the findings of similar measures, such as the Client Resistance Code (Watson & McMullen, 2005) and the Psychodynamic Intervention Rating Scale (Milbrath, Bond, Cooper, Znoj, Horowitz, & Perry, 1999). Some items proved to be less reliable than others, which could be partially due to the raters’ lack of clinical experience. Another factor affecting the reliability of these items may be a particular form of disagreement, known as the “location disagreement” (Luborsky et al., 1983). Some items, for example IRM7 (Patient interacts in an acquiescent manner), refer more to an interpersonal atmosphere than an actual interaction. Therefore, it could be difficult to recognize the beginning and the end of this marker. Checking the single ratings and focusing on IRM7, we realized that the three raters rated IRM7 more or less the same number of times (frequency) but in different verbal units of the whole session.

Therapist NIs and patient rupture markers (DRMs and IRMs) were positively correlated. NIs seem to be produced by therapists in very difficult moments of the session, a correlation that may indicate that the therapist is responding in a defensive, noncollaborative way to patient ruptures. (Keep in mind that we evaluate therapist interventions as the therapist’s response to the previous patient utterances.) At the same time, this association could be explained as the effect of these negative interventions on patient response: From this point of view, DRM and IRM could be seen as a product of therapist NIs. At this level of analysis, we are unable to indicate the causal direction of correlations, that is, if the therapist NI provokes a patient rupture marker or if it is a consequence of a rupture marker. A circular dynamic is the most probable solution.

This correlation could also be affected by rater expectations insofar as raters are more likely to see a rupture after a negative therapist intervention. From a methodological point of view, this issue could be addressed by using separate raters for patient and therapist utterances (one rater blindly evaluates only patient utterances and another blindly evaluates only therapist utterances). Our coding system is based on the concept of therapeutic alliance, however, and thus it has been conceived for the evaluation of single (patient or therapist) utterances in answer to the previous interactions; it could be misleading to assess the two contributions separately. Possible effects of rater expectations have to be taken into consideration, but we realized that good observation skills united with adherence to the coding manual guidelines can prevent this effect.

Therapist PIs are significantly correlated with patient CPs. This correlation probably describes those moments of the therapy in which patient and therapist work together in a collaborative atmosphere: Therapist responds in a collaborative way to patient collaboration, which positively affects the subsequent patient response. PIs were also correlated with some IRMs and, to a lesser degree, with some DRMs. Different explanations can be given for this phenomenon. For example, these correlations may describe therapist-patient interactions in which the therapist responds to a previous patient rupture communication in a collaborative way. Another explanation could be that these interventions may provoke a negative reaction in the patient instead of the “expected” positive one. As
already observed, at this level of analysis, we are unable to indicate the causal direction of correlations, in this case if the correlation represents a therapist addressing ruptures or, conversely, a patient responding with a rupture to something we rated as a PI.

The fact that therapist PIs may provoke patient negative answers is a critical aspect that needs further investigation. In this study, we only calculated the moment-by-moment correlation: Probably, considering different lags (evaluating the effect of a therapist intervention also in relation to a series of antecedent and successive patient responses), we could obtain more exhaustive information about this aspect.

The aim of this study was to present and explain a new measure and to test its reliability. Future research must investigate other aspects, such as construct and convergent validity. Another relevant issue to test will be the relationship between in-session ruptures and resolutions (as evaluated by CIS) and sessions and therapies outcome. This is a critical aspect for us in relation to not only the validity of our instrument but also clinical practice. As clinicians and researchers, we need more information about what to do and how to address therapeutic impasses, particularly in the treatment of severe personality disorders, which are characterized by rupture processes more so than other pathologies.

Future research could further develop the Safran and Muran model, on which our scale is largely based. Some examples are a special focus on therapist’s contributions in order to define more detailed rupture models from the therapist perspective, studying specific therapist actions that negatively or positively contribute to the alliance process, studying the link between specific kinds of ruptures, specific personality disorders, and so on.

The CIS represents an effort to develop a scale for studying alliance ruptures and repair processes starting from an analysis of transcripted in-session interactions. This is in line with other research designed to evaluate the occurrence of ruptures at a turn-by-turn conversational level (Watson & McMullen, 2005; Sommerfeld et al., 2008).

Other strategies to evaluate alliance rupture processes are based on the task analytic investigation paradigm proposed by Greenberg (2007) and on the idea that it is possible to identify and delineate a rupture episode. This strategy could make it possible to study some rupture episodes more in detail and build process models for resolution ruptures (Aspland, Llewelyn, Hardy, Barkham, & Stiles, 2008; Safran et al., 1994). As described in the Qualitative and Quantitative Analysis section, CIS is not presently conceived for the assessment of rupture episodes, even if we can divide the session into rupture and collaborative phases once the evaluation is completed.

Before concluding, we should point out that evaluating transcripts requires a great deal of energy: transcribing sessions, training raters, rating sessions. It can be very onerous, so the application of our scale is indicated for single-case designs or very small samples.

As we developed this scale, we also tested scoring units larger than one utterance unit (e.g., 5 min, one-sixth of a session). Adopting a larger scoring unit has its advantages, including for example, a reduction in rating time and a probable increase in interrater reliability. On the other hand, it can result in the loss of some information, especially that related to the sequentiality of patient and therapist actions. In conclusion, the use of different scoring units depends on research aims. For studying idiosyncratic interactional patterns, we believe it is necessary to adopt a microanalytic level of analysis; however, for studying the correlation between rupture episodes and outcome, it could be useful to adopt a larger scoring unit.

Several years spent training residents and young psychotherapists made us appreciate the utility of the CIS as a training tool. In fact, it is a good way to help trainees develop their ability to recognize subtle rupture episodes.

At a more general level, the CIS represents an effort to bridge the gap between clinicians and researchers and to contribute to the development of a clinically articulated but empirically grounded way of assessing therapeutic alliance and rupture-repair processes. Indeed, several recent studies have illustrated the importance of combining qualitative and quantitative methodologies in exploring therapeutic relationships (see Bucci, 2005; Kächele et al., 2006; Lingiardi, Shedler & Gazzillo, 2006; Shedler & Westen, 2006). We believe this approach can help the therapist to clarify and articulate what happens during the session, which kinds of interventions are more effective with a specific patient, and which kinds of rupture and resolution dynamics are prevalent with that patient in relation to specific moments or topics of the therapy. From this point of view, the CIS is not only a taxonomy of therapeutic alliance ruptures and resolutions but also a tool aimed at increasing clinical knowledge of patient-therapist dynamics and interactions.

Acknowledgements

We thank all the junior and senior colleagues who, in the course of the years, have been contributing to the scale development: all the participants of our clinical
seminars on therapeutic alliance assessment, in particular the group from Sapienza University of Rome (Francesco De Bei, Francesco Gazzillo, Daniela Gentile); Daniela Maggioni and the ASP Clinical and Research Group of Milan; the group from Padua University (Adriana Lis, Silvia Salcuni, Diego Rocco); and the group from Bicocca University of Milan (Marta Vigorelli, Mariangela Villa, Tiziana Porta). In addition, we thank the anonymous reviewers for their stimulating comments and suggestions.

References


