

Saying the Right Thing at the Right Time

A View Through the Lens of the Analytic Process Scales (APS)

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Abstract

Skillful psychoanalytic technique presumably involves knowing what to say, and when and how to say it. Does skillful technique have a positive impact upon the patient? The study described in this article relied on ratings by experienced psychoanalysts using the Analytic Process Scales (APS), a research instrument for assessing recorded psychoanalyses, in order to examine analytic interventions and patient productivity (greater understanding, affective engagement in the analytic process, and so on). In three analytic cases, the authors found significant correlations between core analytic activities (e.g., interpretation of defenses, transference, and conflicts) and patient productivity immediately following the intervention, but only if it had been skillfully carried out. Findings were independently replicated by psychology interns.

Introduction

How to measure psychoanalytic processes remains a problem more than a hundred years after the invention of the procedure of psychoanalysis. Many psychoanalysts continue to question the value of systematic, empirical research in our discipline. They believe that

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measuring and assessing their work would not only be intrusive and distorting, but would ultimately fail to capture the uniqueness of analytic interventions, which are often tailored to subtle changes in patient, analyst, and the relationship between them. They also fear that research might understate the effectiveness of psychoanalytic therapy. In addition, most analysts object to tape-recording their work for research purposes, in part because they feel it would violate the relationship with the patient. However, the lack of sufficient systematic study of this therapeutic procedure has reduced its acceptability to a broader scientific audience, and has reduced the possibility of comparing it systematically to other treatments, in turn contributing to a reduction of public support. It may also have slowed its internal development, since the accumulation of systematic knowledge may lead to discoveries improving the efficacy of psychoanalytic treatments.

Summary Of The Literature

The problem of how to measure the relationship between treatment process and benefit is shared by the fields of psychoanalysis and psychotherapy. There have been a number of prior studies of the immediate effects of interventions on the patient or the process, such as those of Garduk and Haggard (1972), Malan (1976), O'Malley, Suh, and Strupp (1983), Luborsky et al. (1989), and Gedo and Schaffer (1989). However, the quality of interventions has generally not been assessed in studying immediate or long-term effects, in part because methods for such assessment have not been sufficiently developed¹. In a review published in a National Institute of Mental Health bulletin, Borkovec and Miranda (1996) pointed out that: "Despite initial attempts for some types of therapy, there is no valid way to measure quality for any therapy technique" (p. 15).

However, several promising lines of research address the quality of analytic technique. Jones and colleagues (Ablon and Jones 1998;

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Jones and Pulos 1993; Jones and Windholz 1990) have reliably characterized the nature of the therapist's approach to the patient. They make a clear distinction between psychodynamic and cognitive-behavioral features, demonstrating that the former correlate with successful outcomes while the latter do not, in both a sample of patients treated by psychodynamic therapy and another treated by cognitive-behavioral therapy. This finding was based upon measuring the techniques used by the therapists without attempting to measure their quality. Quality was measured in an interesting small study by Glass et al. (1989), which demonstrated a substantial relationship between skillful dynamic exploration and outcome in schizophrenia.

The studies carried out by Joseph Weiss, Harold Sampson, and colleagues have significantly contributed to assessing the quality of interventions (Weiss, Sampson, and the Mount Zion Psychotherapy Research Group 1986). In their view, interventions need to conform to the patient's plan for therapy, that is, the patient knows at some level what help is needed, and tests (purposefully, though not consciously) the therapist's ability to provide it. If the therapist intervenes in a way that is "pro-plan," the patient improves (Norville, Sampson, and Weiss 1996). This group of researchers has been very careful in supporting their claims with evidence, derived primarily from audiotaped psychoanalyses and psychotherapies.

¹ In this paper, we use the term quality to refer to clinician judgments of the way the comments of the analyst or therapist may be expected to affect the patient, including the aptness of the intervention's type, the potential usefulness of its content, and the skill and tactfulness of its presentation (see Appendix 2, p. 1116).

Two other sets of investigations provide more indirect approaches to quality. Dahl (1988, 1991) has shown a relationship between interventions that address patterns of repetitive maladaptive emotion structures (called FRAMES) and the substantial reduction of those patterns, so that the quality of interventions can be assessed by how accurately the patient's FRAMES are addressed. Similarly, Luborsky and colleagues (1988, 1998) have demonstrated a relationship between addressing Core Conflictual Relationship Themes (CCRT) and benefit.

Caston, Goldman, and McClure's (1986) study of the effect of interpretiveness on the patient's insight and boldness assessed central psychoanalytic concepts with high reliability. It showed a significant impact, comparable to findings we report here, which we will refer to again in our discussion.

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We believe that our group has taken an important step by developing an instrument, the Analytic Process Scales (APS), that makes it possible to study the impact of the quality of analysts' interventions on patients' immediately subsequent analytic productivity. Elsewhere, we (Waldron et al. 2004) describe our working conceptualizations of the psychoanalytic process as they evolved in the course of developing the APS and coding manual, eventually finding expression as APS variables. A distillation of these ideas defines the psychoanalytic process as a special interactive dialogue between patient and analyst, aimed at lessening the patient's emotional conflicts, suffering, and dysfunctions. If the procedure is successful, the patient communicates increasingly unconstrained and affectively expressive associations and reflections (which we consider to be a productive response to the analyst's communication). The analyst contributes to the conversation from time to time with requests for elaboration, with clarifications, interpretations, or support, aimed at facilitating the patient's communications and transforming the patient's awareness. Mindful of the patient's self-esteem and immediate emotional focus, interventions approach conflict, transference, and resistance.

In the unfolding interaction between patient and analyst, connections between the present, the past, and the analytic situation emerge. These aspects are illustrated in Appendix 2, p. 1116, which presents two variables from the APS Coding Manual that are used to assess the productivity of a patient's communication and the quality of an intervention.

Method

Development of the Analytic Process Scales (APS)

A review of the APS and its development will permit the reader to understand our findings

and assess the validity of our claims². Our group of mostly New York-based, experienced psychoanalysts has

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spent the past eighteen years devising the means to assess taperecorded psychoanalyses in a way that reflects clinical psychoanalytic features as closely as possible, while inevitably limited by the perspectives each of us brings to psychoanalytic work. Our research group is led by Sherwood Waldron, Jr., and includes as directors Anna Burton, Shuki Cohen, James Crouse, Stephen Firestein, Fonya Helm, David Hurst, John Lundin, Seymour Moscovitz, Robert Scharf, and Kenneth Winarick³. Five of us are full-time practitioners, each with more than thirty-five years of clinical experience; and Dr. Crouse is an experienced social scientist and a professor of sociology and educational studies who has played a central role in evaluating our data. Our other directors have a special interest in research. We have aimed at studying the nature of psychoanalytic interventions, the nature of the patient's contributions, and the relationships and interactions between them. We tried to use methods that would avoid problems encountered by previous investigators. We studied only the work of experienced analysts and used only highly experienced analysts as raters for our initial studies. We tried to choose central, unambiguous, experience-near process features of both patient and analyst, and defined our variables in the language of the clinical surface.

From early in the project, the study of recorded psychoanalytic sessions led to sufficient clinical agreement among us that we were able to start developing scales for assessing the contributions of patient and analyst to the analytic work⁴. We found that if we evaluated

² This research was supported by grants from the Research Advisory Board of the International Psychoanalytic Association. Patrick Shrout, recent chair of the Department of Psychology at New York University, provided important statistical consultation, both in the early phase of the project and in the evaluation and presentation of the results.

³ Marianne Goldberger also participated in our work for several important years. Shuki Cohen, Fonya Helm, and Seymour Moscovitz joined our group since this work was accomplished, and have contributed to the thinking and writing of this paper.

⁴ In developing our instrument and methodology, we used recorded cases provided by Lester Luborsky of the Philadelphia analytic study group, whose work presaged our own, as well as sessions from the case of Mrs. C, a psychoanalytic treatment that has been widely studied by other researchers. We are indebted to Hartvig Dahl, the custodian of the recordings of Mrs. C. We have also studied recorded analyses from the archives of the Psychoanalytic Research Consortium (PRC), a nonprofit organization formed under the direction of Drs. Waldron, Firestein, and others to collect such recordings, preserve them under safeguarded conditions, and

one session without understanding its context, our views were as discrepant from one another as those reported by Seitz in his classical paper (1966) or by Vaughan et al. (1997). However, we discovered that if we listened to two or three sessions immediately preceding the one to be rated, in order to establish a better understanding of how the patient–analyst pair was working together, we found our views converging, which in turn served as the basis for developing reliable ratings of central clinical variables.

In addition to clinical experience and theory, we drew upon previous psychoanalytic and psychotherapy research to formulate variables for the Analytic Process Scales. These include the Psychodynamic Intervention Rating Scale, or PIRS (Cooper and Bond, unpublished; Milbrath et al. 1999); the Vanderbilt Psychotherapy Process Scales, or VPPS (O'Malley, Suh, and Strupp 1983); the Therapist Verbal Intervention Inventory, or TVII (Koenigsberg et al. 1988; Koenigsberg et al. 1993), and the Psychotherapy Process QSet (Jones and Windholz 1990). We were also influenced as time went on by our exposure to the Adult Attachment Interview (AAI) and the conceptualizations of the linguist Grice (1975), as cited by Main (1996)—particularly the four characteristics of coherent and collaborative discourse in persons manifesting secure attachment. Such discourse adheres to four maxims: quality (“be truthful, and have evidence for what you say”), quantity (“be succinct, yet complete”), relation (“be relevant or perspicacious”) and manner (“be clear and orderly”) (Main 1996, p. 240). We were also familiar with Bucci's (1997) four somewhat overlapping features as components of Computerized Referential Activity (CRA), the degree to which speech was clear, concrete, specific, and contained images (p. 167).

Dividing a Session into Clinically Meaningful Segments, Rated by the APS Variables

The long process of devising variables, testing them on new recorded material, and repeatedly revising them led to the development of eighteen variables assessing the analyst's contribution and fourteen assessing that of the patient, selected to track elements

central to psychoanalysis and psychodynamic therapy—for the patient and the therapist as

they vary during the course of each session⁵. To accomplish this, we developed a reliable procedure for segmenting sessions into psychoanalytically meaningful units for rating, permitting us to study the impact of one participant on the other as each session unfolded. Our procedure for segmenting was a modification of that described by Stinson et al. (1994).

The segmenting of each session is fundamental to understanding the results reported here, because we are then able to estimate the impact of one participant upon the other in a sequential way. Essentially, all speech by each participant is contained within a segment, and segments are usually categorized as either patient segments or therapist segments. Division between segments is frequently located at the point of a change in speaker, resulting in an analyst segment and a patient segment. When there is a rapid exchange between patient and analyst, a segment may include several changes of speaker and is rated for both analyst and patient variables. The interaction between analyst and patient is studied by looking at the relationships between the patient and analyst variables studied over time. The segmenting procedure usually leads to about eight to thirty segments per session, and each segment is rated on the clinical variables applying to that segment⁶.

The APS Coding Manual

The APS Coding Manual (Scharf et al., unpublished) defines and illustrates each variable to be rated (see Appendix 2, Sections 1 and 2, pp. 1116-1122). Brief clinical examples illustrate ratings at the levels of “0,” “2,” and “4”; the intermediate levels of “1” and “3”

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are left to the judgment of the rater. Each example is designed to be easy to read and to remember. In the course of years of examining scoring differences among our group members, we have refined our illustrations and instructions to raters. Our inter-rater reliability has steadily improved, and we have now achieved a satisfactory level on virtually all our variables. Moreover,

⁵ Readers wanting more details may visit our website, and/or refer to our paper describing the APS and its development in more detail (Waldron et al. 2004). Although we focus our discussion on analysts and the analytic method of therapy, the APS is designed to evaluate all psychotherapeutic work derived from a psychoanalytic perspective. The APS Coding Manual is also available for downloading from our website, at <http://www.psychoanalyticresearch.org>.

⁶ Further details, including data documenting the excellent reliability of the procedure in our hands, are reported in Waldron et al. (2004).

we have found that analysts need only brief training to achieve reliability using the manual⁷. As little as one rating hour has sufficed for training, followed by a discussion with a senior investigator, during which the new rater's scores are compared with those of senior raters. We have found comparable levels of reliability for junior clinicians after a series of meetings with our investigators to discuss interventions and patient response. In the data we have presented here, each APS score is the mean of the scores of four trained raters⁸.

In the current study, the central patient variable studied in relation to the analyst variables was patient productivity, measured as progress either in response to the analyst's intervention, or from the patient's own momentum. Raters were instructed to score a segment as "0" when they could not find progress in understanding, in involvement or collaboration in the analysis, or in the nature of other developing emotional responses; as "2" when there was moderate progress in the depth and breadth of understanding, in emotional involvement and collaboration in the analysis, or in the nature of other emotional expressions; and as "4" when the patient made strong progress. Each of these points on the scale is illustrated with clinical examples (see Appendix 2, p. 1116, for coding manual definition and examples of this variable). The patient's productivity immediately following each rated analyst intervention provided the central outcome variable (dependent variable) in this study.

The analyst variables fall into three clusters. The first, intervention quality, comprises two variables: one measures how well the

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analyst follows the patient's productions, and the other measures the overall quality of the intervention⁹. The second cluster, core analytic activities, measures the degree to which the analyst clarifies, interprets, and focuses on resistance, transference, and conflict. The third cluster, affective involvement, measures how much the analyst is confrontational and expressive

⁷ Full reliability scores with both senior and junior clinicians are reported in Waldron et al. (2004).

⁸ The ratings reported here were made during the development of the coding manual, while the exact phrases and definitions were still evolving toward greater clarity. The nature of these changes was such that they would not be expected to materially affect the findings reported in this paper.

⁹ A third variable has been added since these data were collected: the coherence of the analyst's remarks in the segment with other interventions. This variable is not further discussed in this paper, however.

of feeling.

Intervention quality averages the ratings of the following two variables:

1. Following the patient assesses the degree to which an intervention follows the analytic surface by focusing on the patient's most experience-near issues. It often determines the success of the analyst's effort to communicate with the patient. For example, to what degree does the analyst follow meaningful affects (including negative affects, such as anxiety, guilt, or low self-regard) and the patient's moment-to-moment defenses?

2. Good intervention is a more global rating of the aptness of the type of intervention, the usefulness of its content, and the skill of presentation, including tact, timing, and verbal appeal¹⁰.

For the second cluster, core analytic activities, we assess five items: clarification, interpretation, and their major aims—addressing defense, transference, and conflicts. The raters estimate the degree to which each of these analytic activities is present, specifically disregarding the aptness or skill with which they are employed. Each of these elements is rated independently of the others, so that, for example, a given intervention could be rated “4” for clarification, “2” for interpretation, and “0” for addressing transference.

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1. Clarification is rated according to the degree to which attention is called to insufficiently noticed surface features and how they may be psychologically connected.

2. Interpretation is rated according to how well the analyst's intervention aims at transforming meaning by bringing aspects that are outside of awareness into full awareness.

3. Addressing resistance (or defenses operative in the session) is rated as the degree of focus on any measure the patient takes to avoid experiencing objectionable impulses, affects, thoughts, or fantasies. A psychological feature performing a defensive function may simultaneously serve drive, moral, or adaptive purposes. To be scored, addressing resistance must be manifest, or, if inferred, it must be easily identifiable by the rater and most analysts. Raters score the apparent aim of the intervention, not whether they agree with the analyst or therapist that defenses are present in the patient's communication or the skill with which they are addressed.

¹⁰ Those readers interested in understanding in more detail our coding manual definition of good intervention, with examples to illustrate scale points, may review it in Appendix 2, pp. 1116-1122.

4. Addressing transference is rated by the degree to which the patient's reactions to the analyst or to the analytic situation are pointed out. This score increases with the amount of complexity and detail, which may include similar, prior responses to the analyst or other persons.

5. Addressing conflicts is rated by the degree to which the analyst focuses on the patient's conflicts in the segment—impulses or affects and their feared consequences or resulting moral concerns—and the connections between any of these, including related fantasies and memories.

The third cluster, analyst's affective involvement, is assessed by averaging the following two variables:

1. Confrontation is rated by the degree to which the intervention introduces a special emphasis, urgency, or reiteration

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to point out that the patient is denying, avoiding, or minimizing an issue at the psychic surface. Raters are to disregard whether the confrontation seems constructive or harmful and score only for emphasis and urgency. The confrontational aspects of an intervention may be conveyed by tone of voice as well as content, making it essential to listen to a recording.

2. The contribution of the analyst's feelings rates the degree to which voice quality and verbal content convey the analyst's emotions, regardless of whether such emotional expression seems to encourage or to interfere with the analytic work.

Encouragement of elaboration is separate from the three analytic intervention clusters and refers to the analyst's request that the patient expand on what he or she has been relating. The request may be general (“Can you tell me more about that?”) or specific (“What comes to mind about the car emerging from underwater in the dream?”).

The Patients Studied

This report is based upon the study of three treatments with three different analysts. They were initially studied to facilitate development of our scales, providing different treatment approaches and levels of clinical work. From perusal of several hours from each case, we estimated clinically that one patient had done relatively well; another appeared to be deadlocked after 660 sessions; and the third was chosen as a good representative analytic process.

Although we make no claim that the sample is representative of all analyses, there were no systematic biases in selecting the sample, except that only patients who had agreed to be

audiotaped could be included. The cases were chosen as a matter of convenience, to provide us with material for developing our APS. The sessions for the first two cases were chosen from the very beginning, the middle, and a few weeks before the end of the treatment, with no other

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selection criteria except that the sessions be from a complete week of analytic work. The first case was chosen because it was already transcribed, and the second because it was from a different analyst than the first. The third case, by yet another analyst, was chosen to extend the sample for purposes of further refining our instrument.

Patient A2 was a young, agoraphobic housewife and mother whose symptoms improved considerably in the course of her 300+hour, four-times-weekly analysis, which became a twice-weekly treatment as termination approached. Despite her improvement, her analyst thought she would have benefited from further work. Our raters concurred. Generally, they thought that the analyst-patient interaction was negatively influenced by the male analyst's imposing presence, toward which the patient seemed unusually compliant. They also thought that the analyst emphasized transference analysis in ways that were often not meaningful or useful to the patient. Despite this, the analyst seemed sensitive and attuned to the patient in ways that she appreciated and responded to positively.

Patient V4 had serious difficulties in relationships, including distancing himself from women. His initially positive reaction to this, his second, male analyst gradually gave way to a sense of alienation and feelings of being misunderstood. The analyst became increasingly frustrated and appeared to blame the patient for his failing marriage and faltering treatment, which ended after 660 hours. The analyst was rated as very confrontational and emotionally expressive. The confrontations seemed to become increasingly hostile. An absence of effective or meaningful interpretations of the pair's antagonistic relationship may have undermined the possibility of more productive analytic work.

Patient U8 was a married man experiencing relationship problems, who had left a previous analysis because he felt too distant from the analyst. The present, two-year analysis with another male analyst (about 400 hours, four times weekly) addressed ways in which he kept himself removed from others, including spouse, children, and his present and previous analysts. Positive changes occurred in both his analysis and his life. His analyst's contributions

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aimed at conflict and defense, and the analyst was unusually active. This analysis was seen as a partially successful effort to break through the patient's wall of isolation and passivity.

The sessions from this third case were the only ones available from it, and came from the very end of that treatment. These were the only sessions rated using the APS; no other sessions were excluded from the sample. The data come from recorded sessions drawn from the eighteen cases then in the collection of the Psychoanalytic Research Consortium (Waldron 1998)¹¹.

The Raters and Their Training

The raters in the initial study were all experienced analysts (>35 years), trained at psychoanalytic institutes where the so-called American ego psychological viewpoint tended to predominate. Of course, their points of view about clinical work had altered through the experience of many years of practice following training. These raters participated variably in the creation of the instrument, developing a degree of shared understanding about the variables. However, all ratings of each of the sessions in the study were independent; that is, raters did not discuss amongst themselves their views of the particular session rated until after ratings were completed, nor were they privy to the case summaries provided above. Raters also did not know what followed each segment of the session at the time they rated that segment, and were not permitted to change ratings retrospectively.

The purpose of the replication study was to determine whether the relationship found in the initial study between intervention quality and patient productivity, reported later in this paper, would also be found if patient productivity were assessed by psychology interns who were blinded to the analysts' interventions during the session to be rated. These trainees had enrolled at the Karen Horney Clinic for their internships because of its reputation for teaching

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psychodynamic psychotherapy, which was a particular interest for each of them.

The training and data collection that took place with the Horney interns occurred as follows: Kenneth Winarick, the training director, met with the interns as part of their regular academic experience for several weeks, in order to familiarize them with the APS Coding Manual, a 78-page document that defines and illustrates the 32 analyst and patient variables constituting the APS. Following this initial familiarization, the interns were trained in the use of the APS via a sample session. Next, the interns read and listened to two complete sessions immediately prior to the session to be rated, to establish context (the same procedure undergone by the original senior raters). Then they rated separately each of the nine sessions studied, using

¹¹ The recordings came from the collection of the Psychoanalytic Research Consortium (PRC). (See footnote 4, p. 1083.)

the APS variables assessing patient functioning (the analyst's remarks having been deleted) and e-mailed their scores to Dr. Waldron.

Dr. Waldron prepared a printout of each response, showing the four raters' scores on each variable, along with the average score of the four senior raters for each segment and variable. These printouts were studied and discussed in detail in meetings among the interns and Drs. Waldron and Winarick. In order to sustain interns' interest and sense of continuity, the senior investigators read to them the actual interventions as the session was reviewed, which had been omitted while they accomplished their ratings. The discussions tended to be lively, and the students appeared to become engaged in the process of clarifying their own thinking about the treatments, leading to a sustained sense of involvement, despite their being blind to the analyst's remarks at the time of the rating.

Statistical Analysis of the Data

The APS variables were chosen and defined to produce measurable differences between scores on each variable. These scores constitute the basic data of this study. Our statistical approach was developed in ongoing consultations with Patrick Shrout, a statistician

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who has been instrumental (together with others [Shrout and Fliess 1979]) in developing the intra-class correlation coefficient used in this study. We also became aware of the utility of the multiple regression procedure when James Crouse, a social scientist and professor, joined our group.

We consistently check for relationships between the clusters of analyst intervention data and patient productivity scores. We also check for consistency of relationships between the individual analyst variables and patient productivity scores, to ensure that individual patterns are not being lost or concealed by aggregating the variables. Then, by the method of partial correlation, we hold constant the effect of differing analyst–patient pairs, to determine that any relationship found between analyst variables and subsequent patient productivity is true when examining each analyst–patient pair individually. Finally, by the method of multiple regression analysis, we hold constant the effects of the other variables, in order to discover the contribution of each individual analyst intervention variable to immediate patient productivity. In the replication study, we used the senior analyst scores on analyst variables and the psychology interns' scores on the patient variables, applying the same analyses as in the initial study.

To briefly review and elaborate, we remind the reader that we rated nine sessions from three psychoanalyses drawn from the collection of the Psychoanalytic Research Consortium

(Waldron 1998). Four sessions were taken from early, middle, and late in a 324-hour analysis; three were selected from early, middle, and late in a 660-hour analysis; and two were drawn from the end of a 388-hour analysis. The nine sessions produced a total of 123 segments rated for the analyst variables, and 117 segments rated for patient productivity.

The data are arrayed to show analyst intervention scores in relation to patient productivity scores from the immediately prior and the immediately subsequent patient segments. This permits us to follow events of the session from two reciprocal perspectives: how the analyst's activity affects the patient's work, and how the patient's

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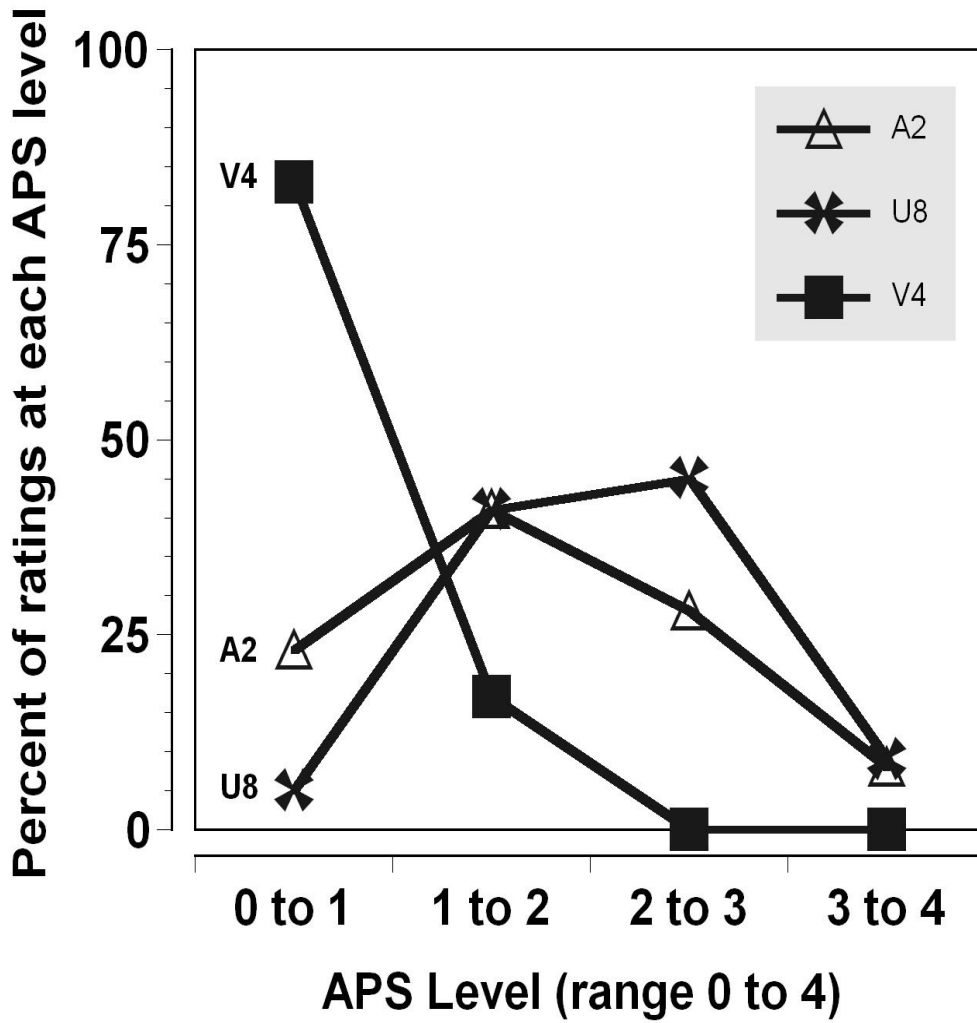
work facilitates the analyst's activity. When the patient becomes more productive, the analyst may be able to make higher-quality remarks, demonstrate better core analytic activity, and become more involved, so that any increased productivity following an intervention might result not only from the intervention itself, but also from the patient's productivity in the previous segment (as was demonstrated using similar measures in the Caston, Goldman, and McClure [1986] study). Since subsequent patient productivity might reflect both the patient's previous productivity and the analyst's intervention, we assessed the relative influence of these two factors using the method of multiple regression.

Results

We report here the results based upon the ratings of senior analysts, with replications for certain central findings based upon patient productivity scores generated by Karen Horney Clinic psychology interns, who were blinded to analyst interventions. In our first study applying the APS (Waldron et al. 2004), we found differences between the analytic activities of the three analysts, differences in the patient's functioning within each session, and differences in the interaction between analyst and patient. In this paper, we will focus particularly on findings related to ratings of quality of interventions.

Figure 1 on p. 1095 reveals considerable variation in the quality of intervention within each analysis, as well as substantial differences among the analyses. We have arranged the quality scores along the horizontal axis, increasing from either "0" or "1" (the lowest level of quality) to "3" or "4" (the highest levels). For each of the three patients, the percentage of segment scores at each level of intervention quality is charted on the vertical axis. Inspection shows that 30% of interventions scored below "1," 64% between "1" and "3," and only 6% either "3" or "4." The striking differences among the patient-analyst pairs support the clinical impressions derived from reading the clinical summaries of the cases. For example, more than three-quarters of the

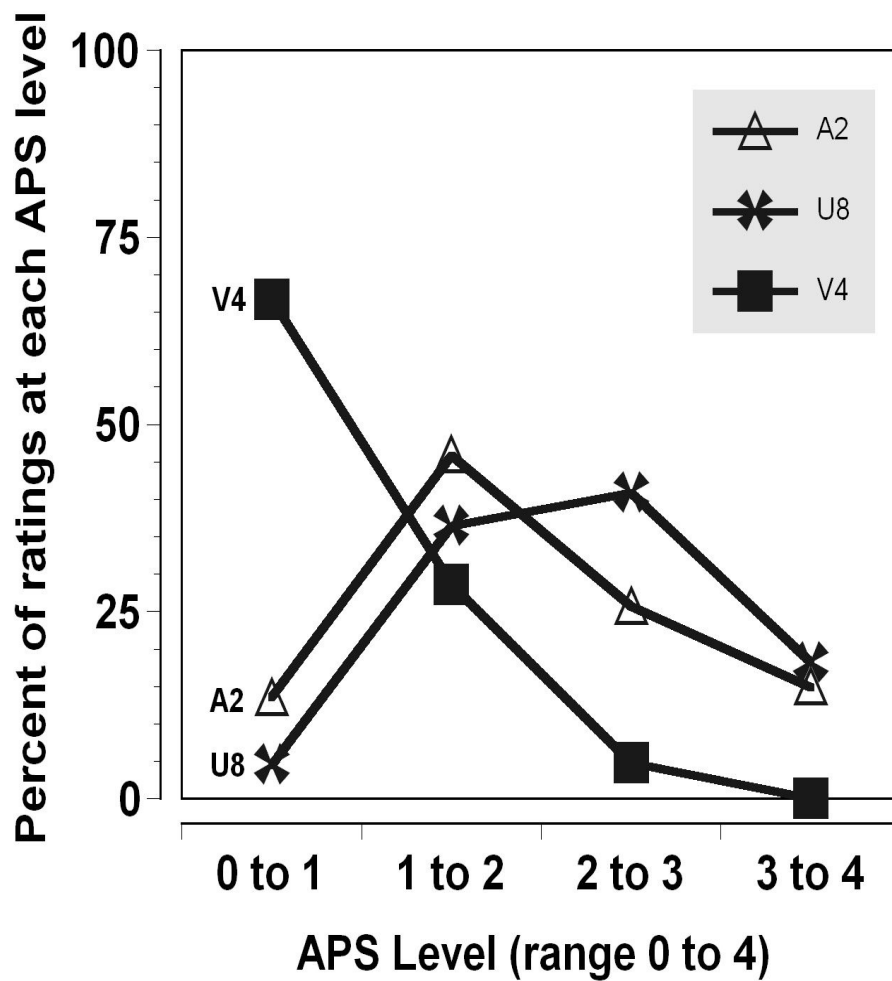
**FIGURE 1: quality of analyst communications by case
(123 segments from 9 sessions
conducted by 3 different analysts)**



quality fall below “1” for the case designated V4—a case viewed as problematic by the raters.

In the two cases viewed clinically as more successful, only 7 and 8% of interventions, respectively, were scored “3” to “4,” while the seemingly unsuccessful case, V4, had no interventions at these levels. It is possible that high-quality interventions predict benefit even

**FIGURE 2: patients' productivity
(117 segments from 9 sessions
conducted by 3 different analysts)**



when they constitute a relatively low percentage of the total. However, a much larger sample will be necessary to examine the relationship between successful treatment and infrequent but highquality interventions.

The percentage of segments falling at different levels of patient productivity is graphed for each patient separately in Figure 2, above, in a way similar to that of Figure 1. The congruity of the curves of Figures 1 and 2 may demonstrate the mutual influence of patient and analyst, and suggests that each participant may not be able to achieve a high level of work without the other's also doing so.

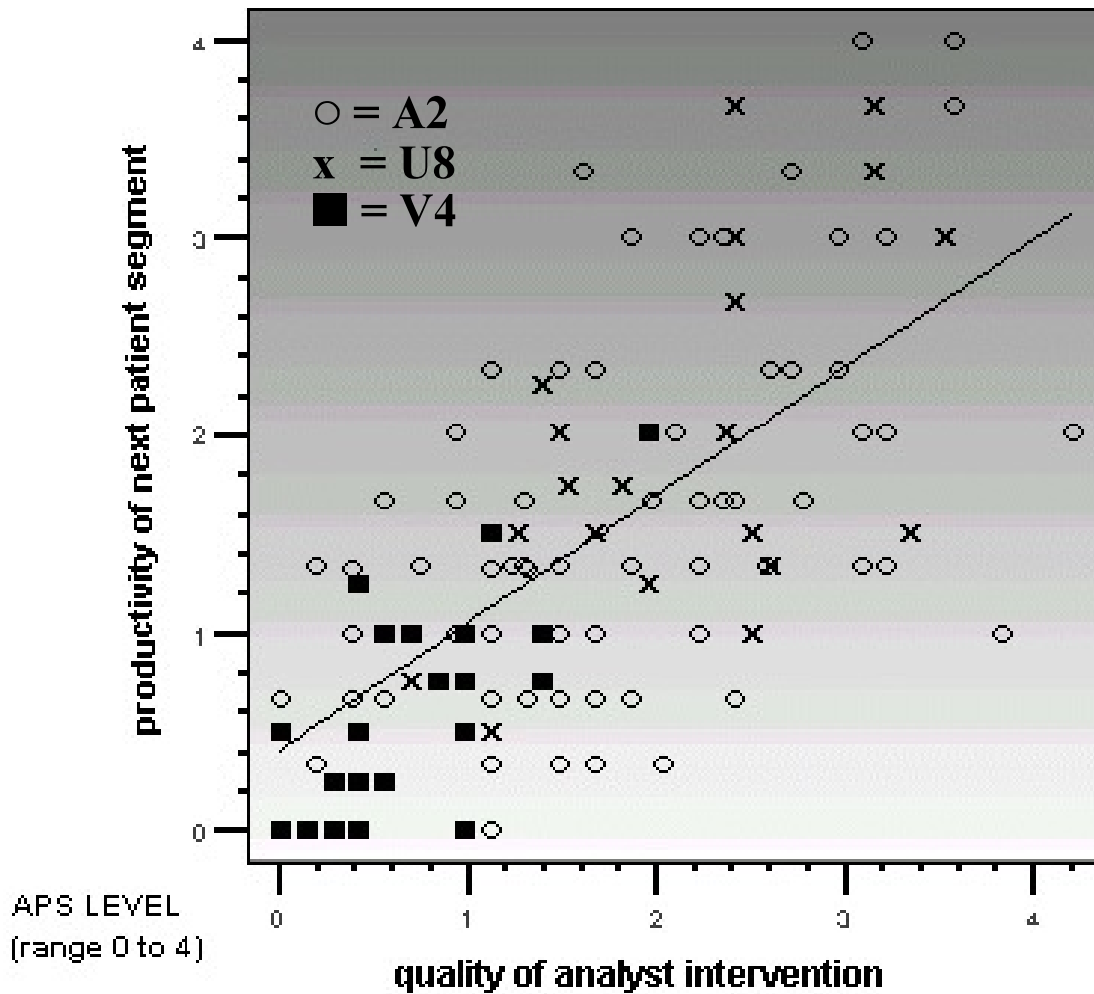
We next consider the relationships between the core analytic activities utilized by the analysts, the quality of these interventions, and the patients' responses in the next patient segment in the three treatments. (The correlation matrices may be found in Appendix 1, Table 1 on pp. 1112-1113, and the column and row numbers in

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what follows refer to this table.) One potential problem in studying correlations between these variables is that such a correlation might be an artifact of differences among patient–analyst pairs, and might not represent changes in productivity due to specific interventions. For example, a spuriously strong correlation could appear if both analyst quality and patient productivity were consistently high for one patient–analyst pair, medium for a second patient–analyst pair, and consistently low for a third patient–analyst pair. To protect against such misleading results, we used the statistical procedure called partial correlation, which holds the influence of patient–analyst pair constant. When we calculate the partial correlation of the mean core analytic activity (averaging level of clarification, interpretation, analysis of resistance, transference, and conflict for each segment) with patient productivity in the next segment, there is a modest but significant correlation of 0.25 (see Table 1, row 3, column 1, pp. 1112-1113). Among the partial correlations of each individual core analytic activity with patient productivity, only analyzing resistance ($r = 0.22$, row 6, column 1) and analyzing conflict ($r = 0.37$, row 8, column 1) are significantly related to subsequent productivity. The reader will recall that these assessments of core analytic activities are made without considering the quality of the intervention, which is rated separately.

Continuing an examination of the results of our partial correlation procedure while holding patient–analyst pair constant, we find intervention quality to be moderately correlated with immediately subsequent patient productivity ($r = 0.44$, row 2, column 1). Also, previous patient productivity has an important influence on the intervention quality that follows ($r = 0.43$, row 9, column 2), which illustrates how much the analyst's work may depend on the patient's contribution. Finally, subsequent patient productivity is related to previous patient productivity ($r = 0.49$, row 9, column 1), showing that the patient's work has its own momentum as well. We have, therefore, found that the quality of the interventions is more strongly correlated with patient

FIGURE 3: RELATIONSHIP BETWEEN QUALITY OF INTERVENTION AND IMMEDIATE PATIENT PRODUCTIVITY
 (117 segments from 9 sessions conducted by 3 analysts)



response than are the core analytic activities, when either combined or examined singly.

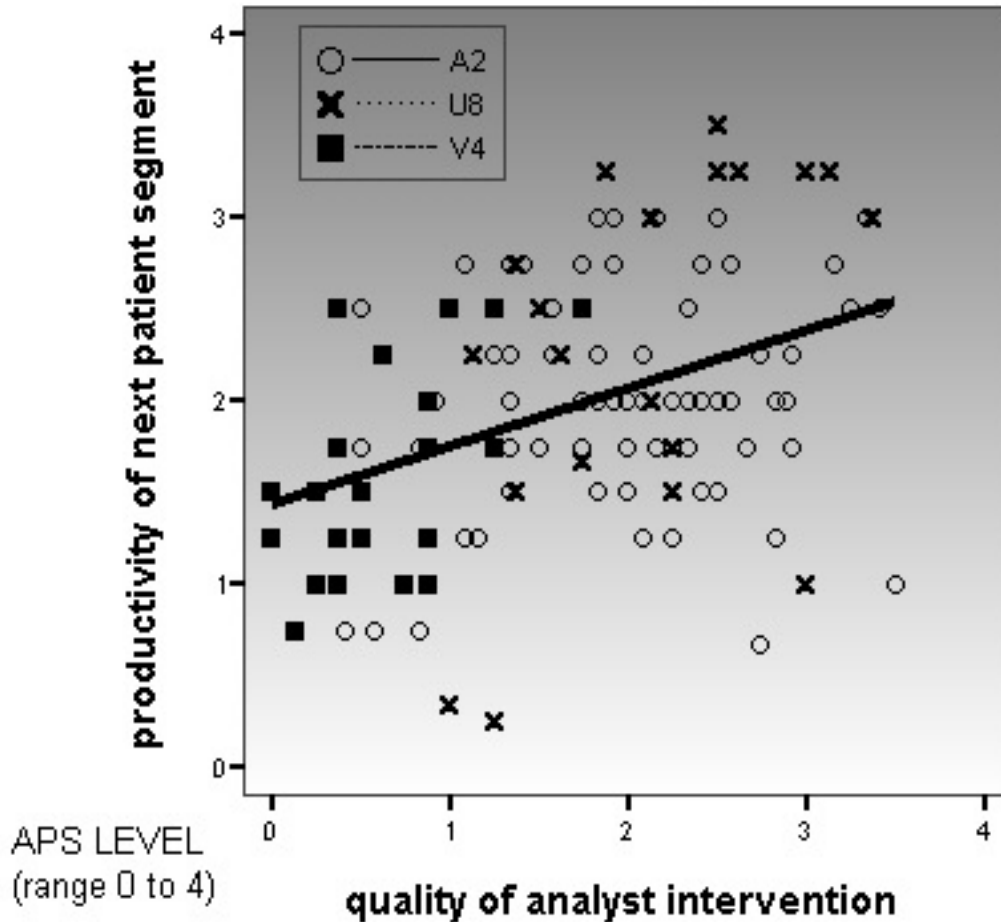
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In Figure 3 above, we have demonstrated in another way the degree to which quality analytic interventions are related to patient productivity by graphing the analyst's intervention against the patient's response. For each of the three analyses studied, the points are clustered along the straight line shown, and the relationship between the two variables is directly

proportional¹².

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Figure 4: QUALITY OF INTERVENTION BY SENIOR ANALYSTS VS. PATIENT PRODUCTIVITY BY BLINDED INTERNS (same 9 sessions as Fig. 3)



¹² Each graphed symbol in the figure represents a pair of scores for one segment: on the horizontal axis, the value for the quality of the analyst's intervention, and on the vertical axis, the score for the patient's productivity in the immediately subsequent segment. The markers in the figure are different for each patient-analyst pair; thus, the pattern of correlation between these two variables can be seen for each of them. Close inspection of the figure shows that each patient-analyst pair had a strong correlation between these two variables (and all were statistically significant), although the patient designated as A2 had somewhat lower values than the other two. The corresponding B scores for quality of intervention in relation to analytic productivity were .333 for A2, .894 for U8, and .846 for V4 (see footnote 10, p. 1087).

This relationship between the analyst's intervention and the patient's response is present in each analyst's interventions compared to that patient's immediately following segment, indicating a consistent relationship between quality and productivity for each of the three cases in this sample.

Note the absence of markers in the upper left quadrant of Figure 3. If these patients were sometimes successfully carrying on their own analyses with little help from their analysts, we would find a number of markers in this area. Similarly, the lower right is virtually empty, indicating that there were no very high-quality interventions followed by an absence of productive work.

Figure 4 on p. 1099 represents the same comparison as Figure 3, except that the scores on patient productivity are those of the psychology interns who were blinded to the interventions of that session. The relationship between intervention quality as judged by senior analysts, and patient productivity as judged by blinded interns, continues to be significant, as can be seen for each patient separately on the scatter-plot diagram¹³. Thus, a bias on the part of the senior raters in favor of patient responses to interventions favored by these raters does not account for our findings.

Statistical multiple regression analysis was applied to examine which elements in the analysts' interventions were most strongly associated with subsequent patient productivity (see Appendix 1, Table 2, Equations 1 through 9, p. 1114). Multiple regression is a procedure that tests the degree of association between what are called independent variables and a variable that is hypothesized as perhaps dependent on these other variables. In this study, patient productivity in the next patient segment following an analyst segment was the dependent variable, and we measured the association

between this productivity and five APS variables or clusters of variables.

We have already described the correlations with patient productivity of (1) core analytic activities and (2) the quality of interventions. We also measured (3) the degree of the analyst's

¹³ For the statistically inclined, the correlations between intervention quality and immediate patient productivity (next segment) were highly significant, even though the level of correlation was less when scores from the interns were used ($r = 0.64$ for Figure 3; $r = 0.34$ for Figure 4).

involvement in each segment (by averaging the degree of confrontation and the degree to which the analyst showed feelings that contributed to or shaped the intervention in the segment), and (4) how much encouragement of elaboration occurred in the segment. Finally, we measured (5) previous patient productivity. These five independent variables were entered into a multiple regression procedure that determined how much each variable was associated with subsequent patient productivity—when the other four independent variables were held constant statistically (see Appendix 1, Table 2, p. 1114).

The results show that, among the four predictor variables derived from the analyst's activity, only the quality of intervention has a strong association with subsequent patient productivity when the other variables are held constant. Each one-point increase in intervention quality is associated with an average increase of sixtenths of a point in subsequent patient productivity ($B = .616$ in Appendix 1, Table 2, Equation 2, and a correlation [β] of 0.59), a clinically significant effect¹⁴. This strong relationship between quality of intervention and patient productivity is the central finding of our work to date and the major focus of this paper.

To review, quality was assessed by averaging two variables with four major features: the degrees to which the intervention followed the patient's immediate focus, was suitable in the type or

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blend of types of intervention, was apt in content, and was delivered with skill. Among the other analyst variables, only the core analytic activities proved importantly related to immediate patient productivity ($B = .477$, Equation 4), and even this significant relationship is dependent on the quality of interventions (the B drops to $.037$, a negligible value, in Equation 5, when the quality of the intervention is held constant)¹⁵.

¹⁴ The B score may be unfamiliar to most of our readers. It has a particular property that makes it important and worth understanding. The size of the B score directly indicates how much change will occur in any variable in response to a one-point change in the variable upon which it is dependent. In our study, we have found, for instance, that as intervention quality increases by a whole point on the APS, patient productivity in the next segment increases by six-tenths of a point. This is indicated by a B of $.616$ in Appendix 1, Table 2, Equation 2, p. 1114.

¹⁵ The B scores are not significant for analysts' affective involvement in Equation 6 or for encouraging elaboration in Equation 8. These findings can be tentatively interpreted as showing that, in this sample, (1) the analyst's affective involvement does not have a negative impact on patient productivity, and (2) encouraging elaboration has no particularly positive impact on patient productivity, any more than do any other aspects of interventions.

Thus, multiple regression analysis demonstrates that the averaged core analytic activities of clarification and interpretation, as well as the analysis of transference, resistance, and conflict, have a substantial correlation with immediate patient productivity, but only if these activities are carried out with high quality¹⁶. The reader may well wonder whether the individual core analytic activities differ from one another in regard to the crucially important quality of the intervention. Further multiple regression analyses of the data showed that the quality of analytic work remained centrally important in affecting patient productivity for each of the five core analytic activities taken individually, just as it had for the five averaged together, as shown in Appendix 1, Table 2, p. 1114¹⁷.

So, in this preliminary study, the quality of the analyst's intervention—reflecting attunement to the patient, choice of content,

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and aptness and skill of the intervention—was the analyst variable most strongly related to observed patient productivity in the ongoing therapeutic relationship. This was true whether the intervention was predominantly an interpretation or clarification, and whether or not the analyst approached transference manifestations, defenses, or psychological conflict¹⁸.

¹⁶ The B score of the regression between the core analytic activities variable and subsequent productivity in Appendix 1, Table 2, Equation 4 (.477, highly significant) drops essentially to zero (.037) if the quality of the intervention is held constant, as it is in Equation 5 (see p. 1114).

¹⁷ We ran five multiple regressions, as in Equation 2, of productivity on quality, for each of the individual core analytic activities in place of the value for the five core analytic activities averaged together. In each regression, the coefficients for quality were very close to the .616 of Equation 2. Therefore, we omit these tables here (although they may be obtained from the senior author).

¹⁸ The reader may wonder how this statement can be understood in relation to Appendix 1, Table 1 (pp. 1112-1113), which shows that core analytic activities are only moderately related to immediate patient productivity. What our multiple regression analysis has shown is that no particular individual core analytic activity shows a consistent relationship to immediate patient productivity apart from its quality. The explanation must take into account that the quality of an intervention is, after all, the quality of something being done. And the activities being done by the analyst may be well described as core analytic activities, done with more or less quality, as earlier presentation of our results has shown (Waldron et al. 2004). Multiple regression analysis also shows that, among the three sets of variables—(1) core analytic activities, (2) the analyst's affective involvement, and (3) encouragement of elaboration—only the core analytic activities set of variables has a significantly positive association with subsequent patient productivity (see

We have also examined the degree to which the quality of the analyst's intervention depends on the level of the patient's productivity that preceded it. We would expect that, when a patient delves into matters of psychological importance, this productive process tends to develop momentum that carries over through multiple segments. Such a pattern of relationship between current level and immediately prior level is quite typical of complex, evolving phenomena sampled over time, such as the historic stock market.

And indeed, as mentioned earlier, we found that prior segment patient productivity correlates with both the analyst's intervention quality (0.60) and subsequent segment patient productivity (0.62). Our multiple regression analysis allowed us to determine the relative contributions of intervention quality and prior patient productivity

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to immediately subsequent patient productivity (Appendix 1, Table 2, Equation 3, p. 1114). We found that about half of the relationship between intervention quality and subsequent patient productivity was accounted for by the patient's prior level of productivity; that is, when the patient had been more productive in the segment prior to the analyst's intervention, the analyst made a higher-quality intervention, and the patient continued to be more productive. But the other half of the relationship was a direct one between intervention quality and subsequent patient productivity, independent of prior patient productivity. This degree of direct relationship implies an important causal connection, unless another explanation for it emerges¹⁹.

We next asked how much of the variation in patient productivity had been accounted for by our variables. It turns out that differences in analytic productivity across segments are only 46% accounted for by the variables we have measured, together with the momentum of the process itself²⁰. Thus, despite the significant effect of intervention quality and prior patient productivity

the B score in Equation 4 versus the B scores in Equations 6 and 8). This demonstrates that core analytic activities do show a moderate degree of relationship with the patient's immediately subsequent productivity in this sample, when these activities are studied separately from the quality of interventions.

¹⁹ In more formal language, controlling prior segment productivity reduces the effect of intervention quality from Equation 2 to Equation 3 by $(.616 - .338)/.616 = 45\%$. This means that 45% of the effect of intervention quality in Equation 2 arises because it is correlated with the patient's prior segment productivity, whereas 55% of the relationship found is a direct effect of the quality of the intervention on subsequent segment patient productivity.

²⁰ The percentage of the variance in subsequent patient productivity accounted for in this study by intervention quality, core analyst activities, affective involvement, elaborations, and

on later patient productivity, more than half of the differences in subsequent productivity remain unexplained by our variables. We believe this is expectable in view of the complexity of the process we are assessing and the often-delayed impact of interventions.

In view of the close relationship found between the quality of intervention and immediate patient productivity, we must examine whether this could be accounted for by rater bias.

Confirmation

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bias could incline our raters to find the productivity that they thought should follow a good intervention in the patients' responses. Our replication study allows us to make a definitive test of confirmation bias by recalculating the regression analysis expressed in Appendix 1, Table 2, p. 1114. Recall that this analysis demonstrated that for each one-point increase in intervention quality, subsequent patient productivity increased by six-tenths of a point. When we recalculate this using patient productivity scores as rated by the blinded Horney Clinic raters, we find a less strong relationship, but one that is nevertheless statistically highly significant. Patient productivity increased by one-third of a point for every onepoint increase in intervention quality²¹. This result further affirms a meaningful relationship in this sample between intervention quality and patient productivity.

We also studied the relationship between scores for intervention quality and patient productivity of the next several segments following a given intervention, because our clinical experience led us to expect that the impact of an intervention may not become evident immediately. Indeed, the multiple regression for intervention quality and patient productivity continued to show a statistically significant relationship to the fifth segment following a given intervention.

Discussion

We report here the application of a newly published research tool for the investigation of psychoanalyses and psychodynamic therapies, the Analytic Process Scales (APS). The APS

prior patient productivity is indicated by the adjusted R squared of .462 in Equation 3. Thus, 46% of the variance has been accounted for.

²¹ When controlling for prior patient productivity, as we did in the earlier analysis of the data—but this time using the Horney rater scores—we found that the B score in Appendix 1, Table 2, Equation 3 (p. 1114) declined only slightly, from .34 to .26. It was still statistically significant ($p = .011$).

allows us to investigate psychoanalyses and psychotherapies by studying aspects of each case in a way that is both statistically reliable and clinically valid. The variables serve to delineate cases using central psychoanalytic

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concepts. We have demonstrated that experienced clinicians can agree on the nature and quality of interventions, once they are sufficiently familiar with a case. Because the APS assesses the nature and quality of interventions sequentially throughout an hour, we have been able to examine their effects on subsequent patient productivity in the very next segment of the hour. The reliabilities we have achieved in assessing core psychoanalytic dimensions provide a basis for optimism about systematic studies of psychoanalytic process with suitable analytic data. The problems of achieving consensus in evaluating analytic treatments are not insurmountable, and can be resolved by methodological innovation and the participation of experienced clinicians (Caston 1993; Caston, Goldman, and McClure 1986; Caston and Martin 1993; Rubovits-Seitz 1992; Seitz 1966).

We have discovered that the strongest analyst variable influencing patient productivity is the quality of the intervention that preceded it, rather than the specific type of intervention. This indicates that, in our small sample of three patient–analyst pairs, attunement to the patient's present state, the choice of an effective intervention, and its timing and tactfulness are most important to the progress of the analysis—refuting any suggestion that interpretation in general is necessarily more helpful than clarification, or that analysis of transference is necessarily more helpful than analyzing resistance. The quality of the analyst's contribution of any kind, so long as (s)he says “the right thing at the right time,” is the essential element. We do not dispute the major importance of interpretation, but with these three analytic pairs, we conclude that the other core analytic activities seem equally important, and that none is very effective unless of high quality.

A reader might gain the impression that we think there is only one “right thing” that can be said at any given time. In this respect, the title of our article could be misleading. However, we tentatively believe that clinician judges are very aware of choices made in interventions, including tactfulness and timing of any given communication

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by analyst or therapist, and that it is these aspects that are reflected in the ratings of quality. Less idiomatically expressed, we respect the positive impact of the analyst's saying a right thing at a right time.

Most clinicians already assume the clinical truth of what we have found, but researchers

have largely been unable to demonstrate the effects of differences in treatment approaches to patients, much less the impact of differences in the quality of these approaches. Sequential analysis of the evolving contributions of patients and analysts or therapists provides a tool that can disentangle these varied contributions, as we have outlined in a recent paper (Crouse et al. 2003).

We have been able to find strong evidence for the role of the patient's previous productivity in facilitating the analyst's making a high-quality intervention. This empirically supports the contention that there is a complex interdependence in the dialogue between the analyst and patient. We have accounted for one-third of variations in patient productivity in the immediately subsequent segment, reflecting the varying quality of core analytic activities of the analyst and the patient's own productivity in the previous segment. These constitute substantial findings, since psychoanalytic treatments are extremely complex emergent systems (Kauffman 1995; Palombo 1999; Waldrop 1992). Since the consequences of any intervention are multiple and often delayed, this degree of immediate relationship implies an important causal connection.

Relevant findings were obtained in a similar study (Caston, Goldman, and McClure 1986), in which the raters of patient response were blind to the interventions. Here Caston and colleagues used segments chosen on the basis of a coherent unit of patient material immediately following each intervention (p. 288), similar to our patient segments. In that study, one variable, insight (as defined in the article's Appendix 18, pp. 387-391), is approximately equivalent to our patient productivity variable. A separate group of judges rated the interpretiveness of the interventions, a measure

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that approximates a blend of our variables for the analyst's clarifying and interpreting (see description of scale anchor points in Caston and colleagues' Appendix 14, pp. 377-379). With blind judges, these researchers found a correlation between interpretiveness and insight of .30 (p. 291), similar to our own findings of a .22 correlation of clarifications with productivity and a .26 correlation of interpretation with productivity (see our Appendix 1, Table 1, pp. 1112-1113). The Caston, Goldman, and McClure study eliminated possible bias that could stem from rater reaction to the analyst's prior remarks, and ultimately provided a convergent line of evidence to support our findings.

The results of the present study were not anticipated by the participating clinicians. The most strongly held belief of this group of psychoanalyst raters at the outset of the study was that immediate patient productivity would be most enhanced by interventions rating at least moderately high for interpretation. Yet the correlation between the degree of interpretation and

patient productivity was quite low (0.14 in Appendix 1, Table 1, pp. 1112-1113, when the patient–analyst pair was held constant), and this relationship was no longer significant when the quality of interventions was held constant. One central requirement of a scientific procedure is that hypotheses can be disconfirmed by evidence (Grünbaum 1984), and the APS is an effective tool for such disconfirmation of hypotheses about the variables of treatment process and their impact in different treatments.

A central requirement for application of the APS is respect for the need of clinician raters for a reasonably full context. This is supported by Rubovits-Seitz (1998):

The anchor point for interpretations is not strictly empirical, but depends on a network of interdependent and continuously modifiable interpretations ... thus, there is no satisfactory way of interpreting a segment of clinical data in isolation from the contexts (including other interpretations) that precede and follow it. [p. 213]

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Raters' knowledge of both patient's and analyst's prior comments contributes to our study's strength: we have achieved reliability on our clinical measures and can claim validity based upon careful attention by expert analyst judges to the meanings of the exchanges between patient and analyst, where context is indispensable. It should be noted that our psychoanalytic raters assessed the work in each segment without knowing what followed. We may then state that psychoanalytic interventions of quality lead to greater patient productivity in this small sample. That expert judges appear able to sense which interventions are likely to be beneficial to the patient in the short term probably reflects the impact of expert knowledge that may be difficult to verbalize, and is reminiscent of the burgeoning recent work on implicit memory and procedural knowledge. This finding, if replicated on wider samples, may lend further support to the value of clinical wisdom in conducting psychotherapy and psychoanalysis.

It may be asked why the relationships reported here have not emerged from earlier studies. In *Reassessing Psychotherapy Research* (1994), Russell provides a cogent discussion of the limitations of previous approaches to assessing relationships between intervention and benefit. For example, he shows how efforts to correlate the use of interpretation to patient benefit are bound to fail because the requirement of effective therapy is to make interventions attuned to the requirements of the patient at a particular moment in time. A well-attuned therapist will make very different interventions with patients, depending on the individual patient's needs and degree of resistance at the moment. This flexibility of technique cannot be measured using simple correlational research techniques, based upon simple hypotheses of what contributes to therapeutic benefit (Wampold 1997).

In contrast, the APS ratings, anchored by a manual with examples, reflect many of the complexities of clinical judgment in regard to interventions that are actually made by a treating analyst. We conclude that the only way to judge whether a given intervention

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is appropriate and helpful (of high quality) is through the lens of psychoanalytic understanding. How widely this may obtain in the broad field of psychotherapies is a question awaiting further research.

What, then, are the major limitations of this study?

1. We have not established, even preliminarily, whether high-quality interventions are correlated with treatment outcome. The APS variables have a built-in potential to measure outcome when applied from early to late in treatment. Positive changes observed in patient functioning in the analytic situation from early to late in treatment are expected to reflect improved functioning in general, but the degree of relationship remains to be established. What will ultimately be required are investigations of the relationship (or lack thereof) between a psychoanalytic or psychotherapeutic process characterized by frequent high-quality communications from the therapist and productive psychoanalytic work by the patient, on the one hand, and follow-up assessments of quality of life (Seligman 1995), on the other. Successful outcomes are the only gold standard for evaluating treatments.

2. It is clear that a clinical evaluation of analytic work, which is necessarily non-experimental in nature, cannot rule out rival explanations of findings to the degree that may be achieved in some other areas of science (Rubovits-Seitz 1998). We maintain that this does not invalidate our results, but does give reason for caution in generalizing from our findings. The heuristic value of the APS measures can only be determined by their ultimate utility in generating a pattern of useful findings.

3. The small size of our sample—117 analyst interventions and patient responses from only three patient–analyst

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pairs—limits the generalizability of the results. A larger sample of recorded analytic work from other patient–analyst pairs is needed.

Our investigation of the quality of treatment may turn out to represent another way of examining elements addressed by the Boston Change Process Study Group (CPSG) researchers, who have studied change from the vantage point of the moment-to-moment interaction—what

they call the local level (Nahum et al. 2002; Stern et al. 1998). The emphasis of this group is upon the co-construction of the relationship, which they believe provides the opportunity for changes in implicit relational knowing—changes at a level that may correspond with Bucci's (2000) non-symbolic and nonverbal symbolic levels of information processing. The intricate detailing of how the analyst's moment-to-moment response to the patient can facilitate such positive developments through participation with the patient has been conveyed in an example from a child analysis (Nahum et al. 2002, pp. 1054-1055).

One consequence of these considerations is a proposed change in terminology. It has been customary to speak in terms of the analyst's interventions. This term may not imply the subtle, ongoing interaction that can lead to special moments of meeting, impacting the degree of fittedness between the two participants in treatment— terms used by the CPSG to describe important dimensions of treatment. The analyst's contribution is certainly reflective of his or her implicit relational knowledge, in regard to each moment with each patient. It seems to us preferable to describe the analyst's contribution and the patient's contribution, in order to more truly reflect this complex interplay. We believe that our clinician raters have responded to this complexity in assessing the quality of the contribution of the analyst from moment to moment, and it is most likely because of its importance that we have found a strong relationship with the very next patient contribution.

APPENDIX 1 TABLE 1: Correlations and Partial Correlations of Variables*

Standard correlations are above the diagonal
 partial correlations holding analyst-patient pair constant are below
 The most important comparisons with our clustered variables are in the double box
 The single box shows correlations of the various individual core analytic activities

	next patient productivity	intervention quality	core analytic activity	analyst clarifies	analyst interprets	analyze resistance	analyze transference	analyze con-flict	prev. patient productivity	analyst involvement	encourages elaboration
next patient productivity	1.00	.61	.41	.22	.26	.35	.29	.49	.62	.04	.13
intervention quality	.44	1.00	.69	.56	.55	.47	.53	.67	.60	.06	.05
core analytic activity	.25	.62	1.00	.68	.85	.74	.86	.89	.36	.40	-.24
analyst clarifies	.08	.50	.64	1.00	.40	.39	.54	.54	.25	.22	-.30
analyst interprets	.14	.49	.83	.32	1.00	.54	.67	.74	.20	.29	-.25
analyzes resistance	.22	.38	.70	.33	.50	1.00	.47	.70	.39	.49	-.16
analyzes transference	.16	.46	.83	.48	.63	.38	1.00	.65	.18	.36	-.16
analyzes conflict	.37	.57	.87	.46	.69	.69	.59	1.00	.48	.28	-.12
previous pt. productivity	.49	.43	.19	.11	.07	.24	.01	.37	1.00	.11	.17
analyst involvement	.07	.21	.50	.31	.37	.48	.40	.41	.16	1.00	-.21
encourages elaboration	.03	-.10	-.36	-.39	-.32	-.24	-.25	-.21	.09	-.22	1.00

* **Correlations are bolded if $p < .05$.** Correlations in this table are Pearson correlations, which can range from -1.00 if the two variables are perfectly inversely related, to zero if there is no relationship, to +1.00 if there is a perfect positive correlation. Three standard correlations, above the diagonal, are no longer significant when controlling for analyst-patient pair: these three pairs of boxes are lightly shaded. Any correlation above .24 is significant at the .01 level or higher. N=117 for full correlations which included the patient productivity variables, and n=123 for analyst variables with each other. For the partial correlations, degrees of freedom equal 113.

**Table 2: Regressions of Patient Productivity on Analyst Interventions and
Prior Patient Productivity: N = 117 Analyst Segments
With Complete Data on All Variables**

← - - - - - **Independent Variables** - - - - - →

<u>Equation</u>	<u>Intervention</u> <u>Quality</u>	<u>Core</u> <u>Activity</u>	<u>Affective</u> <u>Involvement</u>	<u>Encourage</u> <u>Elaboration</u>	<u>Prior Pt.</u> <u>Productivity</u>	<u>Constant</u> ¹	<u>Ad. R2</u> ²
1. B ³	** .644					.490	.370
beta ⁴	.613						
2. B	** .616	.037	.008	.102		.388	.364
beta	.586	.031	.006	.111			
3. B	** .338	.095	-.088	.048	***395	.301	.462
beta	.322	.081	-.063	.052	.403		
4. B		** .477				1.080	.159
beta		.408					
5. B	** .660	.037				.491	.365
beta	.628	.031					
6. B			.058			1.569	-.007
beta			.042				
7. B	** .645		-.010			.495	.365
beta	.613		-.007				
8. B				.118		1.486	.008
beta				.129			
9. B	** .639			.093		.402	.375
beta	.608			.101			

* Designates “B” coefficients significant at p < .01

1. “Constant” represents the intercept of the slope on the y-axis. Since the y-axis represents the intervention, if a positive number it signifies that the patient has some productivity even when the analyst’s intervention is judged to have no value in the respect measured by each equation.

2. “Ad R2” is an abbreviation for “adjusted R squared”. This number, part of the multiple regression formula output, represents the variance in the dependent variable (patient productivity) accounted for by the combination of independent variables in each particular equation.

3. “B” is the most important measure of the relationship between the dependent variable, patient productivity, and the independent variables listed. “B” is the change in patient productivity associated with a one-point increase in the variable, holding all other variables in the equation constant. Beta represents the standard deviation change in the dependent variable associated with a one standard deviation change in the independent variable while holding other variables constant. While included here because Beta is customarily reported in a regression analysis, it does not convey additional information in our study, because the “B” statistic serves this purpose fully when the measures being studied all have the same metric (in this case Likert-type scales with a range of from zero to four).

4. Beta represents the standard deviation change in the dependent variable associated with a one standard deviation change in the independent variable while holding other variables constant.

APPENDIX 2: SCORING OF PATIENT PRODUCTIVITY

WHAT IS THE DEGREE OF THE PATIENT'S OVERALL *ANALYTIC PRODUCTIVITY* DURING THE SEGMENT?

This variable measures the patient's *overall psychoanalytic progress* during the segment, whether occurring in response to the analyst's *intervention*, or emerging from the patient's *independent momentum*, or a mixture of the two.

Score according to the degree that, overall, *progress* is achieved during the segment in: the *depth* or *breadth* of the patient's or rater's *understanding*; and/or the *intensity* of the patient's *involvement* and *collaboration* in the analysis; and/or the quality of other momentary *emotional expressions*. The score increases as there is more *complexity* or *detail*, and decreases as the patient's *expressions* are less *affectively* meaningful, for instance when feelings are either suppressed or exaggerated.

Improved understanding includes more comprehension of any psychological features such as *conflicts*, *fantasies*, *identifications*, or *self esteem*.

Advances in the patient's emotional *involvement* and *collaboration* in the analysis consist of better *emotional expressiveness*, *self reflectiveness*, or useful *attention* to the *analyst's focus*.

Improvement in any other momentary *emotional expressions* is seen in headway with *defenses*, *affects*, *inhibitions* (for example of *assertiveness*), *specific symptoms* (for example obsessive doubting), or *character symptoms* (for example antagonism).

Score 0 when, *overall*, there is no analytic progress during the segment in *understanding* by the patient or rater, *or* the *involvement* or *collaboration* in the analysis, *or* the quality of other momentary *emotional expressions*.

Example: THE BUSINESSMAN AFRAID OF HIS FATHER

A man is undertaking analysis because his wife finds him removed and insensitive to her concerns, and has threatened to leave him. He works in a family business founded by his father, who thinks he is insufficiently capable to warrant major responsibilities. The patient begins with an indifferent tone, "There's really nothing new, so I'm going to tell you the usual things . . . It's a month since the baby was born, and Sally (wife) is nervous because the nurse will finish this week . . . (with more enthusiasm) The appliance line is selling pretty well, which is a surprise in this economy."

Explanation: The patient begins by indicating his lack of *emotional openness*, and then ignores his emotions and those of his wife. There are no dimensions of analytic advance.

Score 2 when the patient, *overall*, shows *moderate analytic progress* during the segment in the *depth* and *breadth* of the patient's or rater's *understanding*, *or* the person's emotional *involvement* and *collaboration* in the analysis, *or* the quality of other momentary *emotional expressions*, including *inhibitions* and *symptoms*. There is usually *moderate complexity* or *detail*.

Example: The patient, continues, "I was driving a company van yesterday, and a truck backed right into me. He took off like a bat, but I wasn't going to let him get away from me. I drove after him, and got his license number! Back at the factory my father acted as if it was all my fault. I thought I handled it pretty well, but I can never *win* with that guy. A lot of time I end up feeling that he thinks I'm ineffective, and that *he's* the great efficient operator."

Explanation: During the segment, the patient shows a *moderate understanding* of his feelings of rivalry with his father, and the fugitive truck driver, as is seen in his reflections about his father's depreciation and his feelings that he never wins. A time dimension is included, "*A lot of time I end up feeling*". His emotional *engagement, collaboration, and self reflectiveness* are *moderately* improved, and there is *moderate complexity and detail*.

Score 4 when the patient, *overall*, makes *strong analytic progress* during the segment in the *depth and breadth* of the patient's or rater's *understanding, or* the person's emotional *involvement and collaboration* in the analysis, *or* the nature of other momentary *emotional expressions*, including inhibitions and symptoms. There is *usually strong complexity and detail*, which may link *current experiences, past experiences, and responses* to the *analyst*.

Example: He continues, "I feel that my father doesn't really want me to do better in the business, but I can't be sure that it's happening. Maybe I'm making it all up because I'm stressed out by the accident." The analyst remarks, "*At moments with strong emotional charge, like this one about your father, you become vague and indecisive so as to obscure feelings which frighten you*". The patient, "I can't see that at all . . . I guess I *do* stay away from confrontations with people, I can see *that*. Going against my father or the other people at work can be big trouble, so it's better to just go along . . . I don't open my mouth much here with you either. You understand this stuff better than I ever could, and could make me look like a real *jerk* in about two seconds . . . I *really* used to be afraid of my mother when I was a kid . . . she screamed and *strapped* me all the time."

Explanation: The patient responds to the analyst's interpretation with *moderate understanding* of his passivity, and fear of his father and co-workers; and he expresses a similar fear of the *analyst*. He then recalls *memories* of his mother terrorizing him as a child. Although the patient has only *moderate* understanding of these experiences, his communications permit the *rater* to *strongly comprehend* the connections between the three sets of experiences, concerning his father, analyst, and mother. Emotional *involvement, collaboration, and self reflectiveness* are *strong*; and there is a *high* degree of *complexity and detail*.

APPENDIX 2 CONTINUED: SCORING OF GOOD INTERVENTION

TO WHAT DEGREE IS THIS A GOOD INTERVENTION?

This is a global variable that rates the overall quality of the intervention.

Rate the aptness of the intervention's type, the potential usefulness of its content, and the skill of its presentation. The skill of the presentation is scored higher when the intervention is more tactful, well timed, and its language is more clear, vivid, or likely to appeal to the patient. The score also increases when the intervention is more direct or more relevantly complex and detailed. The length of the analyst's contribution should not necessarily influence its score.

We divide interventions into four *types*: three distinctively analytic ones — *encouraging elaboration*, *clarification*, and *interpretation* — and those offering *support*, which include all other interventions.

There is, of course, more than one useful response to a patient's material. The rater should evaluate the potential effectiveness of the intervention by following the analyst's *chosen* direction, but should also consider how well the intervention approaches what you regard as *optimal*, with some thought as to what you would have done in the same situation. Be careful not to score inappropriately high by giving the analyst's effort the "benefit of the doubt."

Rate according to the highest level of the variable reached, even if the segment is long and most of it warrants a lower rating.

If an intervention seems useful but not remarkable, it is usually rated at 2 or less.

SCORE 0 when the type of intervention, or its content, or the skill of its presentation do not suit the patient's expressions at all.

Example: The Man Whose Brother Entered a Cave

The patient is a vulnerable, self-defeating young man who is conflicted about expressing his anger and started analysis because of insufficient progress in his career. This session starts with the patient describing an evening with his parents and his younger brother, John, who has been visiting. "The dinner with my parents went all right. John and I walked past a beautiful church and I pointed out a carving on an arch. John seemed interested, but didn't have much to say about it, so I started talking about work. The analyst said "You seem to have let your brother get the best of you."

Explanation: Although the intervention applies to the patient generally, its content does not match the patient's communications and it is insufficiently tactful.

SCORE 2 when the intervention is a moderately suitable response to the patient's communications. The type or blend of types of intervention is at least reasonably apt, the content addresses the patient's expressions in a potentially moderately useful way, and the presentation is reasonably tactful, well timed, and verbally appealing to the patient. There is a moderate degree of directness or relevant complexity.

If an intervention seems useful and reasonably well designed, but not remarkable, the rating is usually 2 or less.

Example: The patient continues "John wanted to know if he could stay at my apartment and then, out of the blue, he punched me on the arm so hard that it really hurt. Well . . . I mean! . . . I told him that he could stay with me last night, but not over the weekend. We're inviting a lot of people to a party on Saturday." The analyst intercedes "You speak about your brother punching you on the arm, and then continue as if that were quite usual. You seem to be avoiding getting angry at John."

Explanation: This blend of clarification and interpretation is an apt type of intervention, which calls attention to the patient's denial of his anger moderately well. There is reasonably suitable tact, timing, and verbal appeal, as well as moderate directness and complexity.

SCORE 4 when the intervention is a highly suitable response to the patient's communications. The type or blend of types of intervention is very apt, the content focuses on the patient's expressions in a potentially very effective way, and the presentation is usually very tactful, well timed, and uses clear and vivid language. There is usually a high degree of directness or strong relevant complexity, possibly linking current experiences with past experiences or experiences involving the analyst.

Example: The patient says "I had a dream last night. There were two holes in a barren rock and I was lying in one of them. I guess it means that I was dead, like in a grave . . . [sigh] . . . It reminds me of the time my family went on vacation when I was nine, and John and I found an opening in a rock face and he crawled in. The earth over the entrance started to slide, and my father ran over with a piece of wood and braced it. Dad turned to me white-faced and furious, and said 'He could have died in there! How could you let him do that?'" The analyst says "Your father's accusation touched on a deep feeling in you. John's hitting you seems to have brought the accident and your father's accusation back to your mind, that you would be willing to see John die. It's as though you are guiltily saying, in your dream, 'I'm the one who deserves to be in a rocky grave, not John.' Feeling that you are capable of being so destructive leads you to back off from standing up for yourself with John and to feel pessimistic about yourself and about this treatment helping you."

Explanation: The interpretation is an apt type of intervention, strongly calling attention to the punishment the patient feels he deserves for his past and present murderous impulses. The interpretation is sensitive, well timed, vivid, and dexterously expressed. Links between the patient's recent conflicts and past experiences show considerable complexity. (For illustrative purposes, this intervention is given as if said all at once. Most likely such an intervention might best be given in a way that would give the patient an opportunity to respond to each part before proceeding to the next part of the intervention.)

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