Dynamic Emotional Processing in Experiential Therapy: Two Steps Forward, One Step Back

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The study of dynamic and nonlinear change has been a valuable development in psychotherapy research. However, little advancement has been made in describing how moment-by-moment affective processes contribute to larger units of change. The purpose of this study was to examine observable moment-by-moment sequences in emotional processing as they occurred within productive sessions of experiential therapy. This article further tested A. Pascual-Leone and L. S. Greenberg’s (2007) model of emotional processing through a reanalysis of their data sample of 34 sessions in which clients presented with global distress: 17 that ended in poor in-session events and 17 that ended in good in-session events. Current analyses used univariate and bootstrapping statistical methods to examine how dynamic temporal patterns in clients’ emotion accumulated moment-by-moment to produce in-session gains in emotional processing. Results show that effective emotional processing was simultaneously associated with steady improvement according to the model as well as increased emotional range. Consequently, good events were shown to occur in a 2-steps-forward, 1-step-back fashion. Finally, good events were also shown to have progressively shortened emotional collapses, whereas the opposite was true for poor in-session events.

Keywords: emotion, process, psychotherapy, temporal patterns, dynamic systems

The most common methods in psychotherapy research examine grouped data, often using pre–post designs, and inadvertently obscure the dynamic and discontinuous nature of individual change patterns. For this reason, Hayes and Strauss (1998) have recommended that dynamic systems theory be used to provide a conceptual framework for the study of change in psychotherapy. The authors argued that treatment research should “move beyond simple pre–post designs and toward more sophisticated growth curve analyses that generate trajectories of change in individual and by group” (p. 945). Similarly, methodological conclusions from a study of psychodynamic therapy by Jones, Pare, and Pulos (1992) have also highlighted “the importance of obtaining . . . ‘in motion’ descriptors of the evolution of change processes that permit an understanding of process as a sequence of patterns that extend over time” (p. 29).

In their article on dynamic systems in cognitive–behavioral therapy (CBT), Hayes and Strauss (1998) also outlined a strategy for examining psychotherapeutic change that begins with identifying variability in a system when it precedes a therapeutic transition. They have recommended that such information could be used to develop more precise models that would be qualitatively descriptive and eventually quantitatively measurable. However, in discussing process research, Greenberg and Pinsof (1986) have contrasted between intermediate in-session outcomes (i.e., event outcomes, which they refer to as small o’s) and larger treatment outcomes (big O’s).

Keeping this in mind, it follows that dynamic systems could be studied at either level: by examining change variability either across treatment sessions or within single sessions. Indeed, some advancement has been made in both areas, but the study of nonlinear changes across treatment has received far more attention (for a review, see Hayes, Laurenceau, Feldman, Strauss, & Cardaciotto, 2007). Despite the contributions of theoretical work and case studies, moment-by-moment (as opposed to session-by-session) dynamic changes have been often presumed but rarely measured. A chief reason for this paucity in research is the tremendous methodological challenge in doing the kind of detailed, intensive qualitative analyses that might describe seemingly chaotic, or at best nonlinear, patterns in time that are required to study dynamic systems at a molecular level.

Clients’ processing of emotion occurs moment-by-moment as part of a highly dynamic system. In this context, a dynamic system is a set of affective-meaning elements (i.e., schemes) that continually interact and evolve—forming, over time, a variety of adaptive or maladaptive self-organizations (i.e., emotion schemes; Greenberg & Pascual-Leone, 1995; Hayes, Laurenceau, et al., 2007). Emotional processing has been described as an important change mechanism and a significant process predictor of outcome in several different approaches to treatment (for a review, see Greenberg & Pascual-Leone, 2006). However, although clinical theory has described general principals of emotion change (with some differences among approaches), the actual temporal patterns of change have not been well elucidated. In this article, I follow the...
call by Hayes and Strauss (1998) for analyses of clients’ variability and the nonlinear progression of therapy. I do this by using continuous ratings from video to examine the dynamic moment-by-moment temporal pattern by which clients move from distress toward resolution in experiential therapy.

EMOTION AS A DYNAMIC SYSTEM

Research examining therapeutic exposure to distressing external stimuli and/or painful emotions themselves has provided some insight into the paradox of how distress from engaging such material can lead to positive change. Imaginal exposure to traumatic experiences produces strong emotion for clients and in some cases can exacerbate their symptoms. Nevertheless, an initial increase in symptoms was not shown to detract from positive outcomes in the longer term (Foa, Zoellner, Feeny, Hembree, & Alvarez-Conrad, 2002). This is counterintuitive to some clients and therapists, and, as a result, some less than optimal treatments may delay exposure to particularly evocative material. Gilboa-Schechtman and Foa (2001) examined the recovery patterns of assault victims over the course of therapy. Overall, they found that long-term recovery was delayed when treatments postponed addressing and directly activating the fearful experiences associated with trauma, regardless of its nature. These findings point to the conclusion that when it comes to distress during emotional processing, it gets worse before it gets better.

This conclusion about the dynamic temporal patterns of overcoming distress has been given a great deal of attention by behavioral, humanistic-experiential, and psychodynamic-experiential theorists alike (i.e., Foa, Huppert, & Cahill, 2006; Fosha, 2000; Greenberg, 2002). It also was supported by Hunt’s (1998) experimental research on coping with induced dysphoria. However, getting worse before getting better is a pattern that has only been demonstrated across sessions. For example, in an exposure-based treatment involving the imaginal reexperiencing of a traumatic event, an overall client pattern was related to treatment outcome (Jaycox, Foa, & Morral, 1998). Researchers found the pattern by averaging clients’ self-reports of arousal across six sessions and showed that the most characteristic pattern of good treatment outcomes is high initial emotional engagement with a gradual tapering of arousal within sessions.

More recently, researchers have been examining change at the unique session-by-session level rather than using averages across sessions. This approach has led to the identification of several discontinuous and nonlinear patterns. Sudden gains, for example, is a term used to describe a large discontinuous improvement that occurs between sessions. Tang, DeRubes, Beberman, and Pham (2005) have shown that sudden gains in CBT and non-CBT treatments for depression were preceded by clients’ substantial cognitive change during the pregain session. Similarly, Hayes, Feldman, et al. (2007) used symptom measures every 2 weeks to identify depression spikes; the conceptual opposite of a sudden gain. Depression spikes during exposure-based therapy were also related to client’s cognitive-emotional processing and were predictive of subsequent symptom improvement (i.e., it gets worse before it gets better).

Even so, given the here-and-now nature of emotional experience, a dynamic temporal pattern of change should also ultimately be identifiable within single sessions. In a study on helpful sessions, Mackay, Barkham, Stiles, and Goldfried (2002) found that in productive sessions of psychodynamic-interpersonal therapy, the arousal of unpleasant emotion followed an inverted U-pattern against time, with the highest arousal of painful feelings taking place in the middle of the session before attenuating by the end of the session. In contrast, arousal in productive sessions of CBT followed a U pattern. In summary articles, Foa and colleagues (Foa et al., 2006; Foa & Kozak, 1998) reported that in good outcomes of behavioral therapy, a client’s fear is activated in session. However, through prolonged exposure to the fearful stimulus, the initial intense affective reaction is gradually attenuated through habituation among other processes. Moreover, with repeated exposures there is a reduction of the initial starting level of distress across each session. The effect is a decrease in distress both within each session and across treatment. This describes effective emotional processing in the treatment of anxiety as occurring in a pattern that Stiles, Osatuke, Glick, and Mackay (2004, p. 107) have described as sawtooth—a “two-steps-forward, one-step-back” progression during therapy.

However, tracing shifts in emotion and meaning to their more refined, moment-by-moment level in the process of psychotherapeutic change is complex and methodologically arduous. It is likely to be for this reason that most attempts to do such research limit themselves to intensive case studies. Researchers using the assimilation model, for example, have tracked moment-by-moment therapeutic developments of several affective-meaning positions that a particular client might entertain during the therapy process (Osatuke et al., 2005; Stiles et al., 2004). One exception to the case study approach, however, is Mergenthaler’s (1996) work that uses algorithms for the lexical analysis of transcripts. His methodological solution to capturing the complexity of emotion/meaning processes over time has produced valuable findings. Lexical analysis, however, does not lend itself easily to discerning the degree to which clients are actually experiencing, as opposed to talking about, emotion. Finally, these approaches notwithstanding, research on moment-by-moment temporal patterns is lacking in the literature.

EMOTIONAL PROCESSING IN EXPERIMENTAL THERAPY

Drawing on the general theory of emotion-focused therapy (EFT; Greenberg, 2002; Greenberg & Paivio, 1997), a moment-by-moment model for the emotional processing of distress in experiential therapy has been proposed by Pascual-Leone and Greenberg (2007). Empirical support for that model indicates that when in-session emotion events result in therapeutically productive outcomes, key phases of emotion are likely to emerge in a sequential pattern. Accordingly, clients who begin an emotional event in a state of global distress (i.e., highly aroused distress with low levels of idiosyncratic meaning making) must initially work through reactive and depressogenic emotions that are undifferentiated and insufficiently processed.

Fear and shame represent subsequent, second-level states in the model of processing and are characterized by a deep, enduring, yet familiar painful state, which is highly idiosyncratic and is often anchored in generic autobiographical narratives. Clients at a comparable level of processing alternatively enter a state of rejecting anger, for which the action tendency is either to angrily create
distance from, or destroy, the source of distress. Further on, at the third level of processing, articulation of a core negative self-
evaluation is contrasted to an existential need, and this serves as a pivotal step in change, occasionally producing a sense of relief.

Following is a fourth level of advanced states in emotional processing. On the one hand, clients often enter a state of hurt/grief in which they are able to acknowledge personal losses without complaint or self-pity. On the other hand, clients will often become mobilized through assertive anger in which they proactively affirm healthy entitlement to experiences of worth, competence, and/or connection with others. Similarly, clients may enter a state of self-soothing as a way of directly attending to their existential needs rather than through explicit assertion. Just as clients in hurt/grief can move to assertive anger or self-soothing, they may just as easily move back again into hurt/grief; eventually a synthesis of these advanced emotional states leads to the most resolved state of acceptance and personal agency. Examples for identifying the model states described here can be found in Pascual-Leone and Greenberg (2005).

THE CURRENT PROJECT

The model of emotional processing observes that progressive developments in affective-meaning states (i.e., model components) occur in both a hierarchical fashion and a nonlinear fashion (Pascual-Leone & Greenberg, 2007). Thus, a client’s actual performance as observed in session and plotted on this model against time could have a very nonlinear and cyclical pattern, progressing forwards and then dropping backwards to earlier levels of processing. This makes the nonlinear progress in clients’ performance analogous to a game of “snakes and ladders.” As one might expect, certain clients have personal difficulties consolidating aspects represented in the model. As a result, they may collapse and repeat a model component several times in what inevitably becomes a very idiosyncratic and personalized pattern of repeatedly taken positions. However, the cyclical and reiterative nature of emotional processing has not been clearly demonstrated. This article is a verification of that facet of the model.

Osatuke et al. (2005) have used the Assimilation of Problematic Experiences Scale (APES) to illustrate how clients periodically drop back in their progress ratings, producing seemingly different process-outcome patterns for clients in CBT versus client centered therapy. However, using data from single case designs, it is difficult to know to what extent ups and downs in therapeutic process are due to the nature of the therapy or to an artifact of therapist skill. One of the aims of the current study is to analyze an entire pattern of progression in emotional processing analogous to a game of “snakes and ladders.” As one might expect, certain clients have personal difficulties consolidating aspects represented in the model. As a result, they may collapse and repeat a model component several times in what inevitably becomes a very idiosyncratic and personalized pattern of repeatedly taken positions. However, the cyclical and reiterative nature of emotional processing has not been clearly demonstrated. This article is a verification of that facet of the model.

In the current article, I reexamine data on emotional processes collected from 34 in-session events (see Pascual-Leone & Greenberg, 2007) to study the nature of dynamic and recursive emotional shifts. The data, which track clients’ moment-by-moment emotional experience, are recoded and analyzed by way of two sets of questions and related analyses. The first part of this article is a set of analyses that examined the jagged, sawtoothed progression of clients’ emotional processing. In the second part of this article, I transformed the data so as to analyze the nature of clients’ emotional collapses in-session (i.e., microdevelopmental regressions). In this article, I explore the following question: Is the experience of “improving” during a session simply an additive effect of moments in meaning construction and more positive experience (as is conveyed by the metaphor of treatment “dosage”)? Or is there a measurable pattern of change, whereby clients dynamically alter their tendency (or ability to shift) toward healthier self-organizations? In doing so, the article addresses how such a pattern might concretely translate into the consolidation of emotional improvements and the shortening of collapses within a good session event.

PART 1: SAWTOOTH PROGRESSION

Specific Hypotheses

Wedged-Variance Hypothesis (H1)

The first research hypothesis addresses the following question: Can good within-session events (i.e., events that end in reduced distress and increased meaning making) be discriminated from poor within-session events (i.e., events in which clients do not make new meaning) on the basis of shifts in a client’s emotional flexibility? This hypothesis tests whether cases with good within-session events are more emotionally “flexible” and able to shift in the nature of their experiences than cases with poor within-session events, although the central tendency (i.e., the dominant affective-meaning state) may also show a shift. Thus, what characterizes positive change is not necessarily the absence of global distress (i.e., State A) or the presence of some resolution, but it is also the increased range of states (i.e., A and B and C and D) or a higher variability in the degrees of resolution experienced. In other words, the variance of the distribution of model components within a single good session will increase as a function of time, with higher variance occurring later in an emotion event (i.e., the variance is wedge shaped). By contrast, events with poor in-session effects will have a homogeneous variance in affective-meaning states across time.

Positive-Slope Hypothesis (H2)

The second hypothesis addresses whether good and/or poor within-session events typically have regression lines that indicate a pattern of progression in emotional processing. In other words, although clients may periodically suffer distress throughout the course of a good within-session event, it is hypothesized that they generally become more resilient against old destructive (i.e., maladaptive and/or undifferentiated) affective-meaning states, are more able to cope with them when they reemerge, and are more able to access internal resources and shift to healthier trajectories of being. The positive-slope hypothesis states that for cases with good within-session events, the simple linear regression line of emotional processing against time is positively sloped—thereby indicating an improvement in the client’s emotion state as the session progresses. Moreover, the regression line will be more positively sloped for good over poor within-session events. The positive-slope hypothesis is about both the progress and the higher order continuity of emotional processing; it also offers important contextualization and clarification to the anterior hypothesis, which is that good sessions become increasingly variable.
Overall Hypothesis: Sawtooth Progression

To support the overall hypothesis of a jagged sawtoothed progression, one must fulfill both specific hypotheses. Support for the wedged-variance hypothesis (H1) and the positive-slope hypothesis (H2) would each be revealing in their own right. However, taken together these complementary hypotheses suggest a broader cyclical pattern. Evidence for a combination of (a) heterogeneous, wedge-shaped variance at the same time as (b) a steady increase in the central tendency of emotional processes provides a testable description of a jagged, sawtoothed progression in therapy. To date, the overall sawtoothed pattern of moment-by-moment change has only been clearly demonstrated in single case studies.

Method

Because I reanalyze archival data in this article to address new research questions, the following descriptions of participants, measures, procedures, and reliability of data have already been described in Pascual-Leone and Greenberg (2007). These are outlined again here to provide a complete account of the current study.

Participants

Sample

As described in Pascual-Leone and Greenberg (2007), the sample in this study of single sessions included 34 clients, with one session per client. This sample originally came from several larger subject pools that were recruited for four clinical trials completed at a large urban university psychotherapy research clinic between 1991 and 2002. Clients in the sample were being treated for depression and/or long-standing interpersonal grievances. All clients had given informed consent to have their sessions used in research.

Sample Demographics

The sample of 34 clients included 28 women and 6 men between the ages of 27 and 59 years (M = 42, SD = 10.4). Nine clients were single, 20 were married or common-law, and 5 were separated or divorced. The education level of the selected sample included 12 graduates of college, 3 with some postgraduate education, and 9 clients who had postgraduate or professional school educations. The diversity of client ethnicities in the current sample is believed to be representative of a large multicultural urban area.

According to pretreatment assessments, the mean Global Assessment of Functioning score for the sample was 69.2 (SD = 10.7, range = 53–90). This mean score indicates mild to moderate symptoms of impairments in psychological, social, and occupational functioning. In the sample, 20 clients (58.9%) suffered primarily from mood disorders; another 6 clients (17.6%) suffered primarily from anxiety disorders. Of the total sample, 5 clients (14.7%) suffered from a secondary, comorbid Axis I disorder. There were 8 clients (23.5%) who did not receive any Axis I.

Therapists and Final Treatment Outcome

The therapeutic modalities included 32 clients in EFT (Greenberg, Rice, & Elliott, 1993) and another 2 clients in client-centered therapy (Rogers, 1957); both treatments embody highly humanistic and experiential therapy. In the total sample of 34 cases, treatment was conducted by 19 therapists (17 women and 2 men). All therapists had a minimum of 3 years of clinical experience: 17 were advanced doctoral students; 2 were psychologists.

The relevance of providing final treatment outcome, even if it is not pertinent to the design of this study, is to contextualize the sample of sessions. Successfulness of the treatment is relevant in much the same way as information on type of treatment or sample demographics. Twenty clients in the sample had enjoyed good final treatment outcomes, and 14 had had poor final treatment outcomes according to criteria in the studies from which they were drawn.

Process Measure

The Classification of Affective-Meaning States (CAMS; Pascual-Leone & Greenberg, 2005) is an instrument for the systematic observation of emotion states that uses 11 nominal codes. It was developed and empirically validated as a measure of discrete and specific emotional states that are important to emotional processing in psychotherapy.

The data used in this study have been shown to be reliable on the basis of an 89.1% reliability sample of the individual codes made during data collection. As reported in Pascual-Leone and Greenberg (2007), the original ratings require different forms of reliability depending on how data are being used. First, the continuous nature of ratings required that independent raters agree on what constitutes a unit of observation, which they did at 85.9% agreement. Second, the different emotion codes in the measure required that the sequential ordering of those codes also be reliable—which they were (Cohen’s k = .91). Third, the continuous nature of ratings required agreement on the duration of any given unit of coding, and this was also shown to be high (r = .76). Levels of agreement above .75 can be considered excellent agreement above chance (Fleiss, 1981), indicating the high overall reliability of these data.

Measure for Within-Session Event Effects

Client Experiencing Scale. The Experiencing Scale (Klein, Mathieu-Coughlan, & Kiesler, 1986) is a 7-point scale that measures the degree to which clients symbolize their internal experience and use this felt experience as information to explore their problems. This measure makes no reference to discrete affective states, and (unlike the CAMS) this measure is not contingent on emotional activation.

Some authors (i.e., Pos, Greenberg, Goldman, & Korman, 2003) have highlighted the natural separation between lower and higher levels of experiencing, suggesting that higher levels of experiencing (i.e., 5–7) capture a client’s use of reflecting, questioning, and synthesizing in solving problems. As such, high levels of experiencing are positive therapeutic achievements in and of themselves.
(Greenberg & Pinsof, 1986). Following this, the 7-point scale was reduced to a binary scale of low (Levels 1–4) versus high (Levels 5–7). Thus, higher experiencing ratings at or near the end of a given emotion event were used as indicators of “good event outcome” with respect to the immediately preceding client processes. The Experiencing Scale is widely considered to be the gold standard of good experiential process and remains one of the most extensively studied and validated measures of productive in-session process in psychotherapy research. High ratings on this measure have been shown to be predictive of good treatment outcome across most major schools of psychotherapy, including client-centered therapy, CBT, psychodynamic therapy, and emotion-focused psychotherapy (see Greenberg & Pascual-Leone, 2006).

As reported in Pascual-Leone and Greenberg (2007), a 50% reliability sample was randomly chosen and coded by two independent raters to establish the interrater reliability of high versus low experiencing ratings (i.e., on a binary scale). The reliability of the data set was high (Cohen’s $k = .88$), which is consistent with the measures of reliability for the 7-point scale reported by Klein et al. (1986), which range from .76 to .91 for psychotherapy cases.

Expert clinical judges. A second measure for determining good versus poor effects of within-session events was also used to complement experiencing ratings. Thus, the evaluation of expert clinical judges provided clinical validity from a separate set of criteria.

Procedure

Event Selection

The first step in Pascual-Leone and Greenberg’s (2007) procedure of data collection was selecting events relevant to the topic of inquiry. The unit of analysis was a within-session emotional event of a naturalistic length that varied from client to client. This unit was not necessarily the whole session and was never more that one session. Global Distress served as the identifying markers for the events to be studied (see the coding criteria for Global Distress in the CAMS measure in Pascual-Leone & Greenberg, 2005). The endpoint of a selected event was determined by the dissipation of affective arousal.

Emotion Process Ratings

Ratings of Pascual-Leone and Greenberg’s (2007) data set began with a confirmation of the preselected Global Distress marker, which served as the rater’s first code. Using the CAMS, raters then coded the emotion event continuously for the presence at any one of the given possible emotion codes. Raters had been instructed to make codes as they saw them unfold sequentially and to indicate the time at which they initiated a change in code. This procedure is referred to as continuous cross-classification (Martin & Bateson, 1986).

Identifying the Effect of In-Session Events

In the rating procedures of Pascual-Leone and Greenberg (2007), raters using the Experiencing Scale were operationally independent from raters using the CAMS. High experiencing in the last 15% of each event was used as an indicator of good within-session outcome. The outside expert appraisal of clinical judges confirmed the identification of each good event outcome. In only 1 case out of 34 clinical judgments was there disagreement between the judge and the Experiencing Scale ratings in discriminating between in-session event outcomes. In that case, however, any high experiencing that occurred was very brief, and a second expert clinical judge independently confirmed that it was indeed a poor-outcome event.

Because it so happened that if and when high experiencing occurred—it only occurred in the last 15% of the event—sorting criteria did not produce any intermediate event outcome cases. In this way, the procedures resulted in the full sample ($N = 34$) being subdivided post hoc into two equal groups. Thus, 17 cases were identified as good within-session effects and 17 as poor within-session effects.

Analyses

The CAMS was originally used to generate a data set of emotion categories—11 levels on a nominal variable. However, research has since demonstrated that for productive in-session events, eight of the emotion categories are likely to emerge in sequentially ordered patterns of at least four phases (Pascual-Leone & Greenberg, 2007). This provides an empirical rationale for converting the CAMS into an ordinal scale. Moreover, qualitative and theoretical models of EFT (Greenberg, 2002; Pascual-Leone & Greenberg, 2007) provide further support for differentiating CAMS codes onto an ordinal scale (i.e., a structural continuum) of emotional transformation.

Recoding Data: Degree of Transformation Scale (DTS; 9-Point Scale)

For the current study, emotion codes of the CAMS were converted into a 9-point ordinal scale. This transformation of nominal values (i.e., emotion codes) into a single ordinal variable produced a DTS. Thus, the complex model of emotional processing was “flattened” into a linear scale that represents the degree to which each state is differentiated/integrated, productive, and generally indicative of processes toward resolution. The value “1” represents the least resolved state, Global Distress. This is followed by progressively more processed states such that Fear/Shame = 2, Rejecting Anger = 3, Negative Evaluation = 4, Need = 5, Relief = 6, Hurt/Grief = 7, Assertive Anger = 8, Self-Soothing = 8, and Acceptance and Agency (which represent the most resolved state) = 9. In this way, the scale numerically conveys model ratings, which have been shown to represent clients’ microdevelopmental progress. Thus, the DTS is neither a measure of arousal nor is it of distress per se; it is a measure of progress in emotional transformation.

Testing the Wedged-Variance Hypothesis (H1)

To address the wedged-variance hypothesis, I examined the variance in DTS scores for all cases across time. Because the length of emotion events varied across cases, all emotion events were scaled to a standard length by shrinking or stretching the data set of each client as required. To test for heteroscedasticity (unequal variances across random values in a sequence), I compared

Testing the Wedged-Variance Hypothesis (H1)
the degree of variance within the first 20% of each client’s emotion event with the degree of variance in the last 20% of each same client’s emotion event. If variance increased across the two time periods, this would indicate that variance occurred in the shape of a wedge. The same method of analysis was used separately for both good and poor within-session events. I determined the significance of findings within each subsample using nonparametric Wilcoxon signed rank tests.

**Positive-Slope Hypothesis (H2)**

The positive-slope hypothesis was tested by following the same method separately for both good \((n = 17)\) and poor \((n = 17)\) within-session events. A regression analysis of DTS scores was done onto time for each individual case. Wilcoxon signed rank tests, which are unaffected by outliers and nonnormal distributions, were used to test that the slopes of good and poor events were each different from zero and different from one another.

**Results**

**Description of Groups: Good Versus Poor In-Session Events**

The findings that follow, of good versus poor in-session outcomes, were previously reported in the literature (see Pascual-Leone & Greenberg, 2007); they are summarized here to help contextualize the data. Although the naturally occurring length of good emotional events was longer than that for poor events \((M = 32.0 \text{ min} \text{ vs. } M = 21.5 \text{ min})\), \(n(32) = 2.40, p < .025\), there was no evidence that shorter and less effective events were truncated by the end of the therapy hour.

More importantly, in this sample, clients who had good in-session events were more likely to also have good posttreatment outcomes \((13 \text{ out of } n = 17)\) as compared with those with poor in-session events \((4 \text{ out of } n = 17)\). This positive relationship between in-session effects (i.e., task resolution measured by high experiencing) and good posttreatment outcome was significant, \(\chi^2(1, N = 34) = 4.37, p > .05\). In short, the outcome of single events predicted posttreatment outcome, explaining nearly 13% of its variance \((\phi^2 = .129)\). Predictive power of the events is not the focus of this study, but it speaks to the sample’s relevance to treatment success.

In the current findings, not all emotional events included every level ranked on the DTS. Good events included anywhere from 3 to 7 distinct levels, and poor events covered 1 to 5 levels. The highest level achieved on the DTS among good event outcomes was \(M = 7.76 \text{ (SD = 0.44)}\), ranging from 7 to 8; among poor events it was \(M = 4.41 \text{ (SD = 2.50)}\), ranging from 1 to 8.

**Wedged-Variance Hypothesis (H1) Findings**

The two plots in Figure 1 show the patterns in DTS scores for all poor within-session events \((n = 17)\) superimposed onto one another (top panel), and the same for good within-session events \((n = 17; \text{bottom panel})\). In effect, Figure 1 shows a collection of “in-motion” change patterns for 34 individuals. Note that because the duration of emotion events varied case by case, Figure 1 presents DTS scores against the proportion of total time respective to each case.

A ratio was calculated to index the amount of any wedge-shaped variance: \(\frac{\sigma^2}{\text{last } 20\%} \text{ (of last } 20\%) / \sigma^2 \text{ (of first } 20\%)\). The average variance ratio for the 17 cases with good in-session events was 4.33, significantly greater than chance using a one-sample nonparametric Wilcoxon signed rank test \((V = 87.5, p < .015)\). This indicated that good in-session events have a wedge-shaped distribution in their DTS scores as a function of time, with increasing variance toward the end of a session event. In contrast, the average variance ratio for the 17 cases with poor in-session events was 3.38 and was nonsignificant when compared with chance \((V = 34, p > .20)\). Thus, when changes in variance over time for good and poor in-session cases were each compared with chance, findings supported the wedged-variance hypothesis.

**Positive-Slope Hypothesis (H2) Findings**

A regression of DTS scores was done onto raw time scores for each of the 34 individual cases. This allowed for the calculation of a slope for each case, in which a positive slope indicated a trend of improvement in emotional processing, a negative slope indicated a deterioration in emotional processing, and a zero slope indicated no change in emotional processing. The groups’ average regression lines of DTS on time for good versus poor in-session events are plotted in Figure 2. Both event outcome groups have somewhat positively sloped regression lines, but a difference is apparent in their slopes (average slope of good events = 0.0611; average slope of poor events = 0.0130; difference between the two groups = 0.0481).

When testing that the slopes of good events were different from zero, a one-sample nonparametric Wilcoxon signed rank test showed that the average slope of DTS scores regressed on time for cases with good in-session event \((n = 17)\) was positive and significantly different from zero \((V = 139, p = .000+\) and was unlikely to have occurred by chance. In contrast, the average slope of poor in-session event cases \((n = 17)\) was not significantly different from zero \((V = 89, p > .20)\). Finally, when good and poor in-session events were compared directly with one another, a two-sample Wilcoxon test showed that the slope of DTS regressed on time for cases with good in-session events \((n = 17)\) was significantly different and, so, more steep and positive than the slopes of poor event cases \((W = 212, p < .01)\). These findings supported the positive-slope hypothesis.

**PART 2: BUILDING RESILIENCE**

**Specific Hypotheses**

In a given session of psychotherapy, clients often have moments of improvement as they access internal resources (Greenberg, 2002; Stiles et al., 2004). Sometimes these moments are very ephemeral and short-lived; at other times, the states are more stable and are consolidated. Initially, a client’s moment-by-moment progress in therapy is fleeting, a “blip” of relative improvement. In this set of questions and related analyses, I examined how the relative collapses and improvements experienced by clients moment-by-moment are related to within-session change.
Shortened-Collapse Hypothesis (H3)

Given that there is often ongoing fluctuation in therapeutic progress during a session of experiential therapy, this hypothesis addresses the following question: Is suffering, in the form of dynamic regressive changes (i.e., collapses) in emotional states, related to within-session outcomes? The hypothesis states that for good within-session events, as the session progresses, the duration of each moment of emotional collapse is reduced. So, in a good event, when a client regresses into a relatively less productive affective-meaning state, the duration of time that the client suffers a collapse (i.e., microregression) actually becomes shorter and shorter across time. In contrast, the duration of collapses in cases with poor within-session effects will not decrease as a function of time.

Sustained-Improvement Hypothesis (H4)

This hypothesis is the complement to the hypothesis (H3) described above. It states that in a good event, positive changes that first emerged only momentarily reemerge for a more sustained period later in-session. Thus, despite emotional collapses, improvements of good event cases are increasingly sustained across the session.

Overall Inquiry: Building Resilience

The specific hypotheses in this part of the study, shortened collapse (H3) and sustained improvement (H4), are alternate ways of describing possible healthy in-session changes (i.e., different ways of building resilience). So, each is a different operationalization and, therefore, a different test of resilience. It follows that support for either specific hypothesis would indicate a positive change pattern; support for both would indicate multiple patterns of resilience.

Method

Participants, measures, procedures, and reliability of data were the same as in Part 1.

Analyses

As described in Part 1, the DTS represents the degree to which a client’s state is differentiated/integrated such that a client’s winding pattern of change can be plotted against time. A given value on the DTS denotes a client’s state. However, a series of DTS values can be used to capture the direction of a client’s progress. This abstraction across data points yields a new construct: trajectory, which is an approximate mathematical derivative.
of DTS ratings against time. As a point of clarification, dichotomizing involves dividing an original scale into opposing poles (i.e., velocity can be dichotomized into fast vs. slow). The DTS was not dichotomized but rather a feature of the DTS data, direction of change, was derived (i.e., following the analogy, velocity cannot be dichotomized into acceleration vs. deceleration, yet these are derivatives of velocity). This allowed for the creation of a new variable representing the directionality of DTS changes.

Recoding Data: Trajectory Index (2-Point Index)

Data used in Part 1 were recoded for a subsequent set of analyses. To track dynamic changes on the DTS across time, I first examined the data for every client for the moment-by-moment directional shifts. Moving up on the 9-point scale across time reflected the client’s dynamic process of “experiencing improvement,” whereas moving down reflected the dynamic process of “experiencing collapse.” Figure 3 illustrates both the states and directional shifts for the typical in-session emotion pattern of a good event, with DTS scores plotted against time for a 32-min event. Next, the curvilinear pattern of relative “hills and valleys” that represented each client’s pattern of change on the DTS was derived into a binary index of trajectory (see Figure 3, bottom). Using the DTS data to create this 2-point index conveys the direction of a client’s dynamic change (i.e., up vs. down; growth

Figure 2. Group average slope and intercept of regression lines.

Figure 3. Coding emotional improvements and collapses for a typical case.
vs. regression), thereby providing a measure of emotional improvements versus collapses (see Figure 3, right).

In this way, I used trajectory index data to code either periods of time in which the client was improving or periods of time in which the client was undergoing a collapse. An improvement was defined as a time period (in minutes) in which a client was shown to be increasing on the DTS from one moment to the next, or a subsequent period in which there was no change in DTS, that is, the level of improvement was being sustained. A collapse was defined as a period of time (in minutes) over which a client was observed to be decreasing on the DTS, or in which there was no change in DTS following a preceding decline. Because the initial criteria of event selection were the activation of global distress, each case was recoded as beginning from a state of collapse. This new variable was considered across time for every client.

Through this recoding process, 4 poor within-session event cases were dropped from the analyses because they had no changes in DTS level at all (i.e., neither ups nor downs), which rendered their data meaningless to the current hypotheses. Thus, subsamples used for analysis were \( n = 17 \) for good within-session events, and \( n = 13 \) for poor within-session events.

**Testing the Shortened-Collapse Hypothesis (H3)**

All changes according to the trajectory index were plotted against time. The episode of collapse was plotted on an \( x \)-axis and the duration of each episode on a \( y \)-axis, and then, for each client, a simple linear regression was used to estimate a slope of collapses against time. To test the hypothesis—for example, that slopes would be negative for good events (indicating shorter and shorter periods of collapse)—I compared the observed findings with chance using bootstrapping.

Bootstrapping was used because there is no traditional inference setting for these types of data, and one cannot confidently make assumptions about the normality of the population distribution. For this reason, I determined the significance of observed findings compared with chance using a bootstrapping technique (for an overview of this, see Hesterberg, Moore, Monaghan, Clipson, & Epstein, 2006). This technique randomly permuted each client’s session data 100,000 times. The resultant bootstrapping distribution provided a context in which the number of clients who had a decrease in the duration of their collapses could be compared with the same under conditions of randomness to obtain an empirical \( p \)-value of the observed findings.

**Testing the Sustained-Improvement Hypothesis (H4)**

Analyses for this hypothesis are analogous to those used for the shortened-collapse hypothesis (H3), the only exception being that this testing focused on the duration of improvements rather than the duration of collapses. Similarly, in these analyses I used bootstrapping to test for a positive slope when duration of episode was regressed onto episode of improvement.

**Results**

Table 1 contains the average number of episodes (i.e., improvements or collapses) per emotion event outcome, as well as descriptive statistics for the first and last of each type of episode. Clients with good in-session events have slightly more episodes of either kind than clients with poor in-session events, \( t(32) > 2.15, ps < .02 \). This is partially explained by the longer duration of good in-session events as well as the overall qualitative difference of good versus poor events. Note that although the average durations for only first and last episodes are reported here, the duration of every improvement and of every collapse was taken into account for each client to test the hypotheses. Moreover, to contextualize the following results, it is important to recall that Part 1 showed good in-session events to predict good posttreatment outcomes.

**Shortened-Collapse Hypothesis (H3) Findings**

Table 1 shows that on average the duration of collapsing episodes for clients during good in-session events decreased by approximately one third from the first episode to the last episode (from 3.29 to 2.24 min, respectively). Moreover, for good in-session events, when all episodes of collapse were regressed onto the duration of each episode, 14 out of \( n = 17 \) clients were found to have negative slopes (suggesting shortened collapses). When compared with a randomized bootstrapping distribution, those cases with good in-session events were indeed shown to have episodes of collapse that became increasingly shorter; furthermore, this occurred significantly more frequently than one would expect by chance (empirical \( p \)-value \( = .000 + \)).

In contrast, when clients in poor in-session events suffered a collapse, the average duration of their collapses actually increased and became longer by almost one third from the first episode to the last episode of collapse (from 4.44 to 6.47 min, respectively; see Table 1). Furthermore, for poor in-session events, when episodes of collapse were regressed onto the duration of each episode, only 3 out of \( n = 13 \) clients were found to have negative slopes (suggesting shortened collapses). When compared with a randomized bootstrapping distribution, this finding was not shown to be significant with respect to shortened collapse (empirical \( p \)-value \( > .95 \)). In fact, the unexpected finding suggests a trend that clients who end with poor in-session events have collapses into suffering that not only do not shorten (as was hypothesized) but that actually become longer and longer as time goes on. There is some evidence that this increasingly prolonged collapse is a trend among clients with poor in-session events (empirical \( p \)-value \( < .08 \), but it does
not reach significance at the .05 level. These findings supported the hypothesis that building resilience occurs through a pattern described by the shortened-collapse hypothesis.

Sustained-Improvement Hypothesis (H4) Findings

Table 1 shows that on average the duration of improvement episodes for clients in good events increased almost two-fold from the first episode to the last episode (from 2.44 to 4.41 min, respectively). For good events, when episodes of improvement were regressed onto the duration of each episode, 10 out of $n = 17$ clients were found to have positive slopes (suggesting episodes of improvement become increasingly longer with time, i.e., sustained improvements). However, when compared with a randomized bootstrapping distribution, this finding was not shown to be significantly different from chance (empirical $p$-value $>.20$).

On average, clients in poor events remained relatively unchanged with respect to the duration of their first to last improvement episodes (see Table 1). When episodes of improvement were regressed onto the duration of each episode, only 5 out of $n = 13$ clients were found to have positive slopes (suggesting sustained improvements). When compared with a randomized bootstrapping distribution, this finding was not significantly different from chance (empirical $p$-value $>.80$). These findings did not support the sustained-improvement hypothesis as a pattern by which clients build resilience.

DISCUSSION

The findings in Part 1 of this article demonstrate that when therapy is productive there is a general progression toward emotional transformation; it follows a path that is variable, and this variability is therapeutic. These two specific findings are complementary, and together they lend support to an overall sawtooth progression of change. In Part 2 of this article, I examined the micropatterns, the individual “ups and downs” (i.e., growth/improvement vs. regression/collapse), whereby successful clients dynamically altered their tendency (or attraction, or ability to shift) toward healthier self-organizations; a process described here as building resilience. Both the above mentioned cyclical patterns of in-session change can be thought of heuristically as unfolding two steps forward, one step back.

Change Happens Steadily: Two Steps Forward, One Step Back

Increasing Emotional Range

There is evidence that the pattern of emotional processing in good in-session events typically has a wedge-shaped variability against time, with more variance near the end of the session. This indicates that clients in good events demonstrate a shift in the range and variability of emotional processes in which they engage—apart from any change that there may be in the dominant affective-meaning state. This finding means that what characterizes positive change is not necessarily the absence of Global Distress or the presence of some resolution, but it is also the increased range of states (i.e., Global Distress and Fear/Shame and Need and Assertive Anger) or a higher variability in the range of experienced emotional shifts. Consequently, some clients with good events may suffer distress periodically throughout the session and yet are still more emotionally flexible and able to shift how they engage their emotional experiences. To use Toukmanian’s (1996) terminology, these clients are more able to shift between varying levels of perceptual processing, which is an overarching goal of successful psychotherapy.

Emotional Progression

Findings support the hypotheses that cases with good in-session events have a significantly steeper increase in emotional processing scores over time (i.e., positive DTS slope) than poor in-session events, which have little or no increase. The conclusion is that good in-session events occur through an evolution in the dominant emotion that clients experience. Successful clients move roughly through a range of states that model change, starting with Global Distress, followed by aspects of Fear/Shame, Rejecting Anger, Negative Evaluation, Need, then on to Hurt/Grief, Assertive Anger or Self-Soothing, and finally Acceptance and Agency. Notice that this overall progression through a sequence of emotions (i.e., states, each with its own criteria) is not synonymous with a linear change in a set of symptoms (i.e., fixed criteria for depression). Therefore, this finding is compatible with other research that describes an S-shaped curve of symptom change over the course treatment for depression (Hayes, Feldman, et al., 2007).

Overall Sawtooth Progression

In summary, good in-session events entail more shifts between a wider and wider range of emotions and a simultaneous gradual development in the central tendency of states toward emotion transformation. These two findings are consistent with conclusions drawn by the research groups of both Stiles and Hayes, who have separately shown that the progress of an individual case does not follow the smooth improvement curve that is often suggested by group averages (see Hayes, Feldman, et al., 2007; Stiles et al., 2004). The progress of an individual good in-session event is ragged and sawtoothen. Thus, although clients may still have moments of distress near the end of a good event, successful processing is revealed through a client’s increased range in emotional flexibility. One can speculate that these within-session patterns are similar to larger patterns across treatment. This would be consistent with Mergenthaler’s (1996) model of psychotherapeutic cycles, in which high counts of both emotion and reflective words periodically co-occur (connecting phase) in a cyclical pattern both within and across sessions.

Building Resilience Has Its Ups and Downs (and Ups!)

As shown, good in-session events have an increase in variability across time. An implication of that finding is that regardless of any changes in the central tendency (i.e., the slope) of emotional processing, clients with good events are likely to experience moments of global distress and other early model components at the end as well as at the beginning of an emotion event. This conclusion highlights a need to explore the nature of these “dips” or collapses into early model components that may occur even at the end of a good event. Collapses can be conceptualized as momen-
tary developmental regressions in emotional functioning, and they are the in-session analogue of depression spikes, which have been identified across sessions of exposure-based cognitive therapy (Hayes, Feldman, et al., 2007). There are at least two moment-by-moment patterns that might describe clients building resilience against these microregressions: The duration of collapses could shorten, or the duration of improvements could lengthen, or both. This study found evidence for the former and not for the latter.

Tracking Emotional Recoveries

Over the course of a good in-session event, the duration of emotional collapses was gradually reduced. One way of understanding this is that clients with good in-session events build resilience by experiencing less of a bad thing. In other words, when emotions are being processed effectively, clients may still have microrelapses (i.e., collapse or regress), but when that happens, they suffer for increasingly shorter periods of time and recover more quickly. This means that rather than never returning to bad feelings, the nature of collapses is what changes. Moreover, there is some evidence that instead of remaining unchanged, poor in-session events actually get worse in this respect. Thus, for events that ended in poor outcomes, the durations of emotional collapses actually became longer over the course of that emotional event, and that lengthening was more than one would expect by chance.

Therefore, resilience against collapses was actually collapsing for shorter periods before clients recovered by accessing more adaptive affective states of meaning making. This supports EFT theory and other recent research that argues that arousal plus meaning making produces a therapeutic emotional experience (Greenberg, 2002; Kennedy-Moore & Watson, 1999; Missirlian, Toukmanian, Warwar, & Greenberg, 2005). Showing that this does not occur in poor events would usually indicate that if arousal is not coupled with forays into more differentiated states of meaning making, then the arousal is not helpful to the therapeutic process. However, the finding with poor events was more extreme than this. Lengthening experiences of generic and highly aroused states of distress (i.e., emotional collapses into lower levels) are arguably not only unproductive but may actually inhibit client progress. This is true inasmuch as aroused distress in the absence of advanced model states (i.e., meaning making) is painful and is indicative of increasingly long periods of unproductive and painful emotional collapses.

Tracking Emotional Improvements

Although sustaining growth is an intuitive understanding of how clients might build resilience, it was the only hypothesis not supported by the data. Showing the process by which improvements become consolidated moment-by-moment has been difficult for psychotherapy research since its inception. In a seminal book on the therapeutic process, Rogers (1942) used segments of psychotherapy transcript across a single case to bring to light how emotional insights are repeatedly returned to and elaborated further, bit by bit, each time an issue is revisited. The current effort was to capture that same process using modern method and theory.

The consolidation of productive emotional shifts is a facet of change that has been easier to identify on a macroscale in research using gross pre- and posttreatment measures. However, tracing these changes to their more refined, molecular level in the process of change has proven to be elusive, except when using single case designs. At a session-by-session level, however, Tang et al. (2005) have demonstrated sudden gains to be an identifiable pattern of improvement in 39%–46% of the cases that they studied. Therefore, the evidence suggests that further investigation into patterns of improvement at the moment-by-moment level could be fruitful.

General Conclusions

This study provides insight into what clients are actually doing in experiential therapy when they successfully (i.e., skillfully) process emotional distress. Overall, change appeared to occur through a positive linear progression, yet, at a more detailed level, the same clients also became more and more flexible in their ability to shift between different states of affect and meaning. Thus, on a moment-by-moment level, emotional transformation emerged in a markedly chaotic and jagged pattern, that is, two steps forward, one step back. In short, good events showed a steady overall progress in conjunction with an increasingly wider range of emotion. Until now, facets of this pattern have only been shown by researchers using single case designs. Nonetheless, the pattern found here in experiential therapy remains surprisingly similar to Osatuke et al.’s (2005) account of an individual’s moment-by-moment progress in CBT:

[The change process] was reiterated and moved further in the following [in-session] discussion sequences, with modal durations of several minutes per APES stage . . . . Progress sequences in chronologically organized CBT passages . . . resembled saw-toothed shapes: rapid increases in assimilation, dropping when a different topic was addressed. Since progress gains across topics were greater than losses, assimilation increased throughout therapy, in a saw-toothed pattern with a general upward trend. (p. 107)

Despite the use of both a different measure and a different therapy, this account is a remarkably apt description of the pattern in Figure 3, which was found to be representative of good events.

Clients in the current study often had moments of improvement in which they accessed internal resources, followed lamentably by moments of collapse (i.e., regressing, feeling less hopeful, less able, less worthy, etc.). This up-and-down pattern was evident in both good and poor emotional processing events, such that a collapse or even multiple collapses per session were not indicative of a poor in-session event. However, good emotional processing events had a critical difference: Each successive time that the client suffered an emotional collapse, the duration of that collapse became shorter in time. Thus, emotional processing built resilience by progressively shortening the periods of time that a client spent collapsing into suffering (i.e., less of a bad thing) before recovering and accessing internal resources anew. By contrast, this was not the case for those clients with poor (i.e., unproductive) events. For those clients, collapses actually occurred for longer and longer durations. A pattern that suggests that these clients may have been expressing a great deal of emotional arousal in the absence of meaningful expressions of need or feelings such as hurt, grief, assertion, and self soothing.
In a dynamic systems conceptualization of change, repeated practice or repeated exposure to new information eventually incurs the destabilization of an existing system. Later, the repeated practice of this increasingly familiar information actually stabilizes new changes, strengthening new ways of being (Greenberg & Pascual-Leone, 1995; Hayes, Laurenceau, et al., 2007). The notion that repeated practice has an essential role in therapy may seem more compatible with a cognitive or a behavioral view of the change process than with traditional views of experiential therapy. Even so, a useful way of conceptualizing the recursive exploratory process in experiential therapy is that it is some form of repeated affective-experiential exercise in meaning construction. The series of improvements and collapses (i.e., two steps forward, one step back) can be thought of as “emotional push-ups” that strengthen clients’ adaptive emotion schemes and increase their ability to shift between emotion states (schemes) in their repertoire (i.e., emotional flexibility). Moreover, the idea that repeated productive experiential processing eventually results in “permanent” (i.e., stabilized) changes in a client’s affective system, and that those changes at some level constitute a neuronal reorganization, is consistent with emotion theory and the emerging research on neuroplasticity (see Doidge, 2007).

By using an alternative set of analyses, in this study I provide a cross-validation of Pascual-Leone and Greenberg’s (2007) model of emotional processing, affirming their conclusions as well as going on to describe temporal patterns of productive change. More broadly, findings also support both humanistic and psychodynamic accounts of how the experiential process progressively unfolds in therapy (i.e., Fosha, 2000; Greenberg, 2002). The conclusions also highlight the ephemeral nature of emotional shifts and shed some light on how positive emotional changes actually unfold. Following this, emotional processing may be better understood as a type of skillful performance, characterized by affective/meaning making rather than something that is “completed” in doses. This view suggests a metaphor of treatment as “tacit skills acquisition.”

The hypotheses of this article inquired into a facet of emotional processing that is not yet clearly articulated in the literature. Although similar to emotional awareness, emotional flexibility is a distinct construct. Emotional awareness is being attentive to the nature of current affective experiences. A high level of emotional awareness means being attentive to a range of both dominant experiences as well as more tacit, peripheral, subdominant experiences of affect and associated meanings (i.e., “I’m feeling sad and hopeless . . . . but also a little bit angry”; Pascual-Leone & Greenberg, 2006). Even so, one’s awareness of subdominant emotional states does not necessarily translate into fully activating and hopeless . . . . but also a little bit angry; Pascual-Leone & Greenberg, 2006). Even so, one’s awareness of subdominant emotional states does not necessarily translate into fully activating and hopeless experiences as well. The conclusions also highlight the ephemeral nature of emotional shifts and shed some light on how positive emotional changes actually unfold. Following this, emotional processing may be better understood as a type of skillful performance, characterized by affective/meaning making rather than something that is “completed” in doses. This view suggests a metaphor of treatment as “tacit skills acquisition.”

Clinical Implications

The study of psychotherapeutic process by observing live video recordings, as was done in this study, produces results that can be transferred directly to clinical practice. The real-time observations made by researchers from video likely reflect observations that therapists could also make while working with a client in-session. To that end, the findings of this study indicate a pattern of change, the proximal history of which represents a client’s zone of proximal development—a sort of moving average with upper and lower limits. Following the work of Vygotsky (1924/1978), Leiman and Stiles (2001) have described this zone as the client range for which targeted therapist interventions would best facilitate change. This implies that for therapists to be maximally effective in facilitating processing, they should monitor (i.e., track) their clients’ level of emotional differentiation and aim to match it or move only slightly beyond it. Overextending the client’s level of differentiation, however, might precipitate a dropping back in progress (a collapse) as a result of moving beyond the shifting zone of proximal development.

This idea offers empirical support for the usefulness of in-session process diagnosis as described by Greenberg and Goldman (in press). Being familiar with the findings of this moment-by-moment process research could help orient therapists to a client’s zone of proximal development. Moreover, the results can help therapists with process-based choices for intervention (i.e., “When both are present, would it be more productive to help the client explore anger or sadness?”; “The client makes progress but then always ends up regressing into hopelessness, is this productive?”; etc.). Thus, by heightening therapists’ perception of client shifts in emotion and indicating productive pathways in emotional processing, we can increase the precision of therapeutic interventions in the future.

Limitations and Future Directions

Even though findings of this research on emotional processing are consistent with theory and evidence from different approaches and populations, one cannot generalize results to the population at large or to other therapeutic contexts. First, this study was a reanalysis of data from a previously published data set, and as such, future replication with an independent sample will be important. Moreover, the client sample for this research was limited to individuals suffering primarily from depression and/or long-standing interpersonal grievances who had been screened for suitability to brief treatment. Furthermore, all clients were treated with experiential therapy. Even so, Mergenthaler’s (1996) lexical analyses of 80 sessions (drawn from 20 clients) showed that similar cyclical patterns of affect and meaning occurred within psychodynamic therapy.

As suggested in the review by Hayes, Laurenceau, et al. (2007), it will be important for identified discontinuous and nonlinear transitions, such as those discussed in this article, to be followed up by research examining what therapists may be doing to facilitate transition periods. Moreover, research would do well to identify markers that indicate when a client would best benefit from destabilization/facilitation. Such a study would examine therapist–client responsivity from a dynamic systems perspective. Finally, in vivo observations of clients’ microshifts in feeling and meaning
sometimes appear to reflect an inherently dynamic and self-organizing process. This invites the following conjecture: More than representing a particular treatment approach, these patterns of change may reflect a fundamental aspect of human emotional experiencing.

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