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Chapter 18
Process and Outcome in Psychoanalytic Psychotherapy Research: The Need for a (Relatively) New Paradigm

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Introduction

This chapter reviews key assumptions underlying contemporary research on process–outcome relationships in psychoanalytic treatments. This review shows that this body of research, with important exceptions, implicitly or explicitly, is based on a number of assumptions borrowed from pharmaceutical trials that do insufficient justice to the typical processes involved in psychodynamic treatments and in psychotherapy more generally [1].

We argue that psychodynamic treatment research should move beyond this approach and develop a more encompassing paradigm to investigate the relationship between process and outcome in psychoanalytic treatments. In particular, we propose a developmentally informed, dynamic interaction [2] or action-theory [3, 4] approach based on the assumption that the typical processes occurring in psychodynamic treatment involve the reactivation of the normal dialectical interaction between issues of relatedness and self-definition [5]. Stated otherwise, we propose that sustained and consolidated progress in psychodynamic treatment involves the reactivation of the normal synergistic developmental process in which interpersonal experiences in the therapeutic relationship contribute to constructive revisions in the sense of self that lead to more mature expressions of interpersonal relatedness that in turn contribute to further refinements in the sense of self. This reactivation occurs in the context of experiences of compatibility and incompatibility in the therapeutic relationship at various developmental levels [6] and is expressed in changes in representations of self and others,

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fostered by the development of metareflective or metacognitive abilities, leading to so-called broaden and build cycles [7]. We argue that these cycles are associated with a greater sense of internal freedom, increased security of inner mental exploration of complex feelings and thoughts including hopes and apprehensions, enhanced adaptive capacities, more differentiated and integrated relationships, and, more generally, an increased belief in and an ability to use inner resources. Moreover, it is argued that this could be the "final common pathway" underlying successful treatments regardless of theoretical orientation. Throughout this chapter, we will illustrate these issues with examples drawn from our own research as well as that of others. We also discuss the implications of these views for psychoanalytic research and training.

Psychoanalytic Treatment Research: Where We Are and Where We May Need to Go

Over the last decades, there has been a steady increase in studies that have investigated the efficacy and effectiveness of psychoanalytic treatments, as testified by several chapters in this volume. Together, these studies have provided considerable evidence for the efficacy and effectiveness of brief psychodynamic treatment and specific forms of long-term psychodynamic treatments with a wide variety of disorders [8–12]. Moreover, a recent meta-analysis also provides evidence for the effectiveness of psychoanalysis [13]. Yet, at the same time, it is clear that more studies are needed to investigate the efficacy of psychodynamic therapies [14].

The field has also witnessed a continuing, albeit somewhat more modest, interest in process–outcome research. Yet, this research has, with some important exceptions, almost exclusively focused on process–outcome relationships in brief psychodynamic treatments. This should come as no surprise. The methodological problems associated with process–outcome research are immense because of the complexity of the therapeutic process and the many factors involved in outcome. Hence, even in relatively brief interventions, it has proven quite difficult to provide convincing evidence for causal relationships between particular interventions and outcome [15]. This is even more difficult in long-term treatment in which the mechanisms of change remain largely elusive. Yet, many clinicians are precisely interested in the mechanisms of change in long-term psychodynamic treatments. Indeed, many psychodynamic clinicians (for a review [16]) argue that existing outcome and process–outcome research of psychoanalytic treatments has mainly focused on brief treatments, largely based on a relatively uncritical acceptance of a simple medical model. Hence, this body of research would do little justice to psychoanalytic concepts of process and outcome, and subsequently be largely irrelevant for clinical practice.

This growing criticism by clinicians is echoed by researchers expressing increasing dissatisfaction with psychotherapy research more generally. The field of psychotherapy research indeed currently witnesses a lively interest in the mechanisms of therapeutic change, regardless of "brand names" [17] and "what works for whom" under what conditions [18]. Kazdin [19], for instance, has been instrumental in promoting a shift in psychotherapy research from outcome to understanding the processes of change, and together with Kraemer et al. [20] has provided researchers with a conceptual framework distinguishing between moderators, mediators and proxies of change.

In this context, there also has been a strong call for the more theory-driven research efforts in psychotherapy research [21]. It was Cronbach (e.g. [22]), very early in the history of psychotherapy research, who urged investigators to include differentiations among patients in their research design, based on the assumption that different types of patients may be differentially responsive to different forms of treatment (i.e., patient–treatment interactions) and different types of patients may respond to treatment in very different ways (i.e., patient–outcome interactions). However, Cronbach cautioned that the introduction of patient dimensions into research designs should be based on theoretically

sound and empirically supported differentiations or else investigators run the risk of entering into a "hall of mirrors" when examining these interactions. In this chapter, we apply these ideas to extant psychodynamic treatment research, with a special focus on long-term psychoanalytic treatments.

Psychoanalytic Treatment Research: To What Extent Have We Embraced a "Fremdkörper?"

In one of his very first attempts to conceptualize the formation of hysterical symptoms, Freud argued that hysteria involves a defense against unacceptable representations that have been excluded from consciousness [23] but continue to influence the individual as a sort of Fremdkörper, a foreign body. Similarly, although psychoanalytic process and outcome research has undeniably resulted in considerable advances in our understanding of the therapeutic process, the field may have avoided a critical examination of its often implicit assumptions – assumptions that may continue to influence our thinking as a Fremdkörper, a set of assumptions of which we are hardly aware but that run counter to other key assumptions of psychodynamic approaches.

More specifically, the bulk of process–outcome research of psychoanalytic treatments has relied heavily on mainstream assumptions of process–outcome research:

1. A focus on relatively accessible and observable features such as symptom improvement, mostly assessed through self-report questionnaires.
2. A reliance on relatively simple linear models to model process–outcome relationships (e.g., aggregating therapists' use of specific interventions such as transference interpretations (TIs) and relating such aggregate measures to outcome across sessions using linear statistical models).
3. Likewise, it is often assumed that the different factors explaining therapeutic outcome interact in linear, additive ways. For instance, it is commonly assumed that specific interventions only explain about 15% of the variance in outcome [24]. The remainder of the variance would be explained by common factors (30%) (e.g., providing support), expectancy and placebo effects (15%), and extra-therapeutic effects (35–40%) (e.g., spontaneous remission, positive events or changes). This assumption is reinforced by what Stiles and Shapiro [1] have called the "abuse of the drug metaphor," i.e., the assumption that psychotherapy consists of supplying "active ingredients" (e.g., interpretations) by the therapist to the patient, and that the more these active ingredients are supplied, the more effective a treatment.

However, these assumptions fail to do justice to our understanding of the complexities of the psychoanalytic process. First, while symptom improvement is important, psychoanalytic treatments, and particularly long-term psychoanalytic treatments, also aim at more fundamental changes [12]. These changes, as we will discuss in detail in the text that follows, are often much more difficult to assess. Importantly, as both Fonagy [25] and Shedler [12] have recently argued, perhaps this has resulted in research looking in the wrong places for evidence of change. This focus on symptom reduction may also be in part responsible for findings concerning the so-called dodo bird verdict, i.e., that all bona fide treatments are about equally effective (B[illegible]). Although many treatments may indeed lead to similar changes in terms of symptoms and other readily observable measures (e.g., interpersonal functioning, feelings of well-being), this may be less the case for more fundamental changes, such as enhanced adaptive capacities to deal with adversity [26], or increased trust in one's own abilities and talents [12].

Second, both clinical experiences and research findings question whether therapeutic change, particularly in long-term psychoanalytic treatments, occurs in a linear fashion. For example, one of the key assumptions of long-term psychoanalytic treatments is that change does not follow a purely linear process. Similarly, the emphasis on patients' engaging in self-reflection and delaying action in

order to reach understanding is also inherently a nonlinear process. Indeed, the emphasis in psychoanalytic treatments on free association, coupled with an attitude of technical neutrality and free floating attention in the psychoanalytic therapist, suggests an essentially nonlinear process. Yet, much of the psychoanalytic psychotherapy research is based on the implicit or explicit assumption that the treatment process consists of a clear beginning, middle phase, and end, and that change occurs not only gradually, but also linearly, reaching an asymptotic point. These assumptions are typical of mainstream psychotherapy research on brief treatments, which in turn derive from assumptions underlying pharmaceutical trials [1]. Yet, even the literature on brief treatments has shown the importance of "sudden gains" in a variety of treatments in both randomized trials and naturalistic studies [27–29], and of so-called critical moments. This is congruent with testimonies of both patients and therapists that suggest that treatment is far from a linear process [30].

In sum, particularly for long-term (psychodynamic) treatments, several assumptions underlying much of contemporary psychotherapy research seem to have limited relevance. Hence, a broader and perhaps different paradigm is needed specifically for psychodynamic treatment research, one that does more justice to what we know about psychotherapy in general, and psychoanalytic therapy in particular. Above all, a paradigm is needed that is better suited to investigate, in more detail, processes that occur in long-term psychoanalytic treatments. In the remainder of this chapter, we review research relevant to these assumptions and draw implications for future treatment research.

What Kind of Changes Should Be Assessed?

There can be no doubt that some of the changes currently assessed in mainstream psychotherapy research are not limited to symptom relief and are not superficial or irrelevant. However, precious little is known about the processes underlying such changes and the mechanisms responsible for sustained therapeutic change. In addition, the goals for long-term psychoanalytic treatments and psychoanalysis are fundamentally different from brief treatments, namely a profound change in personality and personality organization in addition to symptom relief.

One important problem is the conceptualization and assessment of these more basic changes by various psychoanalytic traditions, ranging from changes in ego, id, and superego in traditional psychoanalytic formations [31], changes in the differentiation, articulation, and integration in object representations in object relations approaches [6, 32], changes in the individual's position with regards to the desire of the Other in Lacanian approaches to, more recently, changes in states of mind with regard to attachment experiences [32] and the ability for reflective functioning or mentalizing [33]. A common denominator perhaps of these theories is that psychoanalytic treatments aim at what has been called internalization of the analytic function, leading to greater inner freedom and creativity, self-reflectiveness and the ability to proceed with analysis after the end of treatment, leading to sustained efficacy underpinned by increased adaptive capacities to deal with stressors [21]. However, a major question is how to assess systematically these more fundamental changes and which of these areas is fundamental to the others?

A number of meta-analyses as well as detailed case studies may lead the way. Meta-analyses indeed suggest that long-term psychoanalytic treatment [11], psychoanalysis [13], and intensive psychoanalytic treatment for personality disorders [32, 34, 35] are associated with sustained and perhaps even continuing improvement after the end of treatment. Moreover, some evidence suggests that long-term psychoanalytic treatments are associated with more profound structural personality changes as assessed by improvements in levels of object representations and defense mechanisms [36]. Systematic case studies are congruent with these findings [37].

Yet, few studies have directly shown a relationship between such more profound changes in personality and the enduring effects of psychoanalytic treatment [38, 39]. Despite this, both group and

single case studies converge to suggest that such changes indeed are congruent with object relational approaches – changes in feelings of "felt safety" [35], more differentiated and integrated representations of self and others [40], less use of primitive defense mechanisms, and higher levels of identity integration [36]. Similarly, research suggests that patients, after long-term psychoanalytic treatment, are characterized by (a) an increased capacity for self-analysis, (b) the ability to experiment with new behaviors, particularly in interpersonal relationships, (c) finding pleasure in new challenges, (d) greater tolerance for negative affect, (e) greater insight into how the past may determine the present, and (f) the use of self-calming and self-supportive strategies, among which is the use of the representation of the therapist (and by association the treatment process) as a supportive good internal object [12, 37, 41].

These findings are congruent with traditional psychoanalytic assumptions about the internalization of the analytic function, but also with attachment and mentalization-based approaches that view the development of a "security of internal mental exploration" [33], which is closely associated with the ability for relationship recruiting and resilience in the face of adversity [42], as a key outcome of successful treatment. Hence, successful treatment is thought to result in "earned secure attachment" [43], characterized by the ability to reflect in a coherent way about one's past [44, 45]. In a related language, a common mechanism across treatments may be enhanced emotional regulatory capacities in the face of stress and negative affect which in turn maintains more effective self-reflective abilities and decision making during stressful times [46].

Yet, the question remains whether there is a causal relation between specific psychoanalytic techniques and these outcomes and the extent to which these outcomes are unique for psychoanalytic treatments or are also characteristic of other successful treatments. Although much more research is needed, some findings identify at least one common mechanism underlying effective treatments involving the enhancement of adaptive capacities or resilience in dealing with stress. In the National Institute of Mental Health Treatment of Depression Collaborative Research Program, for instance, both cognitive behavioral therapy (CBT) and interpersonal therapy (IPT) were associated with enhanced adaptive capacities in dealing with stress [26, 47]. Moreover, based on complex linear modeling, Hawley et al. found that reduction in symptoms and increases in adaptive capacity in brief treatment for depression were significantly mediated by a reduction in a central maladaptive personality dimension – self-critical perfectionism [48].

Hence, despite variations in techniques across different treatments, it seems that effective treatment is associated with relatively similar outcomes, perhaps to varying degrees and through different routes. In this respect, many roads may lead to Rome. This should not surprise us, as different treatments – through similar or different pathways – have an effect on similar psychological processes including changes in the representation of self and significant others [21], and similar neurobiological systems and the brain in particular, either by altering top-down regulation of subcortical stress response systems or by changing bottom-up processes including reactivity to stressful conditions, or both [42].

An important question in this regard is whether the effects of long-term psychoanalytic treatments and psychoanalysis are qualitatively different, as is sometimes claimed in the psychoanalytic literature. The few studies in this regard point primarily to quantitative differences, and studies have also failed to identify different rates of change in both types of treatments [49, 50]. Stated otherwise, psychoanalysis may perhaps be associated with greater change, but perhaps only because of the higher frequency, longer duration, and potentially the interaction between duration and frequency.

Hence, it might be possible that successful psychotherapy – regardless of brand name – is associated with personality changes involving a reactivation of the normal developmental dialectical interaction between issues of relatedness and self-definition [51], expressed in increased capacities for self-reflection [52] and self-analysis, the adoption of new behavior, and the use of self-supporting and self-calming strategies (or more effective emotional regulatory) [41], underpinned by changes in stress and affect regulation. These capacities not only lead to enhanced adaptive capacities when

dealing with stress, but also to so-called broaden and build cycles [7]. Experiences of self-efficacy lead not only to more confidence ("build") in one's own abilities and resources (reactivating issues concerning self-definition), as well as increased ability to interact with others in more differentiated and adaptive ways (reactivating issues concerning relatedness), but such experiences also lead one to broaden one's horizon in terms of experiences that foster both self-definition and relatedness [33].

Importantly, from this perspective, successful treatment thus can be considered to set in motion a process of change that starts during treatment but, crucially, is thought to continue after treatment. Moreover, different treatments may be able to activate such a process through different routes. For instance, challenging dysfunctional assumptions about the self and others in CBT may equally activate this process as the repeated exploration and interpretation of relationship patterns in psychoanalytic treatments, as both may result not only in changes in patients' representations of self and others, but also in an increased ability to reflect on one's own self and others, leading to broaden and build cycles.

The extent to which such a change process is set in motion may differ considerably between different treatments. Techniques used in long-term psychoanalytic treatments seem particularly apt to foster such a process with their often explicit focus on understanding patterns of behavior and emotional states in relationships. Yet, psychoanalytic treatments may also contain interventions and aspects that do not contribute to such a process, but should rather be seen as "superstitious behavior" that is unrelated to outcome, but is repeated simply because it is believed to be associated with outcome [25]. Moreover, psychoanalytic treatments, as discussed in more detail in the text that follows, may also contain elements that hamper such a process, and thus are iatrogenic.

It is interesting to compare this view with different accounts of change within psychoanalytic treatments, which range from an emphasis on a "corrective emotional experience" [53] to seeing psychoanalytic treatment as involving a process of "transmuting internalizations" [54]. From our perspective, an even broader view seems more appropriate, which conceptualizes psychotherapeutic change in terms of a series of experienced compatibilities and incompatibilities in the therapeutic relationship, of frustration and gratification both inside as well as outside the therapeutic relationship [6], leading to a reactivation of the dialectic interaction between issues of relatedness and autonomy [21], underpinned by an increase in reflective functioning [33, 42]. This view encompasses the idea of "corrective emotional experience," and points to the central role of the therapeutic relationship in treatment, but also to the role of transmuting experiences as well as the ability for self-reflection and self-analysis, leading to a reactivation of the normal dialectic between issues of relatedness and self-definition; a dialectic that seems fundamentally impaired in psychopathology [51] because of the individual's attempts to defensively adapt to disruptions of this normal dialectic developmental process [55].

This view also allows one to understand findings concerning continuing post-treatment improvement in psychoanalytic treatment. Such continuing improvement may be the inevitable consequence of the "broaden and build" cycle that is activated as a result of the reactivation of this normal dialectic between relatedness and self-definition, instead of continuing the maladaptive interpersonal cycles typically associated with psychopathology.

Therefore, in addition to the importance of dealing with negative self-representations in the treatment process [21], working through dependency issues toward the therapist (or therapeutic setting) could play a key role in explaining the long-term effects of (psychodynamic) treatment as dependency might counteract the continuation of the analytic process after the end of treatment. In this respect, the therapeutic relationship can be seen not only as the vehicle of change, but potentially also as having iatrogenic effects. As Fonagy and Target [56] have pointed out, with some patients, decreasing the treatment frequency and fostering independence more generally might foster long-term changes and at the same time prevent malignant dependency which can occur in long-term psychoanalytic treatment. Indeed, whereas in Freud's days, psychoanalytic treatments were relatively short by our standards, it seems that they have become longer and longer. It is not clear, however, whether this rather dramatic increase in the length of treatment has been paralleled by better

outcomes, and little is currently known about the optimal treatment length and factors influencing this. One implication, however, of these views is that psychoanalytic treatment may relatively neglect the transferring of insight and knowledge gained in treatment to situations and relationships outside the treatment setting. Traditionally, this is seen as violating analytic neutrality, but as treatment progresses, this attitude may hamper the treatment process rather than facilitate it. Thus, while perhaps in the early phases, technical neutrality may be productive, in the later phases of treatment, it may be become counterproductive. At this moment, we simply do not know, and, as noted, perhaps psychoanalytic therapists are involved in "superstitious behavior" [25] when they closely stick to technical neutrality throughout treatment, because it is reinforced by progress in the early stages, thus leading to the superstitious conviction that this stance will always be helpful. It is important to note, in this context, that in actual practice, many psychodynamic therapists seem to behave differently than theoretical descriptions of analytic neutrality might suggest, and with very good reasons to do so [57].

Furthermore, despite the fact that treatment length could possibly be an artifact, research generally suggests a positive relationship between the length of treatment and outcome – longer treatment tends to lead to better outcome [11]. Brief therapies may therefore lead to changes in the long run to the extent that they are able to reactivate the normal dialectic between relatedness and self-definition. Generally, however, brief treatments are associated with relatively high relapse rates, most probably because they do not set in motion the reactivation of this fundamental dialectic developmental interaction [2]. Stated otherwise, in a considerable group of patients, brief treatments may only be associated with a deactivation of maladaptive representations of self and others, but do not activate a more fundamental developmental process that leads to changes in representations of self and significant others, and in significant and sustained changes in the metacognitive ability to reflect on the self and others. It may well be that reactivating a developmental process simply requires more time akin to the additional time required in physical therapy for an injured athlete to regain their full motor skills which is often much later than the time they have regained a full range of motion or painless day-to-day activity.

To summarize, we argue that clinical experience and research findings suggest a fundamental parallel between normal developmental processes and therapeutic processes. This leads to a view that psychoanalytic treatments – and perhaps all effective treatments – involve the reactivation of the normal dialectical interaction between relatedness and self-definition, and to increases in the capacity for reflective functioning, leading to enhanced adaptive capacities to deal with stress.

Linear and Nonlinear Processes in Psychoanalytic Treatments

We began our discussion with the argument that the linear perspective does not do justice to much of the change observed in psychotherapy either in formal outcome studies or in clinical reports. At the same time, much of psychotherapy research is based on the assumption that change in psychotherapy and (long-term) psychoanalytic treatment is linear. This assumption actually ignores the many examples of sudden gains and critical moments reported in the theoretical, clinical, and empirical literature [27–29], as well as regression phenomena [35] and so-called sleeper effects [49]. More specifically, while some changes appear to be gradual, sudden gains happen in most treatments, and clinicians testify to the importance of such experiences [30]. These changes, however, may often go unnoticed in multi-wave process–outcome studies that are designed on a linear model of change, that is, the assessment points may miss the change or detect worsening that often precedes improvement. For example, recent research has noted the importance of regression phenomena in long-term treatments – with some patients showing marked decreases in levels of reflective functioning prior to improvements [39]. Sandell and colleagues, in turn, found that differences between psychoanalysis and psychoanalytic therapy emerged only years after treatment termination [49].

These observations of nonlinear change contrast markedly with a linear model of the relationship between therapeutic alliance, therapist interventions, and process and outcome, so dominant in the literature. From a related domain of research, available evidence suggests that various attachment styles are associated with different therapeutic processes (Chap. 21). Kanninen et al. [58], for example, found no linear relationship between patients' attachment status and early alliance, but did find that patients with preoccupied attachment showed a decline in the quality of the therapeutic alliance toward the middle of the treatment, followed by sharp increases toward the end of therapy [58]. Eames and Roth similarly found that ruptures in the working alliance are very common in preoccupied patients; whereas in patients who are dismissing, relatively stable alliances from the beginning to the middle of treatment were observed [59]. These data suggest that patient characteristics relating to how an individual experiences significant relationships may impact, indeed define, the pattern of change in a therapy and that individual patients show individual growth or change trajectories.

This latter speculation fits with the experience of many therapists. That is to say, most of us have experienced that the treatment process is characterized by "sloppiness" [60], and it is often only in hindsight that some clear structure, sequence, and progression can be discerned. Importantly, research has shown that despite that predominant use of linear models, many developmental psychological processes are nonlinear, and it is hard to imagine why change processes in psychotherapy should not also be nonlinear. Similarly, evidence suggests that for some patients, a "tear-and-repair" pattern in alliance building is associated with good treatment outcome [61], which clearly violates the assumption of a linear relationship between process and outcome.

It is important to note that this view does not exclude the existence of linear processes. As we suggest earlier, the trajectory of change is likely individually variable and some patients may follow clear linear patterns. Indeed, research based on linear models has advanced our knowledge of the therapeutic process, and it is highly likely that part of the therapeutic process can be captured using linear models. Yet, nonlinear trends can be overlooked by having too few assessment points, as well as the use of measures that are not sensitive enough to pick up subtle, yet important changes.

Moreover, the reliance on linear models may lead to spurious correlations and incorrect assumptions about the nature of therapeutic change. A good example of the danger of finding spurious correlations is provided by research on TIs. Interpretations are often considered to be the cornerstone of psychoanalytic technique, as they are assumed to play a key role in fostering insight. Congruent with this assumption, studies have shown that psychoanalytic treatments typically are associated with increased insight, particularly insight into characteristic relational patterns [57]. And although other forms of treatment, such as CBT, are also associated with increased insight, studies suggest that psychoanalytic treatments are particularly associated with such increases [57]. Indeed, in (long-term) psychoanalytic treatments, the repeated activation, exploration, and interpretation of typical patterns of thinking and feeling is central. In this context, the importance of TIs is often emphasized. Yet, despite the centrality of this issue, only about ten studies have investigated the relationship between TIs and outcome [62]. These studies have shown that psychoanalytic treatments show considerable variability in the number of TIs per session, ranging from 5% to more than 50% of all interpretative interventions [62, 63]. Yet, despite this variability, existing research converges to suggest that there is a negative relationship between a high frequency of TIs and both the therapeutic relationship and outcome in both brief and long-term psychoanalytic treatment, even in patients with high levels of personality organization. The study by Hoglend et al. [64, 65] deserves special attention in this context, as it is the only existing dismantling study of TIs (Chap. 23). In this study, the efficacy of long-term psychoanalytic treatment with and without TIs was investigated in a sample of 100 patients with mixed depressive and anxiety disorders. Remarkably, this study found no differences in the efficacy of both treatments both at treatment termination and at 3-year follow-up, except in patients with low levels of personality organization (i.e., patients with low levels of object relations). These latter patients responded better to treatment with a low frequency of TIs (0–3 per session) compared to treatment without TIs. Moreover, Hoglend et al. showed that in patients with

low levels of personality organization, increases in insight mediated the relationship between TIs and improvements in relational functioning [66]. This mediation effect was considerable, as changes in insight as a consequence of TIs explained 60% of improvements in relational functioning. Hence, in patients with low levels of personality organization, TIs seem to be a "high-risk/high gain" phenomenon, as studies on the one hand suggest that TIs may lead to increased insight and changes in relationships [66] and personality organization [36]. But, on the other hand, TIs are also associated with increased defensiveness and disturbances of the therapeutic relationship and the therapeutic process [67] and in patients with normal personality organization apparently made no difference in treatment outcome.

These studies of TI are one step toward adopting more complex mediational or nonlinear models of therapeutic change. Yet, despite their attention to the complexity of the factors involved, including the accuracy of interpretations, these studies may have overlooked a crucial factor, namely the central role of patient–therapist interactions. Because these studies fail to include an interactional perspective, they typically do not take into account both therapist and patient responsiveness [63, 68]. As noted, this neglect is largely based on a rather uncritical acceptance of the drug metaphor in (psychoanalytic) psychotherapy research, which holds that psychotherapy can be conceptualized in terms of a therapist supplying specific interventions to a patient, which is essentially considered to be a passive recipient of these interventions.

A dynamic interactionism or action-theory approach, however, may be much better suited to study the process of treatment, arguing that the therapeutic process is a series of unfolding interactions, both at conscious and unconscious levels, between two individuals, with moments of experienced compatibilities and incompatibilities, moments of meeting, understanding, and mutuality versus moments of separation and misunderstanding [6]. In this context, Jones used the notion of "positive and negative interaction structures" [69]. Thus, the unit of analysis in these studies should be the therapeutic dyad. Importantly, this view entails a very different conceptualization of patient–therapist exchanges and their influence on the therapeutic process. Rather than investigating patient–therapist interactions which implicitly suggests that there are two individuals interacting with each other as individuals, this approach argues that it may be more fruitful to consider patients and therapists as *dyads moving across time*. In this way of thinking, the dyad is functionally different than either individual studied alone and indeed functions as a "dyadic individual" with its own behavior and response. Thus, rather than investigating the influence of the use of specific therapist interventions on outcome, studies examine outcome across therapist–patient dyads. Multi-level models in particular are ideally suited to capture the various sources of variance involved, but are rarely used in psychotherapy research. Moreover, interpersonal models have been developed and validated that are able to model and test various interpersonal processes in dyads [70, 71]. Not modeling the variance associated with specific dyads and the specific processes nested within patient–therapist dyads leads to the neglect of important and perhaps crucial information.

For instance, studies clearly suggest that therapists have the tendency to respond to disturbances in the therapeutic relationship by making more TIs, which typically do not lead to repair of the therapeutic relationship [62, 68]. Similarly, when patients are more defensive, therapists might be drawn into using more TIs [62], which may lead to a vicious interpersonal cycle that is a self-fulfilling prophecy leading to therapeutic stalemates and perhaps even increased dropout [63]. But, this should be studied on the level of the patient–therapist dyad, as it is a process that unfolds within that relationship. Conversely, if patients are very responsive to interpretations, therapists may decrease the number of interpretations they make, as the patient progresses without the need for further interpretations.

Aggregating scores across therapists (and/or patients) is likely to fail to capture such an unfolding process nested within a specific dyad. By contrast, in patients that show little progress, as noted, therapists seemed to be pulled into making more interpretations, often leading to further disruptions of the therapeutic alliance. From our perspective, such TIs often only serve to distance the patient from the therapist, and may be easily experienced as an *incompatibility* which does not convey at the

same time a sense of understanding and mutuality [6]. Congruent with this assumption, there has been a longstanding emphasis on timing and phrasing of interpretations in the psychoanalytic literature. Coady [72], for instance, found that in patients with poor outcome, interpretations contained more disaffiliative comments [72]. Moreover, particularly when arousal levels are high, patients may revert to a psychic equivalence or teleological model of thinking, in which TIs are experienced as a personal attack, insult, rejection, and even re-traumatization [33]. There is a loss of the "as-if" character of such interpretations, primarily because there is often complete loss of compatibility and mutuality. Indeed, there is also a well-studied neurobiological model underscoring that under conditions of heightened arousal, individuals are less able to effectively process and reflect on incoming information, a prefrontal cortical function, and are functionally using more automatic or threat discrimination [33, 46]. This reallocation of cortical resources and function means that, at high arousal levels, the very moment when TIs may increase, patients (and perhaps therapists as well) are no able to effectively process and understand the incoming information.

Likewise, incorrect assumptions regarding the therapeutic process may result from a lack of sensitivity of the design or measures to capture more subtle and possibly nonlinear processes. For example, it is not uncommon for treatment studies to have time lags between assessment points spanning several months, which may miss some important processes. Moreover, a lack of extended follow-up assessments, which are typical of many studies, may miss important "sleeper effects." In randomized trials of MBT for borderline personality disorder, for instance, differences between MBT and treatment as usual emerged only late in the treatment process [73] and were particularly pronounced at 8-year follow-up [34]. Moreover, congruent with the principles outlined in this chapter, Bateman and Fonagy not only found that MBT led to sustained changes 5 years after discharge in core features of borderline personality disorder, such as parasuicidal behavior, but also to much broader changes, including sustained improvement in global functioning and vocational status [34]. Hence, patients in MBT seemed to have been better able to negotiate crucial developmental life tasks than patients in the control condition.

Perhaps, these effects are partly due to the finding that many patients, even after extended psychoanalytic treatment, seek further treatment. They also often stay in contact with their analyst and even periodically return for a few visits or a short period of treatment. These post-analytic periods of contact are rarely discussed in the clinical literature and much less included in assessments of outcome or in interviews with patients post-treatment. For instance, in one of our studies, we found that patients continued to improve after treatment termination in a naturalistic study of psychoanalytic hospitalization-based treatment for personality disorders at 5-year follow-up [39]. Yet, almost all patients had sought additional individual treatment after treatment termination. Critics often point out that such additional treatment seeking reflects limited response to treatment. Although this is to some extent true, from the perspective outlined in this chapter, this may be seen as reflecting important improvements in these patients' ability to relate to others (i.e., a therapist), and in their ability to rely on others in times of need. Indeed, before treatment, most of these patients were unable to enter into stable relationships, particularly not with therapists.

"Sleeper effects" have also been found in a naturalistic study comparing psychoanalysis versus psychoanalytic psychotherapy, in which differences between these two treatments only emerged years after treatment termination [49]. Moreover, a detailed qualitative study indeed showed subtle differences both in terms of therapist attitudes and interventions, as well as changes in patients in both treatments [41]. Hence, only long-term follow-up studies, and particularly detailed qualitative investigations, are able to pick up such subtle, yet important and often nonlinear, effects of treatments. Similarly, a number of single case studies have documented such complex changes associated with psychoanalytic treatment [37, 74]. As many studies lack long-term follow-up and/or detailed assessment of change processes, one can only speculate about the extent to which these studies have missed important and perhaps even essential features of the changes typical of psychoanalytic treatments. Clearly, future research should address these issues, and future studies should

routinely include broader measures of outcome and more detailed assessments of the process of change typical of psychoanalytic treatments.

These findings also have important implications for training. An important factor in psychoanalytic treatment is the use of countertransference as an important source of information about the patient's dynamics. Congruent with these assumptions, research suggests that the recognition of countertransference reactions, in combination with the ability to link these to the dynamics of the patient, is associated with good analytic process [75]. Hence, research findings provide ample evidence for a focus on the ability to recognize what is "pulled for" by patients, to prevent vicious maladaptive interpersonal cycles as well as the defensive use of interventions, including TIs (e.g., being pulled into making TIs).

How to Model the Interaction Between Therapeutic Factors?

Mainstream psychotherapy research appears to have largely settled for the view that treatment effects are only in part due to the use of specific techniques. Research has indeed pointed out that other factors account for a large portion of the variance in treatment outcome, with estimates ranging from 15% of the variance in outcome predicted by specific techniques [24], 30% by common factors (e.g., providing support and empathic understanding), 15% by expectancy and placebo effects, and 35–40% by extra-therapeutic effects (e.g., spontaneous remission, positive events or changes).

Although mainstream approaches assume that these factors interact, they essentially consider these factors as independent and additive. This clearly is not the case and is erroneously based on assumptions from pharmaceutical trials, i.e., the assumption that psychotherapy consists of supplying "active ingredients" (e.g., interpretations) by the therapist to patients that are essentially passive [1].

From a more relational and dynamic interactionism perspective, by contrast, these factors are seen as interrelated factors that interact in non-additive, and often nonlinear, mutually reinforcing or mutually deteriorating ways. From this perspective, treatment can be described in terms of the activation of prototypical representations of self and others, and ways of thinking about the self and others, in the context of the therapeutic relationship, i.e., a relationship with a significant other that provides both care and support while exploring, interpreting, and working through typical ways of thinking and feeling about the self and others. Moreover, it is through this exploration in the therapeutic relationship in the context of experiences of compatibility and incompatibility that changes in representations of self and others (and importantly self in relation to others) can be achieved. This increasing ability to make sense of one's own mind and that of others (most notably initially the therapist's mind and that of significant others) can then be increasingly transferred to ways of thinking and feeling outside the treatment setting. Hence, this leads to the view that the goals of treatment are changes in person–environment transactions [3], which first tend to occur within the therapeutic relationship and are then exported to outside the treatment setting. This process essentially parallels normal developmental processes, and in particular how in normal development, attachment, attachment representations, and the ability to represent internal mental states in self and others develop in the context of relationships with attachment figures [33, 76].

In the study of brief outpatient treatment of depression, Shahar et al., for instance, found that patients' pre-treatment levels of self-critical perfectionism not only negatively impacted on their ability to form a therapeutic alliance, but also on their ability to maintain a supportive interpersonal context external to the treatment process [77]. Hence, the examination of these interpersonal processes should be central in psychotherapy research, and how they result in changes in the representation of self and others and in reflective functioning as well as other changes in person–environment transactions external to the treatment process. In this context, there is some suggestion that at least with some patients, changes first occur in the representation of the therapist, followed by changes in representation of self, leading to new ways viewing oneself as well as others [78, 79].

These views are also congruent with findings concerning person–environment interactions more generally which play a key role in both normal and disrupted development [2]. More specifically, research findings suggest that individuals, mostly unwittingly, create in part their own (maladaptive) environments. These findings are of key relevance for psychoanalytic psychotherapy researchers because they are congruent with the concept of transference, and with interpersonal models that argue that specific (interpersonal) behaviors pull for specific behaviors in relationships, including the therapeutic relationship (e.g., dominance pulls for submissiveness) [70]. Of particular interest in this context are findings of gene–environment interactions. For instance, although still controversial to some extent, there is increasing evidence that a polymorphism of the 5HTT gene may be associated with increased stress sensitivity, resulting in increased vulnerability to depression [80] and a variety of other stress-related disorders, including functional somatic disorders such as chronic fatigue syndrome and fibromyalgia, which may explain in part the high co-morbidity among depression, pain, and fatigue [45]. These findings suggest that some individuals may be specifically responsive to environmental factors in triggering vulnerability, but perhaps also for more positive environmental factors, including psychotherapy. For instance, a study by Kaufman et al. suggests that social support may suppress the relationship between the 5HTT polymorphism and depression [81]. Bakermans-Kranenburg et al. showed that cortisol responses, as an indication of stress reactivity, in an attachment-based intervention in toddlers (age 1–3 years) screened for externalizing behavior, were moderated by a polymorphism of the dopamine DRD4 receptor gene, which is implicated in attachment behavior [82]. Conversely, a haplotype in the corticotropin-releasing hormone receptor 1 gene (CRHR1) may protect individuals who have experienced early adversity against later psychopathology because CRHR1 plays a central role in emotional memory consolidation, and those individuals with two copies of the TAT haplotype may have relatively unemotional cognitive processing of early adverse experiences, protecting them against later vulnerability for depression [83].

Hence, the dynamic interactionism perspective taken in this chapter appears to be much more in line with developmental research and with recent findings in cognitive and affective neuroscience concerning person–environment interactions than assumptions about linear and additive interactions that still dominate much of psychotherapy research. Moreover, this view opens up exciting perspectives because it allows the exploration of similarities between normal and pathological developmental processes at both the psychosocial and neurobiological level [84].

Conclusions

In this chapter, a dynamic interactionism or action-theory perspective on the psychotherapy process is proposed. From this perspective, the focus in psychotherapy research should be the interaction between the patient and the therapist moving across time, which leads to the view that psychotherapeutic change is probably not a linear process, but a process characterized by sudden gains, regression, and other nonlinear processes. These interactive processes are assumed to lead to two types of related changes, i.e., internal changes (i.e., an increased ability to make sense of one's own mind and that of others, first in the context of therapeutic relationship but subsequently generalized to other contexts), paralleled and/or followed by external changes, i.e., changes in person–environment transactions as expressed in broaden and build cycles.

This view not only has important implications for future psychoanalytic psychotherapy research, but for psychoanalytic training as well, as it argues for a fundamental parallel between processes involved in normal and disrupted psychological development, and the therapeutic process.

[AU1]

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Author Queries

Chapter No.: 18 0001331398

Queries	Details Required	Author's Response
AU1	Please check the edit made in the sentence starting with "From this perspective…" and correct if necessary.	
AU2	Please update Refs. [13, 36, 38, 39, 42, 44, 46, 66, 84].	