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Context-Responsive Psychotherapy Integration as a Framework for a Unified Clinical Science: Conceptual and Empirical Considerations

Michael J. Constantino, Ph.D.
University of Massachusetts, Amherst

James F. Boswell, Ph.D.
Boston University Center for Anxiety and Related Disorders

Samantha L. Bernecker, M.S.
University of Massachusetts, Amherst

Louis G. Castonguay, Ph.D.
The Pennsylvania State University

ABSTRACT

The unified psychotherapy movement proposes that the field develop holistic metatheories that embody multiple domains of clinical science (e.g., personality psychology, developmental psychopathology, psychotherapy research). Viewed by some as the next phase in the evolution of psychotherapy theory, practice, research, and integration, unified clinical science approaches are beginning to gain traction. In the current article, we propose context-responsive psychotherapy integration as one such approach. Context-responsiveness proposes an if-then structure for therapists to respond to patients' personal characteristics and emerging clinical scenarios with context-relevant, evidence-based therapeutic strategies. This framework draws on both theory-specific and common treatment factors in response to salient markers that require responsive intervention on the therapist's part. After outlining the context-responsive framework, we use the treatment of generalized anxiety disorder as an exemplar. We also discuss research strategies for supporting this framework, as well as for supporting unified clinical science and psychotherapeutics as a whole. We view methodological pluralism and the bidirectionality between basic and applied research as key elements of the road to unification.

Keywords: context-responsive psychotherapy integration, unified psychotherapy and clinical science, psychotherapy research, generalized anxiety disorder

[1]Correspondence concerning this article should be addressed to: Michael J. Constantino, Department of Psychology, University of Massachusetts, 612 Tobin Hall, Amherst, MA 01003-9271; E-mail: mconstantino@psych.umass.edu.

A major goal of the unified psychotherapy and clinical science movement is to develop holistic metatheories that incorporate findings from personality psychology, developmental psychopathology, and psychotherapy research, among other fields, in the service of improving clinical practice and alleviating human suffering (Henriques & Stout, 2012; Magnavita, 2008; Millon & Grossman, 2012). Developing such metatheories is of necessity a long-term process involving a complex dialectic of empirical and theoretical work. In this article, we suggest one of many possible approaches, and its related conceptual and empirical considerations, that may be useful in moving toward a more unified clinical science.

Specifically, we propose context-responsive psychotherapy integration as a unification framework that consists of developing and testing therapist responsiveness modules that can be applied transdiagnostically and across theoretical orientations in response to cues, or markers, in the therapy process or in the patient's psychological or biological makeup (Constantino, DeGeorge, Dadlani, & Overtree, 2009; Constantino, Overtree, & Bernecker, 2012). After outlining this modular, if-then psychotherapy framework, we use the treatment of generalized anxiety disorder (GAD) as an exemplar for drawing on knowledge from personality psychology, developmental psychopathology, and psychotherapy research when employing a context-responsive treatment stance. Finally, we highlight what we view as important research strategies for supporting the context-responsive framework, as well as for supporting unified clinical science and psychotherapeutics more generally.

Context-Responsive Psychotherapy Integration: An Overview

We believe that the field of psychotherapy will advance substantively when it has (a) derived empirical markers of frequently occurring themes in the psychotherapy process or in the patient's interpersonal, intrapsychic, and/or biological dispositions (as informed by all relevant facets of clinical science), and (b) developed evidence-based strategies for responding to such emergent themes. This approach would move beyond viewing psychotherapy integration as some variation on blending treatment models and their respective techniques (see Norcross & Goldfried, 2005 for a review of substantial advances in this regard) to a fully context-responsive treatment approach. This contextualized integration model should center on systematized, flexibly manualized, and empirically tested modules for addressing specific psychotherapy process themes or scenarios (Boswell & Castonguay, 2007; Constantino et al., 2012). This nomothetic approach can then be complemented by more idiographic principles derived from an understanding of basic research in personality and psychopathology (and other related areas) and how it applies to one's current patient and his or her traits, motivations, self-concepts, affects, and so forth. Theoretically, treatment could begin from any distinct approach/orientation (with its own set of treatment goals) and then shift into (and out of) specific modules/strategies based on readily available, empirically derived markers that necessitate such shifts. Implied in this approach is that therapists would shift out of (or at least somewhat away from) the focus (and theoretical goals) of whatever treatment they are applying; however, there is a continuum of distance in how far one shifts out of and back into their primary treatment orientation. For example, shifting into interpersonal, metacommunicative strategies to address alliance ruptures in cognitive therapy could mean temporarily, though somewhat dramatically, putting one's cognitive tech-

niques on the so-called back burner. However, these same techniques could be largely consistent with a more dynamically and relationally oriented therapy approach.

This context-responsive model is consistent with trends in the psychotherapy research literature, which suggest that common treatment factors, which are transtheoretical and often transdiagnostic, are instrumental in promoting clinical improvement, perhaps even more so than theory-specific treatment packages (Duncan, Miller, Wampold, & Hubble, 2010; Norcross, 2011). From a treatment and training standpoint, it follows that clinicians and trainees might be well served by training in responding to and negotiating empirically indicated common factors. Such training would not replace, but rather complement training in theoretically derived treatment approaches, as such orientations would provide a coherent conceptual backdrop and treatment rationale (Boswell, Nelson, Nordberg, McAleavey, & Castonguay, 2011; Castonguay, 2000). The provision of a coherent rationale and rationale-consistent therapist behaviors have been supported both conceptually (e.g., Frank, 1961) and empirically (e.g., Ahmed & Westra, 2009) as likely important change ingredients, and a clear treatment rationale lends contextual meaning to common treatment factors (Anderson, Lunnen, & Ogles, 2010). Additional contextual meaning is then provided by the person of the patient and his or her culture, personality, and presenting pathology, to name just a few inputs that are central to the unified model. Thus, we stress that unification derives from drawing on the complex interconnections among treatment processes and participants.

We believe that context-responsive psychotherapy integration is well situated within a unified clinical science framework. Consider this statement from an early treatise on the unification of clinical science:

> Unification assumes that we all work in the same realm with the same processes regardless of the subsystem or specific domain we emphasize and specialize in. A unified model encourages us all to be aware of the larger picture and even if domain-specific treatment is undertaken, an understanding of the system and interconnections of domains and processes keep us alert to other possibilities for further developments. (Magnavita, 2008, p. 273)

The idea of working within the "same realm" is reflective of our theme of there being common treatment processes to which we therapists need to be responsive irrespective of the treatment they are employing. The idea of "specific domains" reflects that therapists inevitably practice within the frame of their own theoretical models, assumptions, and biases. Furthermore, the notion of "keeping alert" to the system, and its many interconnections, maps neatly onto therapist responsiveness (see also Stiles, Honos-Webb, & Sturko, 1998). It is important to emphasize that we are not proposing that unification implies that there is one "right way" of practicing psychotherapy (c.f. Messer, 2008). In fact, pluralism in psychotherapy is preserved in our framework by privileging the importance of a theoretical rationale. However, we are also following the data on common factors and psychotherapy processes, which suggest that there may be frequently occurring scenarios across various forms of therapy to which it is important to be responsive. Our approach highlights some of these scenarios, the person of the patient, and evidence-based ways to respond as a form of psychotherapy integration and a potential model for innovative clinical training. This framework reflects more than assimilating different therapies and their theories; it embodies responding to markers drawn from multiple domains of clinical science.

Context-Responsive Psychotherapy Integration: Candidate Starting Points

As Magnavita (2008) warned, a unified model of clinical science carries the risk of being so grand and complex that the integrity of the system can never attain full empirical support or disapproval. However, in a unified system, it is important to strive to support its component parts empirically. Put another way, "…all domains that have been empirically and clinically documented must have a place in the model. The assumption is of holism as opposed to reductionism" (Magnavita, 2008, p. 277). Further, the model must be open to revision based on mounting support (or lack thereof) from the entire ecological system of human functioning. Of course, models need to begin somewhere, and we offer here a starting point for context-responsive psychotherapy integration.

Based on the research literature, we describe five candidate common (pantheoretical and, at their broadest level, pandiagnostic) patient characteristics or treatment processes that therapists need to recognize and to which they need to react clinically. These five candidates, which are discussed in turn momentarily, are: low outcome expectations, change ambivalence, self-strivings, alliance ruptures and their repair, and outcomes monitoring (see Table 1). In some cases, these are new proposals originating from our research group; in other cases we identify others' work as falling under the umbrella of context-responsive integration. As research progresses, use of this paradigm will facilitate identification of areas of responsiveness beyond these five.

The first patient characteristic is low outcome expectations, or limited belief in the useful-

Table 1

Five Candidate Context-Responsive Markers

Marker	Description
Low outcome expectations	Low outcome expectations, which reflect limited prognostic belief in a treatment's efficacy, have been related to poor treatment process and outcome. Such expectations can be addressed with evidence based strategies for influencing one's treatment beliefs.
Change ambivalence	Change ambivalence can reflect low motivation, uncertainty about change, therapist, or treatment, or conflict between a desire to change and a desire to maintain familiar patterns. If present, therapists may consider intervening with motivational interviewing strategies.
Self-strivings	People possess needs for both self-enhancement, or positivity, and self-consistency, or verification. These strivings compete when people possess negative self-views. Patients employ strategies to protect the self from incongruent and unexpected feedback and exchange. Thus, therapists need to assess and skillfully react to patients' self-strivings; otherwise, they risk negative relational consequences and diminished credibility.
Alliance ruptures and repair	An alliance rupture reflects negative shifts in the patient-therapist bond or sense of coordinated collaboration. Ruptures relate to maladaptive treatment processes and outcomes. Therapists need to be prepared to respond to such relationship problems skillfully, as well as to modify potentially their treatment approach.
Outcomes monitoring	Use of actuarial prediction to examine patient progress (or lack thereof) where statistical algorithms indicate if a patient is likely to deteriorate or drop out of treatment. Therapists should use such progress feedback to guide their responsive intervention to patients identified as "high risk" or "not-on-track."

ness of a planned treatment. Such expectations have been shown to have a modest but consistent association with adaptive treatment processes (e.g., therapeutic relationship quality) and outcomes (e.g., post-treatment symptom reduction; see Constantino, Glass, Arnkoff, Ametrano, & Smith, 2011, for a meta-analytic review), thus lending empirical credence that low expectations are something to which a therapist needs to respond. Low expectations can occur in any patient, but such negative beliefs could certainly be compounded by one's diagnosis (e.g., general hopelessness in depression; e.g., Abramson, Alloy, & Metalsky, 1995). Whatever the origin of such beliefs, a therapist might need to respond by reiterating or revising the therapeutic rationale or treatment plan (with an emphasis on sensitive, skillful persuasion; Frank, 1961), and/or using specific, and evidence-based, expectancy enhancing interventions intended to foster more adaptive treatment beliefs (see Constantino, Ametrano, & R. P. Greenberg, 2012, for a review of such strategies).

The second patient characteristic, which again intersects with the treatment process, is change ambivalence, which, like expectations, can be a non-diagnostic characteristic or an intrapsychic process compounded by one's pathology. For example, ambivalence might reflect low intrinsic motivation for treatment (indicating that the patient is in the precontemplation or contemplation stage of change; Norcross, Krebs, & Prochaska, 2011), or it might reflect patients' uncertainty about whether a given therapist, treatment, and/or technique matches their perceived needs and their own change theory. Ambivalence might also reflect an intense conflict between one's desire to change and the felt security that comes with maintaining familiar, though maladaptive, patterns (Benjamin, 2003). Whatever the source of ambivalence, we view it as a common factor that can emerge in any treatment situation, at any time, and we see the continuation of any approach that does not specifically address it as risky and perhaps contraindicated. To us, responding with a theory-informed and empirically supported approach in the face of ambivalence markers would be more appropriate.

For this purpose, motivational interviewing (MI; Miller & Rollnick, 2002) has shown promise. With theoretically guided strategies for helping patients increase their intrinsic change motivation, and thus resolve their "stuckness," MI has substantial empirical support as both a pretreatment and as a standalone treatment (see Lundahl & Burke, 2009, for a meta-analytic review). Some researchers have also called for shifting into MI to address emergent ambivalence and resistance during the treatment course, even when working primarily from a different theoretical approach (Arkowitz & Westra, 2004); we see this approach as representing a "bellwether of context-responsive integration" (Constantino et al., 2009; p. 1252).

A third candidate patient characteristic is self-strivings. Yet again, this characteristic can be viewed as largely non-diagnostic, though it can be compounded by diagnostic severity. Social psychological theory and research suggest that people have two fundamental self-strivings. One reflects the need for self-enhancement, or positivity; that is, a desire for evaluations and interactions that help maintain a favorable sense of self (Shrauger, 1975). The other reflects the need for self-consistency, or verification; that is, a desire to receive self-consistent feedback and behavior from others (even when it is maladaptive) in order to maintain a sense of psychological control and coherence in knowing oneself (Swann, 1996). Positivity and verification strivings compete when people possess nega-

tive self-views (yet another potential cause of ambivalence). Although people with negative self-conceptions desire positive evaluations and interactions, they may have an even stronger need to feel like they know themselves and are known and validated by others. Although such verification will maintain a negative self-view, it may also provide a sense of epistemic security and promote more stable, familiar, and complementary interactions with others (Sullivan, 1953; Swann, 1996). Thus, it is not surprising that people often employ strategies to protect the self from incongruent and unexpected feedback and exchange (see Pinel & Constantino, 2003 for an empirical review). Moreover, to the extent that individuals psychologically desire and "pull for" confirmation of their own self-views and behavior patterns, processes of reciprocal self-confirmation will often inherently mark interpersonal exchanges (what has been termed *complementarity* in the interpersonal literature; e.g., Benjamin, 1984; Kiesler, 1983, 1996; Leary, 1957). As per Sullivan's Interpersonal Theorem of Reciprocal Emotion, self-confirmation is *the* primary motive, or need, underlying interpersonal behavior. Similar to Swann's ideas of epistemic and pragmatic concerns related to non-verifying behavior, Sullivan posited that satisfying, anxiety-free (and thus integrated) relationships are the result of the mutual confirmation of self-concepts via reciprocally influential, self-confirming (i.e., complementary) exchanges.

In responsiveness terms, it may be that therapists need to assess and skillfully react to patients' self-strivings. In the early treatment phase, a therapist's provision of verifying feedback and exchange may be necessary to develop an epistemically safe and pragmatically stable exchange—a type of interaction that may be a precursor to the development of a quality working alliance (Ackerman, Hilsenroth, Baity, & Blagys, 2000). That is, any therapeutic work aimed at changing patients' self-views may first require fostering their sense of control and predictability by providing an optimal dose of verifying feedback and interaction (Constantino, Castonguay, DeGeorge, & Zack, 2010); this may also foster patients' perception of their therapist as a credible source of information and help (Pinel & Constantino, 2003). As noted, people employ strategies to meet their verification needs, and unless they find the source of information credible, they are likely to dismiss or reinterpret information, or dissolve the relationship altogether (see Pinel & Constantino, 2003). Responsiveness to initial self-views, then, may help create a favorable condition under which more change-oriented strategies and feedback can begin to be tolerated later in the evolving treatment process (Constantino & Westra, 2012). Strong (1968) articulated a similar process in his social influence theory of counseling. He noted that psychotherapists first need to gain influence by enhancing their credibility, after which they can draw on such influence to bring about changes desired by their clients.

Such changes, of course, would inherently meet a patient's positivity strivings. But, again, such strategies are most likely to be effective when delivered under favorable conditions—in this case, responding to one's powerful verification strivings, building credibility, balancing verifying and novel feedback/exchange, and treading lightly in the context of change given patients' powerful pulls to revert to what is familiar (Pinel & Constantino, 2003; Sullivan, 1953). Moreover, as patients begin to tolerate more adaptive self-views, the therapist can then responsively verify and reinforce these new conceptions as a means to fostering greater self-certainty. Ultimately, the goal would be for patients' posi-

tivity and verification strivings to be less at odds given a more positive overall self-perception. Such harmony could be a central marker for termination readiness (Constantino & Westra, 2012).

The fourth candidate starting point for our contextual model relates to a treatment process: alliance ruptures and their repair. A quality therapeutic alliance has long been considered an important contributor to treatment success across therapies and diagnoses; empirically, the alliance has been shown to relate robustly to adaptive treatment outcomes (see Horvath, Del Re, Flückiger, & Symonds, 2011, for a meta-analytic review). An alliance rupture reflects negative shifts in the patient-therapist bond or sense of coordinated collaboration (Safran, Muran, & Eubanks-Carter, 2011). Given that alliance ruptures have been shown to relate to maladaptive treatment processes and outcomes (e.g., Muran et al., 2009; Safran et al., 2011), and that rupture resolution relates to better outcomes (Safran et al., 2011; Stiles et al., 2004), it follows that therapists need to be prepared to respond to such relationship problems skillfully, as well as to modify their treatment approach in order to be responsive to their patients' needs (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996). Castonguay, Constantino, and Grosse Holtforth (2006) went so far as to say, "…the alliance occupies such an important place in our conceptualization of what good therapy entails that not paying attention to its quality during practice or supervision could be viewed as unethical" (p. 271).

Thus, clinicians should heed the growing literature on rupture-resolution strategies, which have demonstrated some promise. Variants of these strategies are based heavily on Safran and Muran's (2000) work, which privileges metacommunication as a central technique for negotiating the alliance and the respective needs of its participants. The crux of this approach involves the therapist (a) inviting patients to speak directly about potential problems in the therapy relationship, (b) exploring and validating patients' experience of the rupture, and (c) taking some responsibility for the rupture by recognizing that relational problems are inherently dyadic processes. These metacommunicative strategies have been shown to be effective both on their own (e.g., Muran, Safran, Samstag, & Winston, 2005; Safran, Muran, Samstag, & Winston, 2005) and when assimilated into cognitive therapy (e.g., Castonguay et al., 2004; Constantino et al., 2008).

Our final candidate is outcomes monitoring, or regularly tracking patients' progress in therapy via core assessment tools (Lambert, 2007, 2010), which involves both treatment process and outcome (see Castonguay, Boswell, Constantino, Goldfried, & Hill, 2010). In this strategy, patients' change scores, on core outcomes indices measured by instruments such as the Outcomes Questionnaire-45 (OQ; Lambert et al., 2004) or the Treatment Outcome Package (TOP; Kraus, Seligman, & Jordan, 2005), are assessed across time and compared to an expected treatment course based on a statistical algorithm. When a patient's scores are deviating past a threshold from the expected course, the therapist receives a warning signal in the form of computerized feedback, as well as, in some cases, specific recommendations about clinical strategies for responding—for example, addressing the alliance, assessing the patient's readiness to change, and helping the patient to increase his or her social supports (Harmon et al., 2007; Whipple et al., 2003). Such feedback and strategies have achieved research support, including in the context of randomized clinical trials where feedback groups outperformed non-

feedback groups, especially for patients who were classified as at risk for treatment failure (see Lambert, 2007, 2010, for reviews). These findings are clinically important, not only for the apparent direct benefit of improving outcomes for cases that have a high likelihood of negative outcome, but also in light of convincing evidence supporting the superiority of actuarial prediction over clinical judgment/prediction (Garb, 2005). For example, Hannan et al. (2005) demonstrated that statistical algorithms are much more accurate in predicting an individual patient's likelihood of deterioration in treatment when compared to therapist predictions based on clinical judgment alone. Despite this evidence, mental health practitioners continue to rely largely on intuition and experience in their decision-making. To us, if the data continue to support its value, outcomes monitoring and responsiveness, like attending to the alliance, may reach the level of an ethical mandate. However, to be useful, clinicians have to be committed to actually using the feedback, as opposed to being defensively resistant to its potential benefits (de Jong, Van Sluis, Nugter, Heiser, & Spinhoven, 2012).

Seeking and receiving feedback that a patient has a high probability of deteriorating in treatment, which will be more accurate when subjected to predictive analytics rather than solely to clinical intuition, is a precursor to responsiveness. As one form of response, a therapist might metacommunicate with his or her patient by having a frank discussion about the patient's progress (Lambert, 2010; Youn, Kraus, & Castonguay, 2012). This discussion might reveal cues for lowered expectations or hope, heightened ambivalence about change, unmet self needs, alliance tensions, or other markers that emerge as more candidates for context-responsiveness are identified. In the face of such cues, the therapist can then take appropriate and empirically supported actions. Although outcomes (i.e., symptoms and functioning) measurement has been the most frequently tested element of clinical feedback, by no means does monitoring need to be restricted to such variables. We believe that an important and complementary research direction is to assess regularly and frequently who is on track or off track for process variables (e.g., dyads likely to deteriorate into alliance rupture or relational dissolution).

As should be apparent, there are links between the five starter candidates for our context-responsive model. By way of example using our proposed starting points, patients' low baseline treatment outcome expectations may alert therapists that these patients have ambivalence about treatment or change (for which MI strategies may be indicated), or that this patient does not feel sufficiently verified (for which attending to self-needs may be required). Low expectations might also forecast patients who will be at risk for feeling substantially demoralized following an alliance rupture, which may point to the need for regular relationship "temperature-taking" and metacommunication. Such demoralization might also be more accurately captured in psychological lab tests (i.e., outcomes monitoring) than with the therapist's "naked eye" or faith in his or her experience. Of course, we cannot predict that the currently developed strategies for responding to the contexts that we have proposed will invariably work. Rather, any contextualized, unified model must also allow for micro-responsiveness within one's macro-responsiveness. That is, we can train therapists in the proposed macro-responsiveness modules (e.g., MI in the face of ambivalence). Such training, however, should take place at the level of principles of change, rather than a prescribed and limited set of techniques, in order to allow for flexibility and alterations

that make most sense for a given patient and a given dynamic context (e.g., leaning toward client-centered MI spirit with one patient while relying more on MI change techniques with another). This notion fits with structured clinical trainings that center on *developing* technique, as opposed to rigidly structuring or prescribing technique (e.g., Hilsenroth, Ackerman, Clemence, Strassle, & Handler, 2002; Smith-Hansen, Constantino, Remen, & Piselli, 2011).

By intentionally labeling our patient and process contexts as "starting points," we do not view these five factors as the only guidelines for therapist responsiveness. There are likely many more (e.g., markers for self-splits or unfinished business; L. S. Greenberg, Rice, & Elliott, 1996), and it might even be shown over time that some of the contexts and strategies that we propose here are not as universal or effective as they currently seem. However, any unified model requires a starting point that has both clinical relevance and empirical testability.

The proposed model may also have dissemination appeal. As research continues to uncover frequently occurring contexts to which therapists need to respond, it seems much more reasonable and efficient for therapists to engage in modular training of evidence-based strategies for these contexts, as opposed to attempting to learn hundreds of evidence-based treatment packages. A modular, transdiagnostic, integrative structure enables psychotherapists of any orientation and working with any patient population to utilize this research. Monolithic treatment packages often meet with resistance from clinicians who are skeptical of their idiographic applicability or whose personal theories of change contrast with some of the package, even if elements of the package might be useful or consistent with their own theory (Stewart, Stirman, & Chambless, 2012). Given the results of large surveys on clinicians' theoretical orientations and use of techniques (e.g., Cook, Biyanova, Elhai, Schnurr, & Coyne, 2010), it seems that psychotherapists have an impulse to integrate, and knowing that a certain patient characteristic or process event calls for a particular response would allow them to do so in an evidence-based fashion. As Castonguay (2012) argued, it is also likely that therapists will make more use of empirically based interventions or guidelines if these do not require drastic changes to their clinical practice. This is the case with the proposed context-responsive model given that, as we mentioned above, the described modular training can be assimilated within all forms of theoretical orientations.

A modular approach also works with, rather than against, the cognitive capacities of psychotherapists, who are after all only human. Clinicians are subject to cognitive biases that limit their ability to make causal inferences (Faust, 1986), and clinical judgment is fallible (Garb, 2005). When clinicians attempt to apply the entirety of a theory of personality, psychopathology, and psychotherapy to an individual case (even the less-holistic theories currently in existence), they tend to do so inconsistently and idiosyncratically. Case formulations are unreliable not only when clinicians are allowed to use their own integrative/eclectic theories (de Kwaadsteniet, Hagmayer, Krol, & Witteman, 2010), but also within the context of the relatively evidence based and standardized cognitive-behavioral paradigm (Kuyken, Fothergill, Musa, & Chadwick, 2005). Thus, it seems likely that even if proponents of unified psychotherapy are able to develop a valid metatheory, it will be of more direct use to researchers and treatment developers than to those who are administer-

ing treatments. (Of course, the problem could lie not in the inherent abilities of psychotherapists but instead in the methods for teaching case formulation. Even if this is the case, we argue that the more user-friendly the treatment, the better, because this will facilitate consistently high-quality administration by a wide variety of practitioners.) In contrast to the challenge of applying a complex theory, which becomes particularly difficult when making moment-to-moment decisions in vivo, research on implementation intentions has shown that when plans are formed with an if-then structure, less cognitive control is required to implement them efficiently (Parks-Stamm & Gollwitzer, 2009). If researchers can identify guidelines for psychotherapy with an if-then structure, clinicians should find these guidelines relatively easy to apply.

Context-Responsive Integration Using Generalized Anxiety Disorder as an Exemplar

As we have mentioned, the patient's pathology will influence the treatment context. In this section, we provide a brief overview of how the transdiagnostic elements of the context-responsive psychotherapy integration framework might manifest in and apply to treating patients with GAD. The features of GAD, which have been uncovered in both basic and applied research, relate contextually to our five starting points. Individuals with GAD are hyperreactive both cognitively and affectively. Cognitively, these individuals have a bias for attending to threat cues and interpreting otherwise neutral stimuli negatively (Newman, Crits-Christoph, & Szkodny, in press). Affectively, these individuals are hypersensitive to dramatic shifts from positive to negative emotional states (Newman, Llera, Erickson, Przeworski, & Castonguay, in press). Excessive and chronic worry, the cardinal feature of GAD, is thus used as a strategy to mentally deal with threat and to combat such emotional shifts. According to Newman and Llera's (2011) Contrast Avoidance model, individuals with GAD use worry to maintain a negative, though manageable, state of distress in preparation for the worst possible outcome of threatening, future-oriented scenarios. This negative state is experienced as less aversive than, and thus preferred to, the feared negative emotional contrast (i.e., the dramatic negative shift away from emotional baseline). The mental activity of worry is then negatively reinforced when the person experiences relief that the anticipated feared outcome (negative emotional contrast in relation to worst possible outcome) does not come true (Newman, Llera et al., in press). Worry thus elicits a felt state of readiness and control, a way to mute sharp increases in negative affect by maintaining a predictable level of intrapsychic distress. This compensatory strategy, while maladaptive, makes sense in light of basic research that people with GAD most fear negative emotional contrasts. It is not surprising, then, that people with GAD often view their worry positively (Borkovec & Roemer, 1995) and are reluctant to let it go despite its self-defeating nature (i.e., maintenance of a sustained moderate distress level).

With these features in mind, the clinician can predict contextual markers that might emerge while working with a patient with GAD (also recognizing that GAD is not homogenous and that individual differences will be present). For example, with the centrality of a sense of control and the felt security that comes from avoiding negative emotional contrasts, a patient with GAD might have low initial expectations about the efficacy of a treatment that asks them to relinquish control and/or tolerate substantial affective shifts (e.g., Newman, Llera et al., in press). Thus, clinicians might have to be especially sensitive to this outlook

when discussing the treatment rationale and collaborating on the treatment plan. Moreover, MI strategies may be particularly well suited for GAD patients given their ambivalence about giving up the perceived adaptive functions of worry (Freeston, Rhéaume, Letarte, Dugas, & Ladoucer, 1994; Westra, Arkowitz, & Dozois, 2009).

GAD pathology might also pose a special case of epistemic concern that calls for an ample dose of verification early in treatment. For example, to the extent that failing to be verified in interactions with others leads to increased feelings of anxiety and threat to one's self, it seems plausible that patients who enter treatment with already high baseline anxiety and threat sensitivity would be particularly vulnerable to the negative repercussions of a therapist's failure to respond to this self-striving. Moreover, to the extent that individuals with GAD act in ways to gain confirmation of their negative self-views, traditional cognitive-behavioral methods of treating this disorder, which include the direct challenging of negative self-conceptions, may be perceived as extremely threatening. Also, individuals with GAD behave in ways to avoid negative emotional contrasts in interpersonal situations (Newman, Llera et al., in press). For example, these individuals may act cold and distant to avoid the potential jarring emotional experience that would follow conflict or rejection. Thus, a therapist would need to be cognizant of the protective function of such distance and initially verify it by reciprocating a cold separation. Although a goal of treatment would eventually be to shift such behavior to engage warmth and moderate interdependence, thus encouraging greater interpersonal flexibility in the patient that is not at the mercy of worry, starting with such interpersonal behaviors could be too threatening early in treatment. With greater threat, a therapist is likely to see greater relational instability and disruption. Such disruption would be especially likely with GAD patients who have a high baseline disposition for interpreting situations, especially interpersonal ones, as fraught with threat (Roemer, Molina, & Borkovec, 1997). Moreover, the notions of predictability and control that accompany verifying information may be particularly important for patients with GAD given how central these notions are to worry.

As interpersonal worries are common in GAD, the accompanying relational disruption and sense of diminished control could pose an obvious threat to the therapeutic alliance. Just as people seem to be less committed to their marriages or to the social movements to which they belong when their verification needs are frustrated (De La Ronde & Swann, 1998; Pinel & Swann, 2000), so too might the therapeutic relationship be at risk in the context of frustrated self-needs. Thus, some dose of responsive verification on the part of the therapist would seem to represent an important alliance building, or in some cases repair, strategy. Also, in the face of a rupture, the therapist can deploy the other repair strategies described previously.

With respect to outcome monitoring, predictive analytic alarm signals could reflect that any of the aforementioned contexts are not being adequately addressed. Moreover, outcome monitoring could be especially useful with GAD patients given their suppression of autonomic responsivity (Borkovec, Lyonsfields, Wiser, & Diehl, 1993), which may make it more difficult to perceive their felt distress or tensions in the therapeutic relationship. An alarm signal would call for the therapist to consider determinants of deterioration and to attempt to respond, as opposed to forging ahead with the treatment plan. In light of the

Contrast Avoidance model of GAD (Newman & Llera, 2011) described above, the therapist might also need to consider no change in distress (as revealed in a global outcome measure) as representing an "off-track" treatment course; that is, maintenance of a constant level of distress, even if not deteriorating, could reflect GAD pathology remaining strong (in other words, there is no reduction in worry and no shifts in emotional experiencing, thus representing no therapeutic change).

Empirical Considerations for a Unified, Context-Responsive Paradigm

For any model to be scientifically and clinically viable, it requires empirical support. We offer here several considerations for empirically supporting the context-responsive framework, as well as for supporting unified clinical science and psychotherapeutics more generally. First and foremost, a fully context-responsive model requires empirical validation of both its constituent parts and its evolving whole. Perhaps the most important first step of this research agenda is to identify and scientifically substantiate process and person markers for shifting into (the "if-then" component) and backing out of (the "if-when" component) context-responsive techniques modules. Such work needs to center on identifying conceptual markers, as well as on validating efficient strategies and measures for recognizing markers (or good proxies). For example, Safran and colleagues (e.g., Eubanks-Carter, Muran, & Safran, 2010; Safran & Muran, 1996) have delineated conceptual markers of alliance rupture, including confrontation markers (e.g., patient expression of anger toward the therapist) and withdrawal markers (e.g., patient being overly submissive to the therapist). Such markers help direct therapists toward different responsive attempts at rupture resolution. For example, confrontation markers may require non-defensive exploration of the patient's unmet wish or need, as well as a willingness to accept responsibility for the rupture; a withdrawal marker may require efforts to clarify the patient's underlying need and to help foster adaptive self-assertions (Eubanks-Carter et al., 2010). As Castonguay et al. (2006) noted, "These markers deserve more empirical attention in order to firmly establish their validity, as well as to determine whether some of them are more prevalent with certain types of clients, or whether some others are more likely to emerge in specific contexts" (p. 275).

In the area of measurement, researchers need to devote substantial effort to developing and testing tools that clinicians are likely to implement and which will assist them in revealing person or process markers. For example, even a 1-item measure of outcome expectancy can be used at baseline to forecast patients who are at risk for treatment nonresponse (e.g., Borkovec, Newman, Pincus, & Lytle, 2002) or poor alliance development (e.g., Constantino, Arnow, Blasey, & Agras, 2005). Moreover, such a measure may also be a proxy for an alliance rupture, as outcome expectations may deteriorate following an alliance rupture (as measured with a standard alliance instrument; Westra et al., 2011); additionally, patients who begin therapy with lower outcome expectations may be particularly at risk for lowered outcome expectations following an alliance tear (Westra et al., 2011), thus indicating a specific condition under which rupture responsiveness may be especially important. It is, therefore, possible that very efficient measures might indicate situations to which therapists need to respond sensitively (thus representing a far more clinician friendly assessment device than elaborate coding systems of therapy process). In addition to these formal assessment instruments, researchers can test whether being trained to recognize con-

ceptual markers in the course of normal clinical observation enables clinicians to reliably note such markers. Of course, such measures and trainings can also be used to indicate when responsiveness has been successful.

The second step in our proposed research agenda is the development and testing of the specific context-responsive modules. For example, such research could center on qualitative focus groups for systematized responsiveness manuals, pilot trials for feasibility tests and manual refinement, and fully powered randomized trials for rigorous evaluation. Important guiding questions for this aspect of the research agenda would include, though not be limited to: Do the modules work? Do they augment treatment as usual? What components are most responsible for promoting adaptive process and outcome? Are there moderators of their effectiveness? Moderators may also help identify markers for when not to use the responsiveness strategies because of their lack of utility or even potential harm. For example, using MI to address ambivalence may not work for everyone. Although it may be well suited for worry pathology, as discussed above, it may not be suitable for young children, cognitively impaired individuals, chronically depressed individuals, or other disorders for which cognitive functions are substantially impaired (Constantino et al., 2009).

There is limited but growing research on specific context-responsiveness modules, including structured training on augmenting cognitive therapy (CT) with expectancy enhancement (e.g., Constantino, Klein, Smith-Hansen, & Greenberg, 2009) and MI (Westra et al., 2009), alliance development in psychodynamic treatment (e.g., Crits-Christoph et al., 2006) and naturalistic treatment (e.g., Smith-Hansen et al., 2011), self-verification as a predictor of alliance quality (Constantino, Castonguay, et al., 2005), alliance rupture-repair as a stand-alone treatment (e.g., Muran et al., 2005) or assimilated into CT (e.g., Constantino et al., 2008), and using clinical support tools (e.g., metacommunicating about alliance problems, assessing a patient's readiness to change) in the face of "off-track" alarms from outcome monitoring measures (e.g., Harmon et al., 2007). We believe that more research of this type is needed.

Finally, a third step in our proposed research agenda is to test context-responsiveness as a training paradigm. Trainees may be better served, compared to traditional methods, by learning to (a) be mindful of process and person markers, and (b) implement empirically supported responsiveness modules when faced with empirically substantiated markers (Constantino et al., 2012). We envision at least three forms of rigorous research related to this question. First, within-trainee research could focus on improvements in their patients' outcomes (in treatment-as-usual) following augmented training on one or more specific modules. Second, between-trainee research could focus on the additive efficacy of training on the five modules outlined above versus solely training-as-usual (which is often based on a generalist model or a specific treatment package model). Third, the former two methodologies could be applied and adapted for different disorders based on robust person markers stemming from basic research on personality, psychopathology, and so forth.

There are certainly other viable methodologies and strategies, and we view scientific pluralism and the informative bidirectionality between basic and applied research as two elements of methodological epistemology essential for fostering unified clinical science. We also believe that the research strategies that we have outlined have the advantage of

being immediately applicable to the practice of psychotherapy in addition to rapidly advancing theory. A scientist's instinct seems to be to move only from basic research to applied research and not in the other direction, but as a result of the complexity of the human organism, progress of basic research on personality and psychopathology to the point at which the treatment implications become certain rather than conjectural could take decades. In contrast, finding that a training module on ambivalence, for example, improves outcomes would allow psychotherapists to implement it without delay, and would also have the implication that ambivalence plays a role in maintaining pathology. Researchers could then progress from this applied work to more basic questions about the etiology and function of ambivalence.

Conclusion

We have outlined here a model of context-responsive psychotherapy integration, which we believe represents one unified clinical science paradigm. We have also advanced several research considerations for our model, and perhaps unified science more broadly. Although ours is by no means an exhaustive list, and certainly much more research is needed, we believe that matching modular interventions to significant in-session and within-person events and processes (as opposed to simply matching theoretical orientation to patient diagnosis) is likely to substantially increase our understanding of human functioning and the psychotherapy change process. We also believe that the if-then (and if-when) structure and idiographically-tailored nature of our model will appeal to the practitioner, thereby helping to reduce the science-practice chasm.

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