Listening beneath the Words
Parallel Processes in Music and Psychotherapy

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The authors investigate the parallels between musical performance and psychoanalytical therapy, using the former as a metaphor for the way therapist and patient jointly compose the therapeutic experience and better the treatment it offers. **Key words:** evolution; fractals; music; neuroscience; psychodynamic; psychotherapy

Introduction

The parallels between musical communication and therapeutic dialogue have received relatively little attention in psychoanalytic literature over the years. Yet, musical creativity and improvisation bear striking parallels to the interactive processes involved in the mother-infant affective interplay, the intricate dance of intimacy, and the patient-therapist relational exchange. Just as appreciation of musical content is not limited to explicit analysis of the score and relies on our emotional attunement with the music's unfolding themes and harmonies, a rich body of literature in relational psychoanalysis emphasizes the interplay of the nonverbal and affective dimensions in the clinical interaction and intuition (Knoblauch 2005; Marks-Tarlow 2012a; 2014; Schore 2012). The connection between therapist and patient starts with implicit affective attunement at the level of mirror neuron networks (Iocoboni 2008), progresses to focused attention on verbal and nonverbal communications that envelop a patient's story (such as facial expression, body posture, speech prosody, narrative timing, and eye contact), and includes the complex matrix of transference-countertransference enactments in the treatment setting (Bassen 1989; Schore 2012). The verbal dimension of a patient's presentation can be compared to musical notes that

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comprise the score of his or her conscious life. A rich, nonverbal prosody carries the melody of the score's interactions and conveys its relational context and its somatic, affective, and associative impact on its listener, that is, the therapist. How is the story told? Why is it told now? What remains untold? What is the message to the therapist? When therapists unconsciously resonate with this relational melody as they consciously follow the development of its themes, they participate with the patient in the process of his or her self-discovery and alter the established trajectory of his or her enactments. In the words of Amini et al. (1996), "The therapist's job is to allow the duet to begin and to take up his/her place in the melody, so that the piece can gradually be directed to a different ending" (234).

Can analytical theory and technique successfully accommodate this kind of therapy as performance? Does the therapist cum musician stay detached from the process or become immersed in it? Do therapists look for an objective meaning of the therapeutic or musical story, or do they risk getting lost in the vicissitudes of its subjective and intersubjective interpretations? These are the questions we explore as we investigate the musicality of psychotherapy.

Emotions at the Center of Music and Meaning: An Adaptive-Evolutionary Perspective

Humans respond to music on a deeply emotional level, quite distinct from the semantic analysis of musical form or any associated verbal content. An operatic aria affects the audience on several simultaneous channels not reducible just to the meaning of the words sung or the sequence of the notes played. Both the therapeutic dialogue and complex, multilevel group therapy interactions build on semantic stories, which in turn rest on rich, unconsciously choreographed patterns of self-identity and ways of being with others that drive relations in the here and now.

The capacities for making music and telling stories are uniquely human and universal across all known cultures. From the psychoevolutionary perspective, the origins of both music and language likely stem from affectively driven vocalizations of separation and distress, joy, sexual competition, and territoriality. They are the warning calls and exchanges of feeling and intent evident across the mammalian species that represent the affective salience of experience, which is encoded by the limbic cortex (Panksepp 2009). The Differential Affect Theory

(Izard 1991) identifies nine basic affects hard wired at birth in all individuals of every human culture from hunter-gatherer tribes to technologically sophisticated political states. These primary affects represent adaptive Darwinian algorithms that encode the survival value of relevant events and act as shortcuts to adaptive action (figure 1). Positive and negative affects are not defined in terms of good or bad but simply in terms of unconscious approach or avoidance valences (we normally seek out experiences that feel exciting or pleasant and avoid ones that feel hurtful, embarrassing, or scary). Affective valences are encoded in the limbic system (amygdala) and closely resemble major and minor scales in musical compositions. Music taps into our feelings, and emotional engagement can facilitate musical creativity. A rich tapestry of nearly unlimited emotional "melodies" can be derived from the nine basic affects, just as a virtually infinite number of musical pieces that can be composed from seven basic notes.

Instinctual affective vocalizations coupled with characteristic facial expressions and body postures communicate individual affective states to others. Affective communications, such as fear-based warning calls, facilitate individual and group survival. Likewise, playful squeals and maternal coos promote group

AFFECT	MEANING	ACTION
STARTLE (neutral)	**Beware**	**Stop**
INTEREST (pos)	**Possibilities**	**Explore**
JOY (pos)	**Safety/Connection**	**Seek**
FEAR (neg)	**Danger**	**Freeze/Run**
ANGER (neg)	**Boundaries**	**Intimidate/Attack**
SADNESS (neg)	**Loss**	**Withdraw/Regroup**
SHAME (neg)	**Inadequacy**	**Hide**
DISGUST (neg)	**Poison**	**Throw up (taste)**
DISSMELL/CONTEMPT (neg)	**Contamination**	**Stay away (smell)**

Figure 1. Basic affects and their action tendencies according to the Differential Affect Theory

cohesion; mating songs feed sexual competition; and angry growls establish an interest in particular territories and boundaries (Panksepp 1998, 2012). Because of their cross-species prevalence and ancient origins, preverbal vocalizations and gestures—with their protomusical qualities of prosody, tone, timing, and rhythm—likely served as a primeval language of affect, one that continues to operate alongside symbolic language today. Although a controversy exists over whether language evolved from gestures or from music, perhaps we might consider such an either/or formulation moot because music making seems so closely connected to gesture. In fact, there is a whole category of gesture ("beat") that actually helps speech production, activating the rhythmic dimension of gesture by keeping time with verbal utterances for emphasis (Lucero, Zaharchuk, and Casasanto 2014).

The cognitive revolution among *Homo sapiens* that occurred some 70,000 years ago ushered in "worlds of fiction" capable of unifying larger and larger groups together (Harari 2014). When, with the capacity to use symbolic language, humans could began building social interchanges, they could also process unconscious affects into feelings (affects that we are aware of, such as in: "I'm scared") and emotions (propositional affects, such as in: "I'm scared of spiders"), weaving the music of affect with the music of storytelling (figure 2). And throughout history, storytelling has been accompanied by music. Music

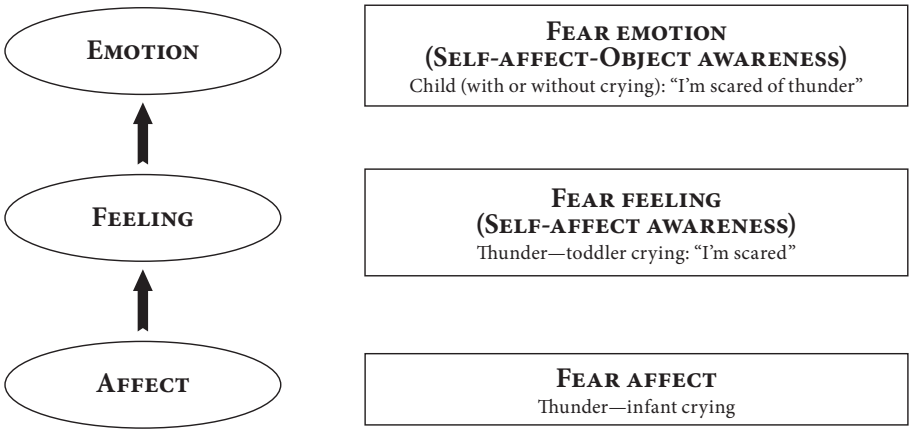

Figure 2. Affective-cognitive processing

and storytelling developed side by side in the course of *Homo sapiens* history, and from tribal fires to contemporary concert halls, music entrained people, synchronizing one individual with another, providing a sense of safety, connection, and joint purpose.

The evolutionary emergence of music and language finds a parallel in the acquisition of theory of mind emerging from the preverbal matrix of mother-infant interaction (Trevarthen and Aitken 2001). In fact, Ellen Dissayanake's "artification hypothesis" (2014) places the bonding rituals of hominid mother-infant pairs at the core of emerging artistic and aesthetic capacity, including musicality, in a process that took place some 1.7 million years ago. Soothing vocalizations may have allowed "touching at a distance," the progression from a tactile to a vocal connection between foraging mothers and their young. The emergence of new forms of relational organization in the process of therapeutic exchange (Lyons-Ruth 1998) indicates the deep parallels between the early, implicit communication and affective synchrony of mother-infant interaction, on the one hand, and the phylogenetic development of *Homo sapiens* as a symbolic species, on the other. Relational psychoanalysis goes far beyond a verbal exchange and cognitive analysis of its content; its nonverbal, implicit dimension parallels the early relational matrix in which experiences are encoded as affective enactment rather than as the explicit results of conscious decision making. The process of revising maladaptive relational templates resembles a joint improvisation on a patient's musical themes, during which the patient's affective-relational melody is, with the therapist's help, released from its developmental constraints and allowed to find its resolution.

Psychotherapy as Relational Improvisation

Consider one of our patients, a single woman in her early thirties. An accomplished amateur cellist, she likens her life to a musical score she is compelled to repeat, all the time aware of its inevitable conclusion. Indeed, her relational history sounds like variations on a theme of abuse—starting with her physically and emotionally abusive father, and continuing with physically, sexually, and emotionally abusive partners. Running through the story is the motif of self-neglect, evident in her self-deprecation during group therapy interactions. When asked why she keeps replaying the theme of self-abuse in her life, she breaks down crying and says in despair that she knows nothing else. She uses

music as her companion, trying to forget about her desperate past and hopeless future and focusing, instead, on the joy of playing. Paradoxically, her anguish helps her play resonate with a composer's meaning.

For this patient, and many like her, the metaphor of a relational melody proves meaningful. Patients come to us with relational scores laden with experiences of abuse and neglect reenacted in tragic themes of loss and abandonment, full of dissonances and disharmonies and in elaborate fantasies of self-blame fuelled by futile attempts to avoid the sense of helplessness at being unable to change their painful reality. This patient's subjective sense of learned helplessness and mistrust paralleled her developmental experiences of being at the mercy of preoccupied care givers, bullying peers, and indifferent authorities. The fractal similarity of psychological ontogeny and evolutionary phylogeny asserts itself. In much the same way we as a species developed self-awareness in an indifferent world filled with dangerous forces, a traumatized patient's self-awareness is entrained by experiences of abuse and neglect, replaying a mournful, affective melody in the keys of hurt, sadness, fear, anger, and shame. Just as humans have tried to appease indifferent nature by creating anthropomorphic gods and making sacrifices to them to gain a sense of control over individual destinies, here a traumatized patient resorts to blaming herself in an attempt to gain a sense of mastery, however illusory, over her trauma.

But are we really handed an unchangeable score we are compelled to replay for the rest of our days? Or can we act as composers of our own relational music, revising the themes that played out in the course of our development and weaving them into new emergent melodies created through interplay with others? Marks-Tarlow (2008, 2011b) and Shapiro (2014, 2015) have written about the complexity approach to psychodynamic psychotherapy. The complexity model suggests that our development proceeds in open, nonlinear trajectories that self-organize in the constant process of our adaptation to environmental demands. A linear view of relationships, invoking a classical Newtonian worldview, pictures two individuals coming together and forming a bond, but the complexity view suggests systemic interrelatedness as the primary bond: an individual emerges from coupled, dyadic-group dynamics and forms relational networks of emergent complexity throughout his or her life.

The process of therapeutic exchange simultaneously provides an opportunity to explore a patient's inner landscape (established in the course of his or her developmental misadaptations) and to provide a novel, relational environment in which new and healthier adaptations arise. Both psychotherapy and musical

performances constitute creative enterprises that involve novel perceptions, integrated cognitive-emotional processing, and contextual responses. If we try to control these processes from the top down, focusing on textbook theory and technique, we easily lose track of the elements that bring therapy alive—its spontaneity and discovery—and the fundamental uncertainty that leads to new vistas.

Psychotherapy requires deep resonance between two bodies and brain/mind systems. There are parallels to this process in the musical improvisations of jazz, during which each performer riffs off another and off the group as a whole, following as much as leading. And even in classical performance, mastering the technique and learning the score are not enough. A gifted performer has to learn and then "forget" the score and respond to each sound in the moment, resonating with the emergent meaning of each sequence and communicating it to the listener. The deepest levels of change are not consciously orchestrated; instead they self-organize from unconscious and subcortical roots—from the bottom up.

The parallel streams of relational melodies and verbal narratives continually intertwine in psychotherapy. The emphasis in most treatments is heavily weighted toward language and storytelling, a fact Steven Knoblauch (2000) notes in *The Musical Edge of the Therapeutic Dialogue:* "Within the traditional psychoanalytic techniques . . . we privilege the semantic meaning that we construct. But on the musical edge, we listen not just for the multiplicity of meanings, but for the multiplicity of languages, nonverbal as well as verbal (46)." Deep resonance and coherence do not just occur at a conscious level but involve the parallel processing circuitry of associative, subcortical, and autonomic networks, binding our cognitive, emotional, and somatic experiences. Our left hemisphere interpreter, responsible for verbally accessible stories (Gazzaniga 2005), is a serial processor that operates on the basis of selective attention; powerful as it is, it can only access one channel of information at a time. Conscious awareness forms the tip of a mental iceberg. The majority of information processing is accomplished by the subcortical networks that simultaneously obtain readouts of our physiological milieus, affective valences, and changes in our environment and in ourselves in relation to these.

The complexity view suggests a fluid interplay of the top-down and bottom-up feedback loops that constantly build on and reinforce each other in the course of therapy. Musical appreciation and affective attunement represent bottom-up processes; storytelling and emotional awareness tend to be processed in a top-down mode. We shift between verbal and nonverbal modes of relatedness, between outside and here-and-now focuses, and between emotional and

cognitive processing. We use conscious awareness as a tool to bind together simultaneously flows of sensory, autonomic, affective, and cognitive information during real-time, patient-therapist interactions. In doing so, we jointly rewrite the mournful score of our patient's relational melody, participating in the emergence of novel themes and novel ways of developing them.

The mutual resonance model in relational approaches to psychotherapy and psychoanalysis put an emphasis on mind/body attunement between the somatic, affective, and cognitive systems of patient and the therapist. But while attuned listening and responding aim to achieve interpersonal harmony, attunement has to be applied in the specific context of the unique patient-therapist interaction. Traumatized patients come to therapy with uniquely misattuned modes of relatedness, subjectively transforming even the most attuned therapist into yet another abusive or neglectful figure in their lives. Sometimes these responses will be asymmetric, a patient replaying themes of mistrust or hurt and anger that may trigger sadness or helplessness in a therapist. Sometimes, misattuned patterns will be reenacted in the intersubjective domain, resulting in interpersonal discord that may parallel a patient's developmental trauma. And sometimes, a therapist's own, unresolved relational discords may be triggered by interactions in the here and now. A patient and a therapist become partners in a relational duet, working towards a more harmonious and coherent relational flow, yet starting from a place where the patient's relational melody is punctuated by frequent dissonances that he or she cannot integrate into his or her experiential reality. Our greatest challenge lies not in avoiding therapeutic ruptures but in attending to them, admitting our part and helping the patient to understand why he or she reacts and relates that way. Ruptures during psychotherapy resemble discords in a musical composition. They may lead to a consonant conclusion or carry a melodic counterpoint within a more encompassing theme.

In psychotherapy as in music, timing is everything. The issue of timing may in fact constitute the primary difference between the science and the art of clinical practice. The context for each clinical moment seems always more complex than can ever be fully described in words. Herein lies the art of psychoanalysis, with its roots in the relational unconscious and unformulated experience (Stern 2013) requiring the intuitive dimension of perception and response. Just as with music, the precise timing of a comment or nonverbal interaction will be unique to the interpersonal chemistry of the players involved; it is unconsciously sensed and synchronized. The rhythm of back-and-forth relational flow, call and response, utterances punctuated by silences, synchronized rhythms of affective

and autonomic responsiveness will be unique to each dyad and each moment. This is the essence of psychotherapy as relational improvisation. The context is too complex, and there is no score that captures all the detail. Without the art of attuned practice, the skills and diagnostic labels are meaningless.

Mapping the Experiential Space of the Treatment Process

There has been a shift in psychological theory from the traditional focus on a patient's explicit narrative to the current focus on the microlevel, relational dynamics of here-and-now interaction. Both are important, as is the relationship between the microlevel moments of the present (Stern 2004) and the macrolevel patterns of day-to-day life outside of the office. It matters little how many significant moments occur in therapy if they do not translate into changes in a patient's outside life. Ideally, a relationship exists between the microlevels and macrolevels that allows small changes in the office to effect significant changes in life.

Therapists can work effectively with small-scale events because of the fractal dynamics of interpersonal patterns (Galatzer-Levy 2009; Marks-Tarlow 2008, 2010, 2011b). Many consider fractal geometry, discovered in the 1970s by Benoit Mandelbrot, to be the geometry of nature because it so successfully models highly complex, irregular, and discontinuous shapes. Even more significantly, the cornerstone properties of fractals—self-similarity and scale-invariance—appear fundamental to evolution. Self-similarity means that the pattern of a whole will be replicated in the patterns of its parts; scale-invariance means that the pattern of a whole will be replicated across multiple temporal and spatial scales.

Marks-Tarlow (1995, 1999, 2008, 2010, 2011b) has written extensively on the fractal geometry of human nature, which is evident, for instance, in the ways we recognize the signature personality markers of our friends and loved ones. We unconsciously reenact characteristic fractal patterns in our lives that form the foundation of our personality and relational style. In music, a soloist can always be recognized not only by his or her large-scale performances of different musical pieces in different venues, but also at a microlevel when a listener hears only a few characteristically played notes.

Just as individuals display fractal properties through self-similar patterns

in the branching of their physiological systems, so too does music carry fractal structure at implicit levels. The spectral frequencies (f) of music display a 1/f power law distribution known as "pink noise." Pink noise displays an intermediate level of correlation between frequencies, so that most popular music is neither too predictable "brown noise" (i.e. highly correlated) nor too unpredictable "white noise" (i.e., highly uncorrelated) (Schroeder 1991). Interestingly, while this power law distribution is temporally ubiquitous in natural events (e.g. earthquake frequency), it also applies to patterns of word rank and frequency in what is called Zipf's law. Just as personality traits—self-similar patterns across time and space—greatly define individuals, so does the reiteration of basic themes largely unify musical compositions.

From this vantage point, the integrative function of fractal self-similarity becomes a metatheoretical tool for understanding the mechanism of psychiatric treatments, from relational psychoanalysis to psychotherapy to psychodynamically informed psychopharmacology (Marks-Tarlow 2008; Mintz and Flynn 2012). A competent clinician, whether a psychotherapist or psychopharmacologist, will be adept at pattern recognition, using a patient's history and presentation to derive relevant fractal algorithms to inform psychiatric treatment. However, the attention to the subjective meaning that defines the context of the patient's experience constitutes a fundamental feature of pattern analysis in psychiatry. And just as a musical score needs to be brought alive by a performer's interpretation, we need to complement impersonal lists of symptoms and external events with the unique meaning encoded in the emotional salience of a patient's experiences. Pianist Georgy Shebok once said that he does not want to play the notes written in the score but the composer's impulse that gave rise to them. In musical performance, as in psychotherapy, the creative process involves a concept of novelty and surprise. But what novelty can we create if we execute only a text?

From the Objective to the Subjective

Consider the clinical case of a man in his late forties with a diagnosis of chronic depression and multiple treatment failures who is referred for psychotherapy assessment. Discloses multiple previous attempts at psychotherapy—all terminated by the patient within several months. Eager to start combined individual/group therapy treatment.

> Doctor: What are you going to do when you feel frustrated with your therapy here?

Patient: Why should I?
Doctor: Well, it happened with all the previous therapists you saw.
Patient: Yes, but you are not them.
Doctor: Granted, but you are still you.

Complementing the objective dimension of psychiatric formulation and treatment with a patient's subjective meaning is equally important in both psychotherapy and psychopharmacological treatment. In this case, the unique meaning that the patient projected at medical authority became a critical factor that eventually helped make treatment successful when he was able to own his own contribution to his relational failures. We find relying on generic treatment manuals and statistical evidence-based data inadequate; we do not treat "objective" syndromes but people who suffer them. Just as the identical copies of a musical score are performed differently by different musicians, the treatments of a disorder we codify in a manual vary according to the person who suffers it. As psychoanalyst and the father of cognitive-behavioral therapy Aaron Beck put it: "You can't do cognitive therapy from a manual any more than you can do surgery from a manual." (Carey 2004).

A patient's history and symptomatic presentation are not unlike a composer's score without orchestration, tempo, or instrument notations. We can interpret and perform it in many different ways, and its meaning will change depending on our interpretations. In addition, the score is incomplete, with major themes remaining underdeveloped. From this perspective, engaging with a patient in psychiatric treatment and psychotherapy resembles a relational duet with the composer, exploring the historical score and improvising on its themes, so that the patient can better appreciate and refine his or her relational melody. Inevitably, the therapist brings his or her own themes into the duet to serve as counterpoints for the patient's patterns. We have to resist the temptation to edit a patient's score to suit our theories or preferences. Instead, our job is to help patients understand explicitly and implicitly why they play the way they do and to enable them to move beyond developmentally imposed limitations. In therapy as in music, we have to investigate the impulses of the composer that gave rise to the score. The score is a process with which we can engage only by being open to its emotional meaning.

Objective, textbook approaches assign priority to theory and technique. These are higher-level processes that may provide excellent population maps but do not have the resolution to distinguish points within them. Pianist, composer, and philosopher Ferruccio Busoni rebelled against those he called lawgivers, who

in promoting proper technique end up killing the music. Excessively subjective approaches, on the other hand, ignore the objective and intersubjective constraints inherent in a composer's score. Similarly, psychiatric diagnosis should not depend on objective labels nor the analyst's momentary impressions, but rather should be arrived at through the process of knowing a patient. The diagnostic picture gradually changes in the course of the treatment as the presenting symptoms wax and wane and as we discover the fractal themes that underlie them. The two subjectivities in the room weave an intricate tapestry of relational connections and intersubjective meanings that self-organize out of the objective and subjective data on hand. In the words of Thomas Ogden (1999) in "The Music of What Happens in Poetry and Psychoanalysis," psychoanalytic "enquiry into personal meanings has become inseparable from an understanding of the unconscious intersubjective context in which those meanings are generated" (979). Ultimately, neither objective data nor a subjective interpretation of it is sufficient for a successful outcome. We need to treat our formulations as flexible hypotheses that we refine or reject based on relational validation during treatment. This is the dialectic of psychotherapy as a creatively scientific process.

From the Subjective to the Intersubjective

A young woman enters the psychotherapy and slumps on the couch. "I'm feeling really low," she says, and begins to cry. "I feel like a failure. I can't pull myself out of this slump." She expresses a wish to return to her former self, to the happy-go-lucky, self-confident person she was before her parents' nasty divorce five years ago. The therapist feels empathy for her distress, though without the kind of pity emanating from the patient. "But remember," says the doctor, "we can't go backwards in time, only forwards. You may have felt happy and confident before, but you were also unaware of how many of your needs, desires, and true feelings you were pushing aside. You worked so hard to accommodate your father's vision of who you were supposed to be. Now, you may be feeling sad, but at least learn to be and to support all of whom you are, not just the bygone happy sliver."

Shifting away from textbook, theory-based algorithms and incorporating the patient's and the therapist's subjective experience are necessary steps in defining the intersubjective space of the therapy process. An intersubjective field is formed when both therapist and patient are free to become attuned to the other. This does not happen on only a cognitive level but occurs on implicit somatic and affective levels, much as in the parent-infant relationship. Research (Guastello, Pincus, and Gunderson 2006) suggests that even strangers who meet

for the first time begin to connect through autonomic responses. If we viewed a silent film of intense moments of psychotherapy, we would witness the fluid dance of entrained facial expressions, postures, and movements in the room.

Sometimes, when the affective states are shared, this dance is symmetric; sometimes, when one person is playing a solo or leading the way to a new relation, it is antisymmetric. The ultimate goal of psychoanalysis is no longer a dispassionate exploration of the patient's psychopathology but an appreciation of the intricate interplay of the two subjectivities in the room, which form an emergent intersubjective system that catalyzes therapeutic change (Marks-Tarlow 2011b; Shapiro 2015).

Just as we do not listen to music to analyze the notes played or to anticipate a successful conclusion of the piece, we cannot skip over the process of relating to our patient in the service of planning an optimal treatment outcome based on impersonal evidence. A meaningful performance emerges at the intersection of the composer's meaning, the performer's interpretation of it, and our capacity to resonate with the unique synthesis of both. Attentive listening in both music and psychotherapy involves following the theme and observing its fluctuations in the here and now. We engage in therapy by allowing ourselves to be affected by a patient's story, emotionally moved by their affectivity, intellectually challenged by their dilemmas and paradoxes. Together, we create themes that both emerge from and guide the treatment. Feelings, like music, always unfold in the present; therefore therapy is not about the past—a point emphasized by Peter Fonagy (1999): "The only way we can know what goes on in our patient's mind, what might have happened to them, is how they are with us in transference. . . . Psychoanalysis is more than the creation of a narrative, it is the active construction of a new way of experiencing self with other" (216).

Each patient's story is as unique as a musical piece. But the story rests in the telling, in the process of its unfolding, in its words and its silences, in its subjectivity and intersubjectivity. There are no ad hoc interpretations for emergent reality and no "passive listeners." A therapist's very presence provides a unique context for the patient's experience, allowing it to consolidate in a new way. We use the therapeutic relationship both to learn more about why our patients do what they do and to help them modify their developmental misadaptations in a new relational environment, whether psychotherapeutic or psychopharmacological. Yet, divorced from the objective reality of the patient's and therapist's lives outside the treatment room, intersubjectivity can be misleading. Here-and-now interactions are only a subset of the larger, independent reality defined by

the patients' psychobiology, which includes their inherited milieu, their objective developmental events, and their adaptations to them. Both prioritizing the neuroscience perspective at the expense of subjective-relational world and using intersubjectivity to eschew individual development and neurobiology (Coburn 2013) is deeply reductionist.

We can expand such reductive approaches by extending the principles of scientific inquiry into the intersection of objective, subjective, and intersubjective domains (figure 3). In doing so, we integrate seemingly disparate categories of symptoms, statistical data, and diagnostic labels with feelings, meanings, and relational dynamics into a unified experiential space equally applicable to the treatment process and musical performance.

From the Intersubjective to Integrated Experiential Space

Much has been written about the content versus process of therapeutic encounters, and each theoretical approach advocates its own perspective. The musical

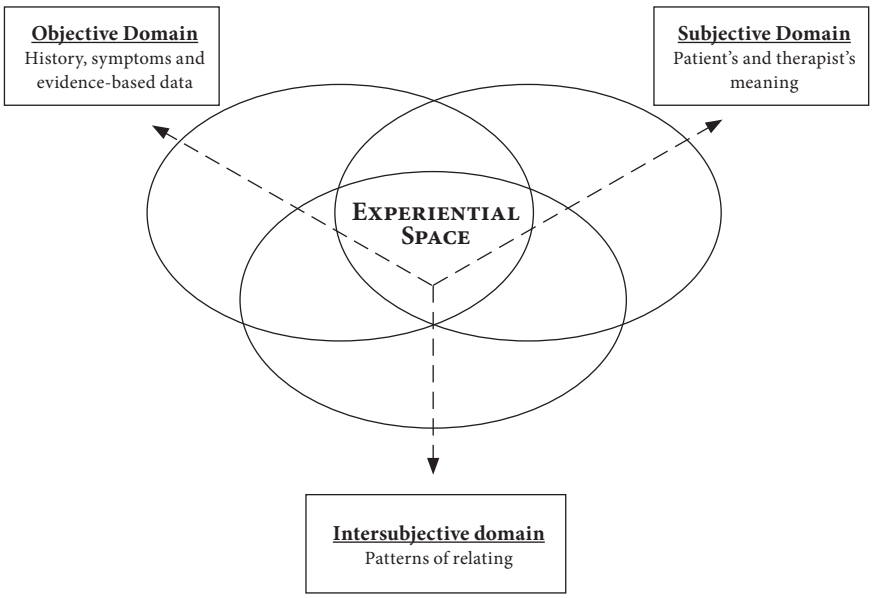

Figure 3. The dimensional model of experiential space in psychotherapy and musical performance

analog, however, may provide a metatheoretical view for maintaining a flexible focus not limited to therapy-specific ingredients. In music we intuitively listen beneath the notes—we follow the progression of the composer's themes in a unified associative-emotional state informed by melodic and harmonic inflections, overall musical structure, and its historical context. In therapy, such an associative-emotional focus constantly blends what patients are saying with how they say it, what they think with how they feel, and what the experience means to them with how it comes across to the therapist. We become more attuned to the rhythms of the patient-therapist interaction, attending to when an utterance is made, the counterpoints of its mutual silences, the unique flow of our own associations and affective valences, and our impulses to engage or hold back from the interaction. If we are able to listen to the patient as we listen to a musical performance, we directly attend to the cognitive-emotional resonance that the patient's relational melody evokes in us, and we respond in the same key. We flow with the exposition, development, and recapitulation of interweaving themes without the need to pick one "right" interpretation at the expense of others. We access the implicit experiential space beneath the words, where what is implied and what is left unsaid are just as important as the actual words used.

Therapeutic uncertainty and the patient's sense of isolation and despair—like the uncertainty, isolation, even despair of any creative enterprise—can lead to emergent vistas of insight and emotional connectedness. Therapists, just as if they were engaging in musical performance, need to move away from managing the process and allow themselves to respond spontaneously while they observe the interaction. The opportunity in relational improvisation resides in putting the theories and plans on hold and letting the music emerge as a reaction to unfolding events. We create the musical flow by anticipating what is to come while allowing ourselves to be surprised by its unfolding, a state some describe as creative dissociation.

What is going to crystallize from our current interaction? What can we do with a joint experience—here, now, together? The patient and the therapist become partners on a voyage exploring psychobiology, surrounded by a flow of symptoms, affects, meanings, emergent associations, relational triggers—and our reactions to them. The therapeutic trajectory, like in any other relationship, is an emergent fractal process that occurs within the joint experiential space and is fundamentally unpredictable from the outset. Minute quantitative changes can grow into qualitative shifts in the patient's self-system and his or her capacity to relate to others. Inevitable therapeutic ruptures can reorganize into qualitatively

new, earned, secure attachments (Roisman et al. 2002) and trust in allowing vulnerability with others. In the words of Lyons-Ruth (2001): "The patient and therapist together create a complex dynamic system that produces its own unique trajectory towards change. Reflecting on the [therapeutic] process in words is only one component of a much more complex relational process that fundamentally occurs outside the realm of verbal reflection and self-awareness" (16).

Therapy is much more about engaging with a partner than listening to the words. For many patients, especially those with early histories of relational trauma, the real growth in psychotherapy takes place from the interpersonal play of the process (Marks-Tarlow 2012c, 2014a, 2014b, 2015a, 2015b). Children express the cutting edge of their growth through play, which is true at all levels—behavioral, social, emotional, and cognitive. Meanwhile, a traumatized or distressed child cannot and will not play. In the same way that children need the safety and trust of a secure attachment to abandon themselves in play, so too do patients need safety and trust as a platform for taking emotional risks necessary for change. Play is intimately tied to improvisation; it allows us to stay open to the emerging context of the here-and-now interaction. We see the language of speech and the language of action as harmonic variations on the same theme. But, while words are exchanged sequentially (call and response), the unit of analysis in the nonverbal domain is simultaneous, multichannel, and jointly enacted. Notes and words are symbols for the musical and relational experience, not the experience itself.

The process of mutual knowing can now be reframed as a function of resonance between the patient and therapist (Galatzer-Levy 2009). There is preliminary evidence that when psychotherapy participants are in relational sync with one another, the process may directly place the two brains in synch. Research emerging from Uri Hasson's lab (Stevens, Silbert, and Hasson 2010) at Princeton University tracks the electrical activity in the brains of speakers who told a story as synced up with listeners. The paired subjects showed widespread neural resonance between the two brains, which extended far beyond cortical areas related to speech production and reception. Interestingly, the greater the understanding displayed by the listener, the greater the brain synchrony with the speaker.

We offer a musical model of therapeutic interaction that practitioners can use to guide their interventions, both in the context of an individual session and the therapeutic relationship as a whole. We do not mean these themes to comprise rigid stages of treatment but rather a flow of relational interactions

comparable to a dance with a partner, its prearranged structure providing a background for mutual rhythms that progress from tentative, uncoordinated steps to a synchronous togetherness. The basic goal of this process is to listen to our patients beneath the words the way we listen to music.

The Musical Themes of a Therapeutic Encounter

Overture: Prelude to a Theme

Each session and each therapeutic relationship has a unique beginning. The patient may present in a guarded and tentative way, eschewing emotional subjects and attention to the here-and-now interactions; or they may jump into the relationship by overdisclosing their traumatic experiences, only to retreat a short while later. They may also lead with hostile dependency, asking for help and pushing it away at the same time. Both patients and therapists bring their current initial conditions into the sessions, which guide the therapeutic trajectory for that day only or for the therapeutic endeavor as a whole. Sensitivity to initial conditions is a hallmark of complex adaptive systems, which organize in new configurations during the constant interplay between their inner and outer environments. It behooves a busy therapist to stop at the threshold of a session and set a mental baseline for his or her affective and cognitive state: Am I distressed, tired, or excited? Am I bringing any particular expectations into this meeting? Am I looking forward to spending the next hour with this person, or am I dreading it? Countertransference can then be gauged by subtracting somatic, affective, and associative states during the session from the presession baseline. In psychotherapy, much as in music, we do not just start playing, but have to tune into the acoustic and experiential space.

Patients, in turn, will enter the treatment room with particular somatic, affective, and associative states evident in their gaits, postures, eye contacts, tones of voice and choices of subjects. They may lead with outside stories about their week, emotional reactions to previous sessions, or, seemingly, with nothing at all—with silences. Yet, silences may carry as much meaning as interpretive insights, serving as counterpoints to spoken words, just as silences in a musical composition provide emotional contexts for the sounds that precede and follow them. Silence created by music transcends the silence of the physical concert hall and links us to the silence of the experiential space, which gives rise to the music. A therapist needs to appreciate the sound of silence (borrowing a meta-

phor from American singers Paul Simon and Art Garfunkel) for the meaning of the words to be clear. Is it a brief calm before the storm, the fresh quiet of a starry night, or the trapped, suffocating silence of a dark and locked room? Listening for what is not said or cannot be put in words is just as important as hearing the words themselves.

Sensitivity to initial conditions underlies the commonly observed importance of the first minute of the therapeutic encounter. The first moments of the session often determine its tone in fractal parallel to the way the first session with the patient often heralds relational challenges in the entire therapeutic relationship to come. Just as the silence and sound continually cocreate each other in music, the perpetual interplay of ritual and spontaneity in the therapeutic interaction continually complement each other in the relational dance of intimacy. The type of the treatment chosen, the theories we use, the routines of therapists in arranging their desks or looking over their notes, patients settling themselves in their chairs, and the familiar greetings and introductions both parties use provide a repetitive structure that serves as a foundation for relevant relational themes. But ritual and content are only a beginning, not an end in themselves; it is the emergent novelty and process of the interaction that embodies the nonlinear trajectory of the relational melody that allows therapeutic change. The leading theme of this process fosters interest in why we feel, think, and react the way we do within the perpetually shifting experiential space.

Allegro Spiritoso: A Lively Theme Played in a Spirited Manner

After the first session, both therapist and patient are implicitly aware of each other's characteristic relational motifs (a situation not unlike listening to a new performance of a familiar musical piece), but their emotional resonances differ depending on the context. No performance exactly matches the previous one; there is an infinite variety of contexts and interpretations. Therapists have to train themselves to preserve the novelty of each encounter, allowing each session to develop uniquely while building on the themes carried from previous interactions. This is the essence of the multilayered, nonlinear process of relational unfolding, during which fractal motifs grow, intertwine, and create qualitatively new configurations. The process carries therapist and patient along like a wave carries a surfer. They do not play the music—the music plays them. In the words of Lyons-Ruth (2001), "Process leads content … so that no particular content needs to be pursued" (15).

The associative-emotional focus does place a priority on here and now,

whether the patient is explicitly focusing on outside stories or events in the therapy room. In both cases, the relational duet implicitly happens in the present, within the experiential space at the intersection of the objective, subjective, and intersubjective. This is a fluid, dialectical process defined both by the anticipation of and the being fully present in the moment. Many therapists make the mistake of prioritizing the content of the patient's story or symptomatic presentation instead of the process of their unfolding in the here-and-now relational enactments that communicate subtle melodic inflections. Musical themes are much less content driven and inherently facilitate process orientation in the listener. If we can listen to a patient's words as we would listen to music, we become more open to the relational harmonies and dissonances encoded at the unconscious level of affective interplay. Why is the story being told now? What feelings drive it? What is the counterpoint in the here-and-now relational dynamics? What is the implicit message to the therapist?

Adagio Ma Non Troppo: Slow Movement—Not to Be Observed Too Strictly

Identifying, following, and engaging in the enactment themes of the session may involve various techniques ranging from supportive to exploratory to confrontational interventions, with inevitable discord and raptures in the relational duet. Crucial to the therapy, the therapist must allow time for the joint exploration of a patient's and a therapist's contributions to their joint, intersubjective experience. The therapist often introduces this riffing together mode as an invitation for mindful exploration of the themes just established, simultaneously stepping away from and highlighting the original motifs. Whether in therapy or in music, a slow tempo allows the therapist to observe and experience the nuances of the melody. In this way, both the allegro and adagio of the treatment process further the development of relevant relational enactments, allowing the participants both to respond in real time and to take the time to better understand the responses.

Holistic perception of sound flow and qualities may be illustrated with the flow-through arrow (in figure 4). The larger arrow represents the overall structure of the developing musical form and the therapeutic relationship. The smaller, inside arrows illustrate discrete changes in musical or therapeutic flow. Only by reacting to these discrete inflections can the therapist follow the overall meaning of the process. Fractal self-similarity is a very practical tool for both a performer and a therapist—the shortest motif embodies a moving structure similar to the whole composition (beginning, climax, and ending). When the

Figure 4. The flow-through arrow as a synthesis of content process dialectic

therapist is plugged into the process, he or she perceives every interaction as a flowing part of the whole, intuitively gauging its role and reacting to it without conscious planning. Words and theories, with their objective, definable meanings, become merely an abstract structure. Beneath the words, the therapist perceives every moment as a living, flowing experience full of surprising novelty, its own personality within the unique relational context, its own resonance, temperature, color. The words and the notes change, but the flow of their interaction connects the experience with a unified, participatory process full of an existing or implied harmony only possible in real time.

This phase of the therapeutic encounter allows us to rejoice in spontaneous synchronies enabling the harmony of relational play. We can revisit relational raptures and misattunements, looking for their meanings and parallels in a patient's experience, and work on establishing a secure base for their resolution. This is the part of the experiential space in which we can formulate subjective and intersubjective hypotheses, substantiating or rejecting them based on here-and-now relational validation. How are the relational melodies significant in terms of a patient's patterns outside the treatment room, presently and historically? How can we look for more coherent rhythms and steps together?

Scherzo and Finale: Revision and Improvisation on the Theme

The sense of understanding and trust achieved in the previous phases can now serve as a foundation for revising the traumatic relational templates and establishing healthier ways for the patient to be with others. The patient and the therapist move toward greater relational synchrony, relearning the steps of the dance as authentic partners. The therapist is at once a conductor, accompanist, librettist, and audience—spontaneously shifting the roles of leading and following, cocreating and listening to the music, inspiring and being inspired. The patient is the composer, conductor, and librettist—bringing in and revising the

relational melodies of his or her life, rewriting the script of the past. This is the phase of joint improvisation, during which the full measure of creative intuition and interpersonal play comes to the forefront.

In affective terms, the therapist starts the therapeutic composition with interest in a patient's experience—working through traumatic configurations of fear, anger, sadness, hurt, and shame—to arrive at the unmitigated joy of authentic relational resonance. The process is repeated again and again for the novel procedural traces to consolidate in meaningful ways. Rather than conceptualizing this phase of treatment as termination, the musical parallel would suggest the theme of emergence. Ideally, the new relational harmonies discovered in therapy will continue to resonate in a patient's life, allowing new ways of experiencing self and others. Therapy becomes a transformational experience allowing the end of a session or therapeutic relationship to open the path to novel, healthier choices and relational trajectories. We can sum up the themes at this phase of the treatment process simply: How can we use the here-and-now experience to change the established disharmonies in the patient's life?

Conclusion

What can the parallels between therapeutic and musical dialogue teach us about the process of both? The musical model of relational transactions in psychotherapy serves as a metatheoretical framework encouraging therapists of all orientations to tap into the flow of the therapeutic process by listening beneath the words and tuning in to the implicit experiential space at the intersection of objective, subjective, and intersubjective dimensions of the interaction. The associative-emotional focus we are all familiar with in playing or listening to music helps us step back from top-down control of the therapeutic process and opens the opportunity for a deeper resonance with a patient, one that highlights mutual synchronies, convergent and divergent meanings, ruptures and intimate attachments, and relational mastery. Each relational encounter becomes a unique interpretation, which can transform the performer and the audience alike, even if the score has already existed for centuries (as in Glenn Gould's 1959 version of J. S. Bach's *Goldberg Variations*). Relational scores are eminently malleable. In the process of playing with the composer, we tap into the self-organizing potential that leads to an open, emergent trajectory unpredictable from the outset of treatment. We help a patient shift from being a helpless victim of his

or her developmental adversities to assuming the active role of a composer of his or her own relational music.

The parallels between musical and therapeutic process point to the common denominator of the nonlinear, emergent dynamics underlying both creative endeavors. The imperative of needing to learn the technical skills and ground ourselves in the theories of their application translates into the need to put away the manuals and approach each musical and therapeutic encounter as a unique process possessed of inherent novelty and spontaneity. Objective analysis of the relational score translates into the dialectic of allowing intimate emotional engagement while simultaneously observing the process; we have to foster the capacity to be surprised and moved by the emergent relational experiences. Ultimately, both the performer and the therapist have to allow genuine responsiveness in the context of each encounter. Therapy becomes a process of synchronizing relational melodies, a relational improvisation tuning in to the process of dyadic unfolding in the verbal and nonverbal domains that blends art with the fractal tapestry of objective, subjective, and intersubjective science.

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