Letting Go of Performance Anxiety and Optimizing Musical Performance in a Case of Traumatic Loss

Katherine H. Leddick, PhD, BCN
Private practice, Brooklyn, NY, and Manhattan, NY

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The article introduces a model integrating psychoanalytic psychotherapy with neurofeedback, in a case of performance anxiety in a professional musician. The author uses a neurofeedback approach that is comprehensive and adaptive, emphasizing a renormalizing of brainwaves, rather than producing specific states or shifts in particular bandwidths in the EEG. Psychoanalytic psychotherapy is used to address the musician’s history of traumatic loss. The case is outlined, and improvements are described in terms of optimized musical performance and improved coping under pressure.

Introduction

When Maria came to my office more than two years ago, her primary goal was to perform better under pressure in order to win important auditions. Maria is a professional musician in her mid-30s. She graduated from an elite music school and possesses a rare musical talent, but she knows her career has not developed as well as it could have over the last 10–15 years. To be sure, Maria functioned quite well as a freelance musician in a very competitive market. She supported herself with her music, bought an apartment, and helped to support her new husband over the last 5 years, as he has developed his own business. Nevertheless she knew she is capable of more satisfying work. In the first sessions, she explained that she aspires to win auditions for better quality ensembles. She was tired of playing in pit orchestras for shows where she feels she cannot be heard over blaring brass and percussion, and playing in ensembles where basic elements of musicality such as playing in tune are too often at issue. She knew she was capable of more, but somehow she was not able to make the advances she desired.

I have worked with several neurofeedback systems over the last 15 years and chose the Zengar NeurOptimal™ system to combine with psychoanalytic psychotherapy, because it trains Comprehensive Adaptive Re-normalization of EEG (CARE; Brown, 2007; R. Tattenbaum, personal communication, January 18, 2011; see also http://www.Zengar.com). Unlike other neurofeedback systems, the trainer does not decide ahead of time which frequencies to target or what states to train. The system responds microsecond by microsecond to a broad band of emerging brain activity and trains increased resilience and flexibility. Training focuses on the ways in which shifts are made, rather than attempting to “train up” or “train down” specific bandwidths. Essentially, NeurOptimal™ gives the brain the information it needs to create its own healing. Rather than attempting to “calm” problematic states or responses, the central nervous system (CNS) is freed to respond to the present as it releases habitual responses learned in the past. Training is done on the scalp above the sensori-motor strip at C3 and C4, providing a generalized effect.

The Neurofeedback Approach

On the first day that I met Maria, I conducted 15 minutes of neurofeedback with NeuroCare Pro™ (an earlier version of the NeurOptimal™ system). I scheduled her for a 60-minute initial session so that I could spend the first 30 minutes hearing about why she had come and establishing rapport. Then I started the feedback. That first day I did a 30-second pre-session baseline, 5 minutes each of the Zen modes 1, 2, and 4, and a 30-second post-session baseline. I told her that it is most common not to have a clear response in the first session, and that we would continue to find our way to the amount of feedback that is right for her. I assured her that her brain would make use of the neurofeedback information in its own way and on its own time.

I like to include a brief feedback experience in the first session in order to address any anxiety about the usually novel experience of connecting sensors (electrodes) to the scalp and ears and putting oneself in the presence of brainwave biofeedback. I explain that the sensors are only reading the electrical activity that is always present on the scalp. Nothing goes back to the scalp through the wires. The “feedback” is information taken in by the brain through the eyes and ears (optic and auditory nerves). When the feedback is perceptible, it looks and sounds like brief interruptions in the ongoing movement of images and...
music. In fact, much of the feedback is so quick that it is not consciously perceptible, but the brain registers it and makes use of it without conscious awareness. The information provided by neurofeedback is not usually available to the brain. Feedback is a mirror of sorts that allows our brain to “see” itself and make adjustments that optimize central nervous system functioning.

Often people who come to my practice are suffering from chronic hyperarousal in the sympathetic nervous system. This can take the form of anxiety, insomnia, irritability, chronic pain, worry, dwelling on negative thoughts, etc. In cases of hyperarousal, neurofeedback will bring the level of arousal down. Sometimes in initial sessions there is an uncomfortable response to the lowering of over-arousal. Change is not always comfortable at first. Sometimes people are frightened by the difference or just a little disoriented. Sometimes people experience sadness that has been obscured by chronic irritability. And often even a little anxiety, generated by wondering what will happen, counts an experience of calm or relaxation that will emerge on subsequent sessions.

Maria was interested in coming back the following week to try the feedback again and to continue our conversation. I asked her to monitor how she feels for the rest of the day and how she sleeps the night after the session. I suggested that it might help to make a note in her calendar about her experience during that time frame. I am interested in hearing about that first night’s sleep even if it is not unusual. I would like to know if it is one of her usual good nights, one of her usual not-so-good nights, or something different. I use this information to help me gauge the settings and the length of the subsequent feedback intervals and to lead in to a discussion of sleep hygiene. At some point in the first few sessions, I typically explain that “good-enough” sleep habits are a fundamental building block of optimal CNS functioning. Early neurofeedback sessions help to establish good circadian rhythms, and clients can help themselves by going to sleep and waking up at regular times.

When Maria arrived for the second session, she reported having felt and slept on the better side of usual after the first session. I noted that the post-baseline looked at least a little better than the pre-baseline, and so we proceeded with 30 minutes of feedback (10 minutes each of Zen modes 1, 2, and 4). I told her that she could have her eyes open or closed, and she could freely alternate between open and closed eyes. She could speak or be quiet. It would be fine to fall asleep, and she should allow herself to be as she feels most comfortable, while remaining still enough to allow the sensors to function well. Maria wanted to continue our conversation that day, as she did during most sessions over the next two years. Occasionally she remained quiet for some or all of a session.

**Constraints on Treatment**

As is often the case, we were limited by time and money. Maria could afford one 45-minute session per week, in part because her insurance offers no out-of-network coverage. Although one session per week is adequate for neurofeedback and often adequate for psychotherapy, we were faced with one session and a strong desire to do both. So that’s what we eventually did. I sat behind Maria as she faced the feedback screen and speakers. I faced my screen and monitored the feedback while I listened and responded to her talk. I gradually began to initiate more questions and ideas myself, as I monitored the rhythms in her speech via the pacing, volume, and tone and occasionally checked her facial profile for expression or whether her eyes were open or closed. All the while, I tried to be sensitive to her pace with both the psychotherapy and the feedback.

Multitasking while doing psychotherapy is not usually recommended (e.g., Schlochower, 1996), and I would not do it in many circumstances. In fact, I would not say that my conversations with Maria started out as psychotherapy. I tell most of my feedback clients that we will understand their reasons for seeking training over the course of the first several sessions, but I do not delay the training. We begin the training while we are still getting a clear picture of the presenting difficulties. Often there is also some psychoeducation about circadian rhythms, sleep hygiene, nutrition, exercise, substance use, caffeine, and whatever other lifestyle choices may presently or eventually interfere with optimal functioning of the particular client’s CNS. Some of this talking may happen while the feedback is on. I am sensitive to the client’s state, and I usually allow for significant quiet time each session. Often I can get the talking done in the first 10 minutes of the session while I am also applying the EEG sensors. This allows for 33 minutes of quiet feedback and 2 minutes of cleanup in a 45-minute session. But some people feel drawn to continue the dialogue during the feedback intervals. As we clarify reasons for wanting training, the conversations may become more psychotherapeutic.

**Neurofeedback and Psychoanalytic Psychotherapy**

I should explain that in addition to my training in neurofeedback, I am also a psychoanalyst. I have been doing neurofeedback since 1997 when I took my first course with Val Brown, just after I got my license in psychology. In 1999 I started postdoctoral training in psychotherapy and psychoanalysis at New York University.
(finally to graduate 10 years later). In the beginning of my practice I used to think of neurofeedback clients and psychotherapy patients as separate parts of my practice, but over time my approach has become more integrated. Sometimes neurofeedback doesn’t come up in a consultation, but I can’t recall a case in which my skills and understanding as a psychotherapist did not come into play. Maria recently commented that she does not know whether talking or neurofeedback has helped her more or even which tool has helped her in which ways. Our relationship has involved an integration of these tools adapted to address her particular constraints on optimal functioning.

**Improved Musical Performance**

Maria noted about 9 months into the weekly sessions that her ability to memorize music had markedly improved. She also noted that her sight reading ability was much better. The sight-reading improvement seemed to her to be an increased ability to think ahead and coordinate motor movements simultaneously while reading unfamiliar music. She had noticed these improvements for many weeks, but she did not want to speak about them until she was certain they were real and stable. These two improvements seemed to me to be effects of the neurofeedback that were not constrained by firmly held emotional conflict or beliefs. They emerged rather spontaneously after some period of training, and they were not “undone” by what Zengar trainers refer to as “external constraints.” External constraints can prevent optimization from emerging and/or constraints can send a person back into nonoptimal functioning after brief periods of relief. Constraints can include substance use (prescribed or not), present family dynamics (especially for children), irregular sleep hygiene, and other nonoptimizing environmental factors.

For Maria, the constraint on her primary goal (performing well under pressure, e.g., important auditions) was psychological. It was “external” to the neurofeedback training, and so it needed to be addressed to achieve optimal functioning. Maria’s constraints were rooted in traumatic experiences from her childhood and adolescence that left her with firmly held beliefs and emotional conflicts that did not simply fall away with neurofeedback training. After many years of struggling with these issues on her own and with a previous therapist, Maria was ready to consider them with me from the beginning of our time together. I am grateful for this readiness as it greatly facilitates our work together. In some other cases where people have done even more previous work, the neurofeedback can proceed like lightening! Of course, neurofeedback can help people get ready to let go of constraints as well, and often that is the work.

Maria’s previous therapy lasted several months and focused on managing anger in work relationships and friendships, and I wondered if some of this work would be relevant to her frustration with advancing her career. I had this in mind from the first session, and as she told me more about her past I began to suspect we would need to reevaluate some of her early experiences to help her understand the pressure she puts on herself to succeed and the ways in which she thwarts that success. I shared these thoughts with her during an early session.

**Audition Experiences**

I wanted to hear more about Maria’s audition experiences. At first Maria said simply that she crumbled at important auditions and did not show her full talent and skills. Over time it became clearer that the problems start well before audition day. She procrastinated in preparing for auditions and sometimes has not prepared the entire list of repertoire. It seemed that there was always too much to do in the weeks and months leading up to big auditions, and she either did not practice sufficiently or played so much with other rehearsals and performances that she had developed mild or even moderate tendinitis by the time the big day arrived. She was interested in why she would set herself up for auditions so poorly, but her understanding was limited to describing her behavior as laziness and herself as a “slacker.” Although Maria has been successful in many auditions in her lifetime, especially when she was younger, I suspected that we would be helped by understanding more about the meanings of auditions from early on. So I began to ask for the background and context to help us understand how Maria felt such pressure to perform and why she did not provide herself with more of the support she needed to succeed.

**Childhood Psychodynamic Issues**

Maria explained that as a child and even through college she often won auditions and prizes without much effort, relying on her natural talent. As a child, her mother insisted on practice and usually provided an environment in which compliance was mandatory. Maria says she appreciated the discipline that her mother imposed and associated her mother with structure and hard work. We wondered together why she was not able to internalize that structuring function her mother provided for her as a child. Yet in the course of our conversation a number of complexities emerged. First, it became clearer that the mother was very invested in Maria’s success for her own narcissistic gratification. Her mother had not had opportunities to develop her own talents and was determined that Maria make the most of hers. For Maria, this
meant that part of what happened when she won an audition was taking care of her mother, and conversely she disappointed and even hurt her mother when she did not succeed (Miller, 1979). This was a lot of responsibility for a child, and Maria became curious to wonder whether some part of her learned to go on strike to avoid the conflict about pleasing, failing, or even retaliating against her mother (Klein, 1946). Perhaps the avoidance itself was a way of asserting her independence or anger. On reflection Maria also recalled an outward compliance that involved long hours of playing that were not very productive. She often felt inadequately supervised or taught and observed that her time spent practicing was wasted. Even in these early years, Maria is describing a sense of false compliance and a split between outward performance and a sense of her own truth that could not be acknowledged (Winnicott, 1956).

When Maria was a child, outward resistance to her mother’s demands was met with insults; her mother likened Maria’s behavior to that of her father. Maria’s father seemed to her more loving and interested in more than just her achievements. However, the father was impulsive and hurtful to himself and his family by gambling and extramarital affairs. Maria now sees her “slacking” as partially an identification with her father. We wondered whether the mother was fearful that Maria would grow up to embody the worst aspects of her father. Maria also suspected that her mother fantasized that if Maria were successful enough, the father might be more faithful and responsible to the family. Yet how would her mother have felt about that, if it were Maria and not the mother who won her father back? At times Maria felt that she was holding on to her father by acting impulsively and destructively. At other times she felt that she was rebelling against all the restrictions her mother placed on her childhood life. She told me quite bluntly near the end of a session that any success she earned could never be enough to satisfy all the emotional needs for herself or her family.

After several sessions of gathering this information and expanding on it together, Maria announced that there was an upcoming audition she wanted to take. She had several months to prepare, and she wanted to be careful not to fill up the time with too much other work. I wondered out loud if there was something about our sessions together that helped her to feel more hopeful in tackling the upcoming audition. Maria said that she thought she understood better how she got in her own way, both concretely by the ways she practiced the repertoire and by carrying the weight of her mother’s pain and desires with her. She did not expect to win this audition, but she wanted to make the finals, which she felt would boost her confidence and her reputation. I believe that there was something about reflecting on these dynamics in a relationship with a compassionate other that fostered an increased acceptance of the past and more capacity to let it remain in the past (let it go). Maria described an increased enjoyment of her music that showed both of us that she was reclaiming it as her own. We began to talk about healing from the directives for performance issued by her mother and others throughout her development, and reclaiming her ambition as her own.

When Maria was 15 she won an audition to a special high school that allowed her to study with coveted teachers far away from her home. She moved to the new city and lived with extended family. In the first year she excelled despite many obstacles, feeling like she was “cheating” because it was not as much work as she had done at home with her mother. But then in her junior year Maria’s father died rather suddenly after a brief struggle with an aggressive disease. At that point, Maria’s work declined precipitously, and she was in danger of not graduating from high school. Her mother explicitly blamed Maria for the father’s death, because of the “stress” he put on himself to move closer to her new school.

After her father died, Maria’s mother withdrew all participation in Maria’s musical life. They had very little contact. Her mother evaluated her only occasionally at family gatherings, and always somewhat poorly. Essentially, Maria lost both parents when her father died. She felt guilt and pain at that time, yet she did not connect her feelings to her difficulties with performance. In fact, it would seem from her narrative that her teachers had some compassion for her after the death of her father, yet she describes their response as “letting me slack because my father had just died.” She describes her audition for college as flawed, and she attributed her acceptance there to the special connections of her high school teacher. The self-blame and lack of compassion came up again when she described herself as resolved at several points in the ensuing years to “reform” herself from “slacking.”

Although neurofeedback can often allow people to release pain from the past without talking about it at all, Maria needed help to make sense of her traumatic past more explicitly. The pain of her father’s death and her mother’s abandonment was obscured by her self-attack, self-blame, and the blame from her mother for his death. As we spoke about his death and its aftermath in the context of her earlier life, she began to ease up on herself. Briefly she felt some of the sadness and grief that I suspected would come more fully as she let go of long-held convictions that she was to blame for her mother’s pain.

After elaborating these dynamics and experiences for many months during neurofeedback sessions, Maria began
to experience more freedom in her musical life. She still feels afraid of what will happen when she is on the spot in an important audition, but she is able to organize her work more realistically and not expect herself to take an audition when she has too much work in the preceding months. She is beginning to consider whether she might actually turn down work in order to allow herself the space to prepare for an audition she especially wants to win, and she has taken steps with her husband to reduce their monthly expenses in order to make that more possible. Additionally, she has taken on a leadership role in putting together a group to play repertoire that she enjoys.

Summary and Conclusions
In summary, this article presents a model integrating psychoanalytic psychotherapy with neurofeedback using the NeurOptimal™ approach, in a case of performance anxiety in a professional musician. NeurOptimal™ was chosen because this approach to neurofeedback is comprehensive and adaptive and emphasizes the renormalizing brainwaves, rather than requiring the trainee to produce specific states or shifts in particular bandwidths in the EEG.

For Maria in particular, this kind of nondirective relationship to the neurofeedback was crucial. She had a long history of being pushed to perform, too often with the desires and needs of others in the fore. The neurofeedback and the psychoanalytic explorations were conducted without any demands for particular responses. Of course, from experience I expected that she would feel better in some way after some time, and I was committed to facilitating her healing. But I could not know what path she would take, whether she would continue to want to win auditions, or whether she would even continue to play music. I believe that my commitment to being available to her as a whole human being was an important part of her healing and letting go of the destructive effects of her early relationships.

Relational therapists often work with present enactments of old trauma. Much has been written about the transformations that can occur when such enactments are recognized as such and worked through with the therapist. Ultimately, the aims are the same in both modalities—to lessen the grip of the past on the present. Neurofeedback does not eliminate the occurrence of enactments, but it may help patients to more easily recognize them with the therapist’s help and move to a way of being that is less vulnerable.

In this case and in many others, I have seen an integration of NeurOptimal™ and psychoanalytic therapy facilitating more healing in a shorter amount of time than either modality might produce on its own. Perhaps this is true in particular for people who suffer from trauma in significant relationships. Certainly the work requires a facility in the professional with both modalities. The logistics of the neurofeedback operations need to be over-learned in order to allow the therapist’s attention to focus on psychotherapy (which requires monitoring the patient’s current state much more than NeurOptimal™ requires). The therapist needs to be intimately familiar with neurofeedback training as a trainee herself (as is also essential for psychoanalytic psychotherapists). Also, the therapist and client need to accept that working with consciousness is the slowest aspect of the work. Untangling the knots that develop from traumatic early relationships is facilitated by the simultaneous presence of neurofeedback and psychotherapy, because the present brain response to the retelling is monitored and renormalized while the psychotherapeutic interventions are occurring. The patient is able to examine history from a more presently focused consciousness rather than falling into the black holes of the traumatic past. For Maria this meant that she was able to take a more adult observing stance as she recounted some of her childhood experiences with practicing and auditioning. She was able to hear the therapist’s ideas more fully and presently with less regression to retraumatized states, and she was able to release the pain of the past with less suffering in the present.

References

Correspondence: Katherine Leddick, PhD, BCN, 211 W. 56th St, Suite 30 D, New York, NY 10019, email: kleddick@gmail.com.