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Susan Gardstrom

University of Dayton, sgardstrom1@udayton.edu

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AN INVESTIGATION OF MEANING IN CLINICAL MUSIC IMPROVISATION WITH TROUBLED ADOLESCENTS

Susan C. Gardstrom

ABSTRACT

The purpose of this qualitative study was to investigate meaning-making in clinical music improvisation with troubled adolescents. Participants were six youth from two partial hospitalization programs. These individuals, ranging in age from 12 to 17, had severe behavioral and emotional disturbances. Each participant was involved in approximately five improvisation sessions with the researcher. The adolescents were asked to create nonreferential and referential instrumental improvisations, both alone and with the researcher. After each improvisation, the participants and the researcher listened to and/or talked about the piece. Selected improvisations were then analyzed using Bruscia's (1987) Improvisation Assessment Profiles (IAPs), in order to discern intramusical and intermusical relationships. Textual data from session transcripts and field notes were analyzed, and intrapersonal and interpersonal relationships were identified. Musical and textual data were compared, as were data for the participants and the researcher. While the manner in which the musical elements were organized to create meaningful improvisations was unique to each individual, tendencies did appear across cases with respect to rhythmic integration, tonal expression, timbre, and playing configuration. Analysis of the verbal meanings assigned to the improvisational products and processes also revealed commonalities, such as the perception that music evoked emotions and allowed for the expression of existing feeling states. A comparison of participant and researcher data revealed both divergent and analogous musical and verbal meaning-making tendencies. Conclusions and implications for clinical practice, education and training, and further study are presented.

INTRODUCTION

This report describes a qualitative research study that I conducted as part of my doctoral training. At the heart of the study was an interest in learning more about meaning in clinical improvisation with troubled adolescents. *Improvisation*, which can be defined as the art of making up music "while playing or singing, extemporaneously creating a melody, rhythm, song or instrumental piece" (Bruscia, 1991, p. 5), is one of four primary music therapy methods used regularly in music therapy practice. Many types of media are employed in improvisatory experiences, including sounds generated on or by the body, the voice, and/or any number of musical instruments, such as piano, guitar, and pitched and nonpitched percussion instruments (Stephens, 1983).

The term *troubled adolescents* refers herein to teens with severe behavioral and/or emotional disorders. Other labels encountered in the literature include conduct disorder, delinquency, emotional impairment, depression, post traumatic stress disorder, schizophrenia, and chemical dependency, to name a few. While adolescents may be assigned a primary diagnosis or label, troubled youth characteristically display a broad and complex array of disturbances in their physical, cognitive, emotional, and interpersonal functioning, and they often require education and treatment in secure settings such as residential schools and psychiatric hospitals. (Note: The terms *client*, *participant*, *adolescent*, and *teen* are used interchangeably throughout this report.)

My curiosities about *meaning* in improvisation surfaced after I attended a summer workshop for

music therapy educators and supervisors at the Nordoff-Robbins Center at New York University. During the workshop, I was immersed in making music, viewing and analyzing clinical videotapes, and discussing diverse concepts and issues related to therapeutic improvisation. In each of these experiences, the centrality of meaning was emphasized. Discussions revolved around the meaning of the improvised music as it related to the clients' unique personalities, the relationship between the therapist and client, and the changes that each one experienced as therapy unfolded.

As I returned from the workshop, I started to reflect on my previous clinical work with adolescents. For nearly nine years, I worked with young male and female felony offenders in residential facilities. I used improvisational interventions, but my efforts at the time were directed toward effecting changes in observable and measurable *behaviors*; finding or creating meaning was not the clinical focus. Yet, for me, the experience of improvising with the clients was often meaningful. Sometimes meaning was related to the recognition of internal changes during the improvisation, such as a sense of peace or spiritual well-being that had not been present before the music-making began. At other times, meaning was connected to my relationship with the clients, as in an unprecedented, intimate interplay of tenderness.

I realized that, although I could identify aspects of meaning in my own experiences, I knew very little about the adolescents' experiences in and of improvisation. Unlike the multi-handicapped children in the workshop videotapes, the clients I had encountered possessed the ability to describe their personal and unique perspectives on improvisation, yet I had never invited them to do so. I wondered: Had improvising held meaning for the adolescents? If so, what had they found meaningful?

RELATED LITERATURE

At this point I turned to the professional literature, hoping to broaden and deepen my knowledge base. At first, my review was focused on the topic of music therapy with adolescents. I searched books and periodicals relating to music, music therapy, psychology, adolescence, sociology, anthropology, counseling, and social work. I quickly discovered that most publications on this topic consist of either activity, intervention, and treatment program descriptions, or quantitative research reports (Brooks, 1989; Clendenon-Wallen, 1991; Edgerton, 1990; Edison, 1989; Gardstrom, 1987; Gladfelter, 1992; Haines, 1989; Henderson, 1983; Hong, Hussey & Heng, 1998; Mark, 1988; Michel & Farrell, 1973; Montello & Coons, 1998; Rio & Tenney, 2002; Saroyan, 1990; Skaggs, 1997; Slotoroff, 1994; Steele, 1975; Wells & Stevens, 1984; Wigle-Justice, 1994; Wyatt, 2002).

There appear to be relatively few resources about *therapeutic improvisation with adolescents* (Aigen, 1996; Dvorkin, 1991; Flower, 1995; Frisch, 1990; Lehtonen & Shaughnessy, 1997; McFerran-Skewes, 2000; Tervo, 2001). These writings emphasize the various benefits of improvisation: (a) improvisation is active enough to engage and hold the attention of teens, who need an outlet to accommodate the boost in physical, psychic, sexual, and creative energy that accompanies adolescence; (b) successful participation in improvisation does not require prior musical training or experience; (c) improvisation has elements of freedom and flexibility that mirror the unpredictability and upheaval characteristic of adolescence; (d) improvisation enhances ego development, a fundamental task of adolescence; (e) improvisation allows for self-expression, a primary treatment goal for troubled adolescents; and (f) social and interpersonal relationships are promoted through improvisatory experiences.

I read several publications on the topic of *meaning in music therapy*, most of which are philosophical or theoretical in nature (Aigen, 2001; Amir, 2001; Ansdell, 1996; Bruscia, 2000a; Forinash, 2000; Jungaberle, Verres & DuBois, 2001; Lehtonen, 2000; Pavlicevic, 1997, 2000; Priestley, 1995; Ruud, 1998; Stige, 1998, 2002). The authors of these writings illuminate the complex nature of meaning and its investigation. Stige (2002) writes:

[Music therapists] must take into consideration that issues of meaning in music therapy do not only relate to music; they relate to the biography of the client, to the clinical understanding of

the therapist, to the immediate communicational context, and to the cultural context of the therapy situation (p. 49).

Some authors assert a *constructivist* position, in which meaning is created by the participants based on personal and social histories and contexts. This viewpoint accounts for the fact that two individuals sharing the same time and space in improvisation may derive completely different meanings within and from the music and that the client and therapist may find different meanings in retrospect than they did during or immediately after the experience of improvisation. A related finding in the literature is that meaning-making can be a shared endeavor; that is, the client and therapist can co-create meaning both in the making of the music and in the verbal processing that follows (Bruscia, 2000a). Musical co-construction is much like two individuals involved in the give and take of spontaneous dialogue; one improviser recognizes and responds to meaning in the music of the other player. In this way, the “conversation” unfolds and is shaped moment to moment by both improvisers within the shared musical and clinical context. Again, not having focused on meaning in my work with adolescents, I could only speculate that co-construction might have occurred in our joint improvisations.

A handful of resources address the *analysis of meaning* as it relates to improvisation (Aigen, 1997; Amir, 1990; Arnason, 2002; Bruscia, 1987; Bruscia, 2000b; Bruscia, 2001; Forinash, 1992; Forinash & Gonzalez, 1989; Hiller, 1994; Lee, 2000; Leeseberg, 1994). Such analysis can help the therapist better understand the client’s needs, evaluate progress and treatment efficacy, and inform research and theory development (Bruscia, 2001). In keeping with the experiential and idiographic character of improvisation, qualitative methods are most often used to analyze the processes, products, and experiences of therapeutic improvisation.

Because I was interested in the improvisatory experiences of adolescents, I was pleased to find McFerran-Skewes’ (2000) study of bereaved teens involved in improvisation. Particularly helpful in the development of my own project was McFerran-Skewes’ description of the musical and textual data analysis used to facilitate her understanding of the participants’ experiences in music therapy. She used the Improvisation Assessment Profiles of Bruscia (1987) as one of four stages in her analysis of the improvised music resulting from weekly group sessions. Analysis for each piece included the following stages: (a) listening in an open manner to the entire improvisation, (b) listening to musical elements from a music theoretical perspective, (c) using the IAPs to focus on dynamics of the music, and (d) listening to therapist responses within the improvisation.

The researcher also analyzed transcripts of in-depth interviews with the participants, conducted at the conclusion of the ten sessions. Simply stated, three steps were performed in this phenomenological analysis: (a) key statements relating to the experience of the group were extracted, (b) these key statements were categorized into individual meaning units discerned from the text and preserved in the clients’ natural language, and (c) similar individual meaning units were clustered into global meaning units presented in professional language. Global meaning units were as follows: (a) improvisation offered opportunities for both freedom and control, (b) individuals’ musical contributions were respected for their significance/meaning, (c) music contributions offered opportunities for altruism and empathy, (d) the opportunity to express the emotions was valuable, (e) the participants expressed feelings associated with their current emotional state in improvisations, and 6) it was most viable to express the discrete emotions through the improvisations (McFerran-Skewes, 2000).

While this study makes a significant contribution to the understanding of meaning in clinical improvisation with youth, many questions remain. First, like McFerran-Skewes, most authors have facilitated and reported on group rather than individual therapy with teens. How would an adolescent client approach meaning-making with the therapist in a one-on-one situation? How would the experience differ from group improvisation, in which teens’ communications are directed at and primary relationships developed with their peers? Would an adolescent—particularly one who may have had difficulty developing and sustaining positive and meaningful relationships with other adults in familial, academic, and social settings—allow genuine interpersonal connections with the therapist to develop through musical co-improvisation?

Another question relates to client responses to referential versus nonreferential improvisations.

As the name implies, referential music refers to or portrays something outside of itself (Meyer, 1956). A referential improvisation may be created based on a nonmusical direction or guideline such as a verbal title, an emotion, situation, or image. During referential improvisation, meaning is formed from and revolves around the referent, which is pre-selected (Bruscia, 2001). In contrast, a nonreferential or *free improvisation* is created from and revolves around the sounds or music itself rather than a nonmusical referent (Priestley, 1994), and meaning is made from and in relation to the sounds themselves. Would an adolescent respond differentially to each type of improvisation? For example, would the provision of a concrete referent help the younger adolescent who has difficulty with abstract thought launch into improvisation more easily or organize sounds more meaningfully? Or would a referent confine or muddle the meaning-making process, either by delimiting the teen's notions about what "should" be played or by suggesting the creation of pre-musical sound forms from which musical or aesthetic meanings may be difficult to derive?

The relationship between the sounds (musical data) and the meaning ascribed to the sounds (verbal data) is another issue worthy of exploration. Would connections be evident in the hearing? Although researchers assert the importance of this relationship, often it remains elusive to the reader in the presentation of research findings. Most publications do not furnish companion audiorecordings and, while exceptions exist—particularly writings about Nordoff-Robbins music therapy and two studies involving the use of the IAPs (Hiller, 1993; Leeseberg, 1994)—many do not report the detailed, "thick" descriptions necessary to fully elucidate how the musical data supports (or refutes) the nonmusical data or vice-versa. The reader is often left to wonder about critical features of the musical improvisation itself, such as instruments used and how they were played, whether referential or nonreferential, salient elements, and formal structures apparent in the musical product.

RESEARCH QUESTIONS

This project was founded on the premise that there is merit in broadening our understanding of how troubled adolescents experience clinical improvisation. For the profession as a whole, the value of increased understanding lay in being able to substantiate and endorse the various reported benefits of this method and to explore new possibilities for its use in clinical practice. Knowledge gained about the way adolescents encounter improvisation may also stimulate additional qualitative research and inform theory development.

For the music therapist working specifically with troubled adolescents, the benefits of understanding a client's improvisation are manifold. First, the mere endeavor of the therapist to understand a client's music and the meaning ascribed to it may be perceived as an attempt to understand the person, a demonstration of investment in their well-being, and a show of compassion upon which trust and rapport can develop. Without rapport, interactions with troubled youth may be characterized by hard-hitting resistance and frustration.

Second, because improvisation can be a highly personal experience in which various aspects of the self are presumed to be projected onto or poured into the music, a more comprehensive understanding of a client's musical expressions and creations can lead to a more comprehensive view of the client and attendant physical, emotional, and cognitive states and tendencies. This construct seems particularly important in therapeutic work with adolescents; analyzing authentic musical expressions as a way to learn more about a client's current and overall state of being may allow the music therapist to bypass the adolescent's initial reticence to reveal who they are and how they think and feel. Expanded awareness enables the therapist to make more confident and effective in-the-moment clinical decisions toward meeting the client's needs.

Likewise, the therapist with insight into what is meaningful for an adolescent who is engaged in improvisation may be able to broaden and deepen that immediate experience, providing she has the skills to do so. Developing the capacity to experience more fully the range of human emotions possible through interpersonal and aesthetic experiences such as co-improvisation is a valid treatment objective for many

troubled teens, especially those who have anaesthetized their feelings in order to cope with past or ongoing trauma.

Additionally, as the therapist enlarges her perspectives on meaning in improvisation with one client, she is perhaps able to more quickly and judiciously respond to other adolescents in future situations. Conversely, without some clarity about the construction and co-construction of meaning through improvisation with teens, clinical decisions related to treatment via this method may be unclear or misguided.

In summary, reflections of my clinical work and a review of the extant literature served as the primary inspiration for this project and informed its evolution. Despite various claims that improvisation is a meaningful and beneficial undertaking for troubled adolescents, there exists a troubling dearth of studies on this topic. The initial research questions were as follows:

1. What does the adolescent client find meaningful about/when improvising with the therapist?
2. What does the therapist find meaningful about/when improvising with the adolescent client?
3. How do the meanings of the client and therapist compare?

During the analysis of the music improvisations (see below), it became apparent that the musical data were not revealing *what* was meaningful so much as *how* each of the players in the study employed, organized, and manipulated the musical elements to create meaningful music. Analysis of the verbal data, on the other hand, revealed the nature of those meanings for each of the players. Thus, soon after beginning the analysis, I changed the language in the research questions to reflect this subtle but critical conceptual shift:

1. How does the adolescent client organize his or her sounds in order to create meaningful music when improvising solo and with the therapist?
2. How does the therapist organize his or her sounds in order to create meaningful music when improvising with the client?
3. What meanings does the client assign to the improvisations and the experience of improvisation?
4. What meanings does the therapist assign to the improvisations and the experience of improvisation?
5. How do the meanings of the client and therapist compare?

METHOD

This project was conceived as a qualitative study grounded in principles of phenomenology. The phenomenological approach is concerned with the study of direct and immediate human experience and its many facets (Giorgi, 1970). Descriptive phenomenology emphasizes apprehending and describing human experience as fully as possible in order to reveal its meaning. Constituents of such experience may include overt actions as well as internal thoughts, intuitions, emotions, and kinesthetic sensations (Forinash & Gonzalez, 1989). The phenomenon being explored in this study was the experience of clinical improvisation with troubled adolescents.

I assumed the dual roles of researcher and participant. As such, I directly encountered the adolescents and the experience of clinical improvisation. Intimacy with the participants and the research process afforded me immediate access to data that would not have been available to me had I been once removed from the experience (for example, observing another therapist in real time or simply reviewing artifacts of improvisations such as tapes, transcripts, etc.). However, this position also demanded that I was aware of presumptions and prejudices related to the phenomenon under investigation.

In order to be as forthcoming as possible about my personal involvement in the unfolding of this project, I have included here an epoché in which I have articulated some beliefs, biases, and

presuppositions that may have had a direct impact on the study (Aigen, 1995, 1996). Additional insights related to my verbal and musical tendencies appear in the Discussion section.

Epoché

The focus on improvisation came from my personal fondness for active, spontaneous music-making. I enjoy and am energized by the creative process of improvisation. Biased in this way, I anticipated that the experience of improvising with adolescents would be a pleasurable and personally meaningful one, which – as it turned out – was not always the case.

The decision to study the experience of improvisation with adolescents who have behavioral and emotional disorders rather than another group of individuals stemmed from my fascination with this clientele, as well as a desire to make greater sense of my recollections and perceptions of previous clinical work. I have always felt a particular compassion for and kinship with adolescents and a desire to help them, perhaps because my own adolescent years were fraught with discord and loneliness.

In my work with adolescents, I tend to adopt a highly energetic and fairly directive style of interaction. This may be a manifestation of an erroneous supposition—that the growth and development of the client depends largely on my actions as a therapist—that I need to do something for the client in order for the client to be changed. My assertive demeanor may also simply reflect my personality or the fact that I worked with adjudicated adolescents in highly structured treatment programs; I rarely had the opportunity to let the music therapy process evolve naturally, let alone with the client positioned at the helm. I correctly anticipated that it would be difficult for me to adopt and maintain a relaxed stance during the improvisations and interviews. This aspect became easier as I progressed through the study and had what felt like successful experiences with the youth during which meaningful data were generated. My desire to sustain an attitude of openness to each individual and the process of discovery derived from a belief that my relationships with the clients would be more authentic and that data would be more detailed and vivid if I did so.

Participants

Participating with me in this study were six male and female adolescents from two separate partial hospitalization sites in Ohio. All participants were between the ages of 12 and 17. Site No. 1, Integrated Youth Services (IYS), was an intensive outpatient program for children and adolescents ages 6 to 18. Youth in this program were individuals who were at risk for hospitalization or placement in residential treatment, those who exhibited psychotic or pre-psychotic symptoms or severe emotional problems, and those who were emotionally fragile or prone to anxiety. Individual, group, and family services were provided at IYS. A certified music therapist was employed by the agency as a licensed counselor; she did not provide music therapy services at the time of the study.

Site No. 2 was a residential Intensive Treatment Unit (ITU) for boys and girls ages 9 to 18 who exhibited emotional and/or behavioral problems that prevented them from living in less secure settings, such as their family homes, foster care, or group homes. Partial hospitalization treatment groups were provided for residents of the ITU as one of many services, including medical care, individual counseling, and transition care.

Individual rather than group sessions were held for three primary reasons. First, I believed that rapport might develop more quickly in an individual setting in which the researcher's attention could be directed fully toward each participant. Second, the participants' privacy was easier to protect in individual sessions. Finally, as a novice investigator, I believed that I would be able to do a more accurate and thorough job of data collection and analysis for individual versus group treatment.

As with many qualitative studies, this study made use of *ongoing sampling*, in which participants were chosen sequentially on the basis of their ability to inform the investigator on the topic in question (Amir, 1996; Aigen, 1995; Merriam, 1998). Rather than choose all participants prior to data

collection, I selected them consecutively and worked with two individuals at a time. Subsequent participants were selected on the bases of their availability and their ability to more fully edify aspects of the data previously collected. This approach to sampling is consistent with qualitative protocols (Kenny, 1995; Lincoln & Guba, 1985) and meets basic criteria for systematic and ethical inquiry. For example, participants were drawn from the population under investigation (troubled adolescents), they participated voluntarily, and they were engaged in their “natural” clinical/educational environments. Because phenomenological research emphasizes individualized rather than generalized experience and demands detailed, “information-rich” description (Patton, 1990), small participant pools are considered both valid and desirable (Merriam, 1998).

Participant selection occurred in conjunction with agency clinicians and administrators based on the following initial criteria: (a) physical and emotional ability to participate in multiple clinical improvisations during the course of the study; (b) verbal ability to articulate their experiences, (c) written consent of parent or legal guardian, and (d) willingness to participate in improvisation (verbal assent).

Pilot Participants. (Note: Pseudonyms have been used for the participants throughout this report.) The first two teens, John and Tanisha, served as pilot participants, allowing me to learn how I might best (a) approach the participants, (b) approach the task of improvisation, and (c) conduct the interviews. These two individuals participated in all aspects of the study as planned. Data from John’s protocol is not included in this report. John had cognitive delays accompanied by severe communication deficits, and it was difficult for me to understand his verbalizations well enough to truly accommodate and accurately reflect his experience. Data for Tanisha is included herein.

Procedures for Gathering Data

Data were gathered from four sources and in four phases: (a) the improvisations, (b) the session interviews, (c) the field notes, and (d) the closing interviews (for purposes of discussing participants’ overall experience and terminating the research relationship).

The Improvisations. Each adolescent and I were involved in a series of improvisations over the course of multiple individual sessions not exceeding five. These sessions were audiorecorded in their entirety for subsequent and detailed analysis.

The purpose of the study was stated in the parental consent form, and I discussed it with each participant at the start of the first session and as needed throughout the remaining sessions. I read an assent form to each teen as they followed along with their own copy. The form clarified that the participant and the therapist would be improvising during each session and subsequently discussing the improvisations. The form also stated that the sessions would be audiorecorded. I invited questions about the purpose or process of the study, and I answered these to the best of my ability throughout the study.

During the first session and in subsequent sessions as needed, I presented a *sound vocabulary* (i.e., named each instrument and introduced various traditional and nontraditional playing techniques). Each session also included time for free exploration on the instruments, if necessary or requested, as a way to enable the participant’s involvement.

Available to each adolescent were a variety of pitched and nonpitched percussion instruments, such as drums (djembe, doumbek, talking drum, handdrum, tubano), tambourine, maracas, triangle, cabasa, claves, guiro, woodblock, agogo bells, chromatic xylophone, soprano glockenspiel, and alto metallophone. An electronic keyboard was requested by one participant but never used. Each player selected his or her own instrument(s) for each improvisation, although on one occasion I disallowed the use of the tubano because of a participant’s negative association with the instrument.

Improvisations were nonreferential and referential. A referent was established if the participant requested one or if I thought they needed one in order to participate fully. At times I provided a referent, and at times I elicited one from the participant. A typical session consisted of one or two duet improvisations, two participant solo improvisations, and one or two further improvisations as selected by the participant. During both solo and duet improvisations, the adolescent was encouraged to begin and

end at will, with no restriction on the length of each piece beyond that imposed by the structure of the site schedule or the allotted session time. Sessions lasted anywhere from 30 to 50 minutes each.

During the duet improvisations, I responded to the client using select techniques from the “64 Techniques of Improvisation” as identified by Bruscia (1987) for establishing empathy, structuring, intimacy, elicitation, redirection, procedure, and emotional exploration.

Each improvisation was audiorecorded separately from the session recording in order to facilitate the second procedural phase, *The Session Interviews*.

The Session Interviews. The second phase occurred at the conclusion of the improvisations created during the session. Initially, I had planned to play the audiorecording of each piece upon its completion. However, I discovered that the participants exhibited varying degrees of responsiveness to this aspect of the session. Thus, I modified my approach and gave each teen the option of listening. (Note: In one session, technical problems with the playback system prevented us from listening. In another, a nonparticipating teen was present in the room and audiorecording was prohibited for reasons of confidentiality.) When a participant did not care to listen to the improvisation, he or she was nonetheless encouraged to speak about his or her experience.

I also discovered that the adolescents responded differentially to the verbal processing of the experience. Sometimes they began speaking about the experience immediately after playing without any prompting. Other times, it was necessary for me to initiate or sustain conversation about the improvisation that had just ended.

The process of listening was patterned after methods used by Lee (2000). Just prior to the listening, the participant was asked to stop the recording and comment whenever he or she felt something important had happened or generally found it necessary to say something about what they were hearing or experiencing. I also stopped the tape and commented when I felt something important had happened or I felt a need to speak about the music or my experiences. I allowed the selected improvisation or excerpts to be played as many times as requested or needed for satisfactory exploration and dialogue. Typically only one hearing was necessary. Improvisations were verbally processed to varying degrees of depth, depending upon the situation, the teen’s receptivity, and my perception of the need at the time.

Interviews in qualitative research may take many forms, including open-ended, semi-structured, structured (Rubin & Rubin, 1995), individual versus group, recall interviews, and think-aloud protocols (McLeod, 2001). Because the purpose of this phase was to gain greater knowledge about and insight into the participant’s experience or, as Rubin and Rubin state, to “discover the world of the interviewee,” (p. 8), I proceeded in an open and flexible fashion that invited individualized responses. Minimal structure was apparent in my attempts to orient the discussion around the topic of the experience of improvisation. Rather than using a predetermined, unwavering set of questions as might be used in quantitative approaches, I engaged and responded to the participant with questions and comments that evolved in the moment from the dialogue between us. Examples of probes used are “What was that like for you?” “Could you say more about your experience?” and “What stands out for you?” My responses to the participant’s answers and comments were largely based on verbal response techniques of the Human Relations Counseling Model as outlined by Okun (2002), specifically minimal response, probe, paraphrase, and reflection. Self-disclosure was also used when warranted. I attempted to match the overall communication style of each participant and use language that befit each situation in order to demonstrate a “willingness to enter into the world of the interviewees and accept their norms and values” (Rubin & Rubin, p. 173).

The Field Notes. Following each session, I wrote field notes about anything interesting or significant that occurred during the course of the session. Content of field notes included basic observations and reactions to the participant and the process. The longer I worked with each individual, the more these comments included feelings, intuitions, and initial reactions. Information from notes often guided further data collection or data analysis (Bruscia, 1995; Merriam, 1998). These notes were extended or embellished at various times, such as after I had listened to the audiorecordings of the sessions or specific improvisations.

The Closing Interviews. As is frequently done in qualitative research, I conducted concluding interviews with the participants as one way to ensure that I understood and described the experiences as they meant to convey them (Amir, 1996). (One individual, Erica, stopped attending the treatment program at IYS and was thus unavailable for a closing interview.) The concluding interviews occurred once all improvisation sessions had been completed. Each teen had an opportunity to summarize and clarify their experiences in the project. During this interview, I also addressed any final issues with the teen and thanked them for their participation in the study. This interview was also audiorecorded.

Procedures for Analyzing Data

The analysis of meaning in improvisation can be an extremely complex process. Specific analytic methods and strategies in qualitative research such as this are not always set in stone but rather may emerge in response to the contextual questions posed in the research setting and moment. This creative process is evident in previously documented attempts to analyze clinically improvised music (Arnason, 2002; Lee, 1989, 1990; McFerran-Skewes, 2000), in which researchers have modified preexisting methods or generated new ones to address emerging research challenges.

The method that evolved for the analysis of the musical and textual data emerging from this study is presented below.

Step One: The Transcription of Textual Data. Textual data resulting from each session were transcribed. Information that was deemed redundant or irrelevant to the participant's experience in improvisation (e.g., a comment about a teacher's car) was not included in the analysis (Bruscia, 1995). (See *Appendix A*)

Step Two: Analysis of the Improvisations. This step occurred for both whole improvisations and smaller sections that I selected. No less than six improvisations were included for each participant. Each of these was analyzed in accordance with relevant profiles and scales of the Improvisation Assessment Profiles (Bruscia, 1987). Both Intramusical and Intermusical relationships were addressed. Intramusical relationships refer to how the elements and components within the player's improvisation relate to one another. Intermusical relationships refer to how the elements and components within the player's improvisation relate to the music of another person. (See *Appendix B*)

A fundamental assumption of the IAPs is that the sounds or music created through musical improvisation are meaningful in and of themselves. The meaningfulness of an improvisation is thus a function of how the sounds are organized expressively in relationship to themselves, to the players, and to any other nonmusical referents (Bruscia, 2001). The six profiles of the IAPs (Salience, Integration, Variability, Tension, Autonomy, and Congruence) and levels within them describe the various ways in which players use, organize, manipulate, and combine each of the musical elements and, in the case of co-improvisation, how they relate these to the music of another player.

Five specific profiles were used in the analysis of the music: Salience, Integration, Variability, Tension, and Autonomy. Salience was used as a preliminary determinant for which elements would be analyzed according to the remaining profiles.

Integration refers to how simultaneous aspects of the music are organized. Scales within the profile describe the extent to which components within each musical element are similar, separate, and independent from one another (1987, p. 404). Gradients within the profile are undifferentiated, fused, integrated, differentiated, and overdifferentiated.

Variability refers to how sequential aspects of the music are organized and related. Scales within the profile describe the extent to which each musical element or component stays the same or changes (1987, p. 404). Gradients are rigid, stable, variable, contrasting, and random.

Tension refers to how much tension is created within and through various aspects of the music. Scales within the profile describe the extent to which each musical element and component accumulates, sustains, modulates, or releases tension (1987, p. 405). Gradients within the profile are hypotense, calm,

cyclic, tense, and hypertense.

Finally, Autonomy refers to the kinds of role relationships formed between the improvisers. Scales within the profile describe the extent to which each musical element and component is used to lead or follow the other (1987, p. 405). Gradients are dependent, follower, partner, leader, and resister.

Due to space limitations, detailed and comprehensive descriptions of the IAP profiles and scales are not published herein. The reader is referred to *Improvisational Models of Music Therapy* (Bruscia, 1987) for a more thorough description. The analysis of each improvisation proceeded in the following manner:

1. I listened to the entire improvisation/excerpt in an open fashion to get a sense of what was salient.
2. I listened again and segmented the music into meaning units or formal sections, if applicable.
3. I wrote a *Musical Description* of the improvisation. This was a description and summary of the salient musical elements within each unit based on relevant profiles in the IAPs. (See *Appendix C*)
4. Based on the aural analysis and the *Musical Description*, I wrote a brief account of the participant's *Organization of the Musical Elements*. Following each statement or cluster of related statements in this narrative, I included a code abbreviation of the profile and scale that related to the statement. For example, I wrote, "She immediately latched onto the beat that I established (RHY INT-FUSED), doubled it fluidly when she felt ready to do so, and then initiated more sophisticated rhythmic figures, which included syncopation (RHY VAR-VARIABLE)." In this case, RHY INT-FUSED is a code for Rhythmic Integration-Fused and RHY VAR-VARIABLE is a code for Rhythmic Variability-Variable. (See *Appendix E*)
5. The coding procedure described above was repeated for my music in the narratives entitled *My Organization of the Musical Elements*. For duet improvisations, I described my own endeavors to organize the music that I played as well as the ordering of my music with that of the participant. For client solo improvisations, I described how I organized what I heard in the participant's music into a meaningful whole.

Step Three: Analysis of the Textual Data Relating to Each Improvisation. In this step, I first read each session transcript in its entirety to get a sense of the whole. Originally, I identified discrete meaning units and established a coding system without having first analyzed the improvisations. However, as I progressed, I could see that I would have difficulty relating these codes to the actual music-making. Based on this awareness, I decided to analyze the improvisations first and then highlight participant comments in the text that referred specifically to each improvisation. I coded them according to whether they reflected intrapersonal or interpersonal meanings of the experience. Intrapersonal meanings were inferred from the participants' and my comments about how the elements of our music related to nonmusical aspects of our own experience, such as personality, behavior, emotions, etc. Interpersonal meanings were derived from comments about how our music related to nonmusical aspects of each other or how our intermusical relationships related to role relationships between us (Bruscia, 1987). The abbreviations INTRA-P and INTER-P were used to discriminate between intrapersonal and interpersonal meanings.

I applied this same coding process to my field notes for each session, noting comments that related to particular improvisations and identifying them as intrapersonal or interpersonal. Taken together, data from these two sources served as the basis for accounts of the participant's *Verbal Meanings*. I repeated the process for my own *Verbal Meanings*. (See *Appendix E*)

Step Four: Development of Charts and Table. To assist the analytical process, I developed charts and tables. The first charts comprised information related to each player's specific improvisations. Data were abbreviated statements and profile/scale code abbreviations from the narratives. These charts were organized into musical columns (intramusical and intermusical) and verbal columns (intrapersonal and interpersonal). (See *Appendix F*)

The tables were a further distillation of musical data from the charts and depicted the incidences

of integration, variability, tension and autonomy for all players for each specific musical element employed. Elements included rhythm (pulse, subdivision, rhythmic figure, phrasing, and meter), tempo, tonal elements, timbre, texture, and volume. (See Tables in *Discussion*)

Step Five: Integrate Verbal and Musical Data. During this step, data from various sources were subjected to cross-analysis and the meanings were integrated. The primary source of data relating to client and therapist experience were the charts, which consisted of text and profile/scale code abbreviations resulting from the analysis of improvisations, session transcripts, and field notes. Musical and verbal data were compared and contrasted. This process resulted in a written portrait of each participant's experience of improvisation; thus six distinct case portraits were generated. This process also produced a statement of what I experienced with each participant; thus six portraits of my experience were created.

Step Six: Condense Client and Therapist Portraits of Experience. A cross-analysis of all client portraits resulted in one synthesis of what the clients experienced, with elements and characteristics of multiple examples. Likewise, a cross-analysis of all therapist portraits resulted in one synthesis of what I experienced, with elements and characteristics of multiple examples.

Step Seven: Compare Client and Therapist Experiences. Similarities and differences between the client and therapist experiences were discerned and articulated.

Triangulation of Data

Triangulation is a research strategy that involves using several methods to reveal multiple perspectives of a single phenomenon (Denzin, 1978). In my desire to construct as comprehensive a picture of the experience of improvisation as possible, I employed some of the methods consistently recommended by qualitative researchers as these methods made sense for this project. For example, I observed participants in contexts other than music therapy (such as social skills group and recreation activities) in order to gain an understanding of the features of the culture in which the teens lived and learned. Although observation was limited to settings within the teens' partial hospitalization programs, information gained helped me situate the participants within the research context (Aigen, 1996) and, in particular, to make greater sense of the participants' comments during the interviews.

In addition, I took the following steps: (a) I gained access to relevant clinical information about the participants from site records and interviews with staff; (b) I wrote field notes to preserve significant incidents and insights; (c) I kept a reflexive journal that contained my personal reactions to the study (Lincoln & Guba, 1985); and (d) findings were verified through collaboration with the participants in the closing interview preceding the writing of the final report (Bruscia, 1995).

A respected colleague served as a catalyst for the process of appraisal. In this capacity, he raised questions related to all aspects of the project. This individual was trained in the use of the IAPs and thus was able to provide helpful guidance as I analyzed the improvisations and integrated the musical and verbal data. On occasion, he listened to improvisations that were particularly baffling to me and offered his verbal comments. Because he did not know or interact with the participants, his perspectives on the musical meaning added a new dimension to my own.

Standards of Integrity

This project was strengthened by ongoing appraisal and attention to how well I was meeting standards of integrity (Bruscia, 1998), with particular regard for methodological and personal integrity. I kept in mind several important questions related to data collection:

1. General Method—Is the method well-suited to the overarching purpose of the study, that of learning more about meaning in improvisation?

2. Specific Procedures—Do the procedures of data collection, specifically creating, listening to, and discussing musical improvisation, allow for meaning to be revealed completely and naturally?
3. Relationship With Adolescents—Do the procedures and the way I conduct them support a relationship in which the participants are willing and able to open up and share their thoughts and feelings about the improvisational experience? Am I acting in a sensitive and responsive manner so that they are able to place their trust in me and in the musical and verbal actions and interactions?

Personal authenticity was a further requirement for of this project (Bruscia, 1998). If I am acting authentically, I maintain an awareness of who I am in relationship to the adolescents and all that I bring to the inquiry itself, including my strengths and deficits as a musician, music therapist, and novice researcher. Further, this awareness and my ongoing actions need to be congruent. Am I being clear about my research intent and epistemological approach? Am I acting out of my personal identity (cultural, professional, etc.) as it relates to all aspects of the inquiry? Am I taking responsibility for the decisions that I make, such as the procedures of data collection I use, including methodological modifications I make in response to the emerging process, and my interpretations of the findings? Am I communicating to other individuals with clarity, accuracy, and thoroughness? In sum, authenticity means that I am honest about who I am and that I own what I do at each step of the research process.

Finally, I enlisted the guidance of a consultant in this process of inquiry (Bruscia, 1998). This individual, an acclaimed music therapy clinician, educator, researcher, theorist, and author, provided ongoing guidance through each and every phase of the study. Further guidance was sought and received from my doctoral advisor and members of the dissertation committee.

RESULTS

In this section, I offer discoveries for each case, beginning with introductory information, such as age, diagnosis, family history, treatment history/goals, and functioning at the time of the study. This is followed by a brief overview of the participant's general responses in the sessions. Case portraits of each individual are then presented, along with three tables for each case: (a) a list of all of the improvisations of the participant; (b) a compilation of musical and verbal data for the participant's improvisations; and (c) a compilation of musical and verbal data for my improvisations with that participant. Musical features addressed include rhythmic elements, tonal elements, timbre, texture, and volume.

Four participants from Site No. 1 (IYS) are presented first (Erica, William, Hayley, and Chrissy), followed by two from Site No. 2 (ITU) (Tanisha and Ralph).

Case I: Erica

Introduction

Erica, a Caucasian with Cherokee influence, was 17 years old, the elder of two children in her family. When Erica was 14, her mother died of a drug overdose. Erica's father had only minimal contact with Erica and her younger brother, both of whom lived with their maternal grandparents.

Erica's Axis I diagnosis was Bi-Polar Disorder. When in her manic phase, she would use drugs and cut on her arms with razor blades because she did not "feel real." When depressed, Erica would have frequent suicidal thoughts and gestures.

Erica's secondary diagnosis was Borderline Psychosis, manifested in both visual and auditory hallucinations and paranoid delusions. She was on a variety of prescription medications to control her mood swings and decrease psychotic features; however, she reported that she did not take her medication regularly.

Erica's appearance was characteristic of heavy metal enthusiasts: Baggy and tattered jeans, leather neck chokers, and T-shirts bearing the names of favorite bands. Her hair was most often black with red streaks and unkempt.

General Responses

Upon our first meeting, Erica pronounced, "Music is a big part of my life. I couldn't live without it. That's just how I am." Although she described herself as immature and impulsive, Erica approached each session with a mature and thoughtful demeanor. She put effort and intention into the improvisational process, taking great care to organize her playing "field" (e.g., selecting an instrument, deciding where to sit, etc.). Although on average Erica played longer than the other participants—more than eight minutes on one occasion—she ended both solo and duet improvisations abruptly and without warning.

Erica talked openly and in far more detail and depth than the other adolescents about the sensations, thoughts, and feelings arising from the improvisational experience. She was also forthcoming about her likes and dislikes with respect to instruments, particular sounds, and entire improvisations.

Portrait of Erica

Erica and I met four times. Each session lasted approximately 50 minutes. During these sessions, she played one solo nonreferential, nine duet nonreferential, two solo referential, and two duet referential improvisations (see Table 1). Six pieces were chosen for analysis on the basis of their ability to edify the significant features of Erica's experience of improvisation.

Rhythmic Elements. All of Erica's improvisations, nonreferential and referential alike, had a highly rhythmic character, owing to her use of relentless subdivisions. However, neither her rhythmic nor her melodic improvisations were consistently integrated with a pulse. There was a "tripping" quality to her playing.

Erica's rhythmic patterns were mostly invariable, and she tended to repeat specific figures within and between improvisations. She played in duple meter exclusively, employing quarter and eighth note durations. On one occasion she played a brief syncopated pattern. Overall tempo was more constant in duet improvisations than in Erica's solo pieces.

Erica created distinct rhythmic phrases in two improvisations, one rhythmic and one melodic. In one, phrase length was uniform. In the other, she used asymmetric phrases.

Tonal Elements. Erica used the melodic instruments only when she was playing a referent of a tender nature. She did not establish resting tones in any of these improvisations, nor did she form cohesive melodic contours. Rather, Erica played "sound shapes" created by repetitive and energetic motor configurations (left-right patterns) that resulted in incessant yet faltering beating, similar to her drum improvisations. Erica did not use harmony in her tonal pieces.

Timbre. As revealed in Table 1, Erica was particularly drawn to the drums, to the exclusion of the other rhythm instruments available to her. Her most frequent choices were the tubano and doumbek. Although she preferred to use her hands, Erica occasionally used mallets on the drums, and she was quite deliberate in selecting the pair that produced the particular timbre she sought. She mentioned that her ears were hypersensitive and that the tambourine, particularly, confused her. Melodic instruments were used in 3 of 14 improvisations.

Table 1
Erica's Improvisations

	Type	Instrumentarium
#1	Duet Nonreferential	Erica—doubek Susan—tubano
#2	Duet Nonreferential	Erica—tubano Susan—handdrum
#3	Duet Nonreferential	Erica—talking drum Susan—djembe
#4	Duet Nonreferential	Erica—doubek Susan—tambourine, tubano
#5	Duet Referential "Peaceful Dreamy Love"	Erica—soprano glockenspiel Susan—cabasa, rainstick
#6	Duet Nonreferential	Erica—tubano Susan—doubek
#7	Duet Referential "Frustration"	Erica—tubano Susan—djembe
#8	Duet Nonreferential	Erica—doubek Susan—talking drum, cymbal
#9	Duet Nonreferential	Erica—handdrum Susan—wooden flute
#10*	Solo Referential "Night Fear"	Erica—tubano (mallets)
#11*	Solo Referential "My Safe Place"	Erica—soprano glockenspiel, rainstick
#12	Duet Nonreferential	Erica—handdrum Susan—bongos
#13*	Duet Nonreferential	Erica—doubek (mallets) Susan—tubano
#14	Solo Nonreferential	Erica—alto metallophone

Note: Shading indicates improvisation was included in study analysis.

*See IAP analysis in Appendix C and hear the improvisations at:

www.barcelonapublishers.com (go to title page Qualitative Inquiries in Music Therapy)

Texture. Erica tended to not use a wide variety of playing configurations in her improvisations. On the drums, she played with single alternating strikes and occasionally used a tremolo.

On the melodic instruments, she used single strikes only; she is the only participant who did not employ *glissandi*. On the barred instruments, Erica typically restricted her expressions to one register, and she played melodically, never harmonically.

Volume. The volume of Erica's playing was generally stable at *mezzo-forte* and *forte*, the most notable exception being a referential improvisation entitled "Night Fear," in which Erica used a *decrescendo* to close the piece.

Erica's Verbal Meanings

Erica's experience of improvisation was largely intrapersonal. Initially, she used words like "great" and "fun" to describe her reactions to playing. Later, she described the experience as intensely deep and personal. She recognized that she was able to both evoke and release what she termed "complex" feelings

through the process of spontaneous music-making. Erica made comments such as “I don’t know what I’m feeling right now. I’ve got to get a steady emotion so I can play it” and “I was feeling confused and different feelings and emotions all at once. I wanted something that would bring it all out.” She described the expression of feelings through improvisation as “emotion pouring out.” After drumming on one occasion for close to six minutes, she stated:

Like, when I play the drums it helps me, like, relieve a lot of anger ‘cause it’s pounding something, and ah, like right now I have a lot of emotions, I guess. I’m mostly angry, er, I don’t know why, just, (laughs) just, like, frustrated and, (plays drum) like I don’t know how to express it, except by this...

Erica related that it was difficult to express herself musically at times, and equally difficult to describe what was happening. She stated, “It’s hard to get it out” and “It was a hard thing to play because it actually had some, like, some meaning to me...it’s a touchy thing to, you know, even talk about.” Yet in all cases, Erica experienced the expression of feelings through improvisation as a healthy release. That is, in playing anger, frustration, sadness, or even confusion, she felt herself move from a state of discomfort or tension to a state of greater ease. This was evident in many of her unsolicited comments immediately following both solo and duet improvisations:

- [Drums] relieve a lot of pressure.
- When I play the drums it helps me like relieve a lot of anger because it’s pounding something.
- Relief, I was getting relief out of it I think, ‘cause I played my anger and all that stuff and it makes me feel better...that’s relief, really.
- Ah, God, that feels good! ...I just kind of let it out and um, I feel better now, I actually can talk a little bit better. I feel less uh, less caged in or something.

Along with a general sense of relief, Erica noted modulations in specific emotional states that occurred while improvising. She made statements such as, “Wow, I can feel my mood changing already...I’m becoming calmer, like, really calm,” “This puts me in a good mood after I play...” and “I don’t know, I just feel a little bit happier now.”

One referential piece, “Peaceful, Dreamy Love,” was based on Erica’s perception that music could transport her to a special place—a fantasy world filled with love, beauty, and peace. She expressed an ardent desire to live in this place that she had constructed and to share the beauty of it with other people. On several occasions, Erica made comments that suggested she had left the “real world” while improvising:

- I was thinking of different things, like in a dream...
- The music makes me lose touch with reality a lot of the time...It’s like a place I go to all the time...I really want it to be here, you know, I really want to be in that world.
- I kind of forgot about my worries and stuff, like I forgot how I felt before.
- I guess I just escaped through whatever I was playing.

Most of Erica’s comments of an interpersonal nature related to her insecurities about playing the drums. It seemed important to Erica that her improvisations reflected some level of musical competence. At times, she seemed disconcerted when she was unable to execute or maintain a particular rhythmic or tonal pattern or, as she put it, “to get it right.” During the first session, Erica acknowledged some nervousness, and it seemed as though her willful playing was an attempt to perform for me. Later, her comments reflected several other motivations toward musical mastery. First, Erica described herself as a perfectionist who had to “have everything just right.” She also desired to play the drums well because her friends played them:

- I love drums, I'm trying to learn how to play them.
- I listen to, like, my friends play them and, you know, I really want to play them. So I have that passion, like [speaking to the drum], "Ah, I want to play you!"
- I've been practicing on other people's drums...with drum mallets and stuff. Well, my boyfriend's, like, that's the only one. Like, he helped me go like this (gestures a roll)...And he said I did it a lot faster than he did, like, I learned it a lot faster than he did...I was, like, well, "I'm doing better than you!"

A further motivation was Erica's personal frustration with not being able to express herself the way she intended. This is evidenced in the following comments:

- Oh God...I can't do what I want to do.
- (Sighs) I can't do it. I don't know what it is.
- I didn't get it right, like what I wanted to play or how I wanted to play it.

Finally, Erica was impelled toward mastery because it brought her gratification and a sense of attainment:

- I feel kind of happy when I play the same beat as [you] because I'm actually following a beat, you know, like I'm actually doing this.
- If I get a beat, like I actually get one, I'll feel better about it; I guess it makes me feel good because I'm accomplishing something...accomplishing something in music, on the drum...

Portrait of My Experience of Improvisation With Erica

Rhythmic Elements. In co-improvisations with Erica, I often served as a rhythmic ground, playing with a steady pulse, strong accents, and an unwavering tempo. When we played together, she usually requested that I start with a beat that she could follow, saying that it helped her concentrate and that she felt more comfortable and secure if I was playing too.

I experienced a high level of rhythmic tension in response to Erica's uneven subdivisions and would consequently cheat the pulse slightly to maintain some semblance of steadiness. I used a variety of rhythmic figures in my pieces, and played in duple meter exclusively. On the two occasions that rhythmic phrasing was salient in our co-improvisation, I synchronized with the length of Erica's phrases.

Tonal Elements. I used only one melodic instrument with Erica in a short duet for wooden flute (minor pentatonic) and handdrum. This piece was not analyzed.

Timbre. As shown in Table 1, the instruments I elected to play in our co-improvisations had a voice similar to Erica's. I stuck with one instrument throughout the course of a piece more often than I varied.

Texture. I used diverse playing configurations with Erica. At times I followed her lead, as in joining in with a tremolo that she initiated.

Volume. The level of intensity of my playing was fairly constant in my duets with Erica. The most notable exception was a nonreferential improvisation in which I played the tambourine and tubano along with Erica's doumbek. In this piece, volume was one of several elements to change frequently and abruptly.

My Verbal Meanings

My experience of improvisation with Erica was mostly intrapersonal, although interpersonal features did exist. Intrapersonal aspects of our music-making included feelings that were conjured within me as I

listened to Erica play, played with her, or analyzed the improvisations. These feelings were diverse and included (a) boredom and disappointment when Erica seemed to be “stuck in a rut”, (b) pleasure as I noticed her energy increasing and her affect brightening, (c) musical competence as I executed a particularly masterful rhythm, and (d) anxiety and confusion as I listened to Erica’s disintegrated beating. I also experienced compassion as I sensed her emotional vulnerability during “Peaceful Dreamy Love.” There were a few improvisations in particular in which I found little or no meaning.

I often felt as though our co-improvisations lacked musical reciprocity and intimacy. In fact, Erica usually closed her eyes while we improvised, saying it helped her to concentrate. This withdrawal rendered futile my attempts to make an interpersonal connection through eye contact or gesture. Interpersonal relations with Erica through verbal dialogue were equally tenuous, and I often experienced a sense of distance from her that prevented me from sharing my immediate reactions to our improvisations.

Case II: William

Introduction

William was a 17 year-old Caucasian male with a tall, thin build and red hair. He had light blue eyes that were slightly Oriental in cast, a trait he had inherited from his mother, who was of Japanese descent.

William was diagnosed with Major Depressive Disorder. His depression began at age nine. Secondary diagnoses included Attention Deficit Hyperactivity Disorder, Dysthymic Disorder, and Post Traumatic Stress Disorder. He had a chaotic and violent family history and recalls having been sexually abused at age three or four by a male family member. At the time of this project, William was on several medications, including Ritalin and Concerta for attention problems and Effexor for depression.

According to agency records, William exhibited many pathological symptoms that included difficulty sleeping, dysphoria, dissociation, low frustration tolerance, temper outbursts, emotional lability, and irritability. His mother reported incidences of opposition and defiance in the home. Additionally, both William and his sister regularly claimed to see ghosts named George and John.

Agency goals for William were to increase his motivation to complete tasks, stabilize mood, and decrease his outbursts of anger.

General Responses

William presented for three sessions with what seemed to be a lackadaisical attitude. He did not register much emotion on his face while playing or speaking, except for an occasional smile. He yawned frequently, stating that his medication made him sleepy. At times he appeared to be bored, although he denied this when asked.

William’s general approach to playing and the resulting musical products seemed haphazard and noncommittal at times. Frequently, he began improvising immediately upon selecting his instrument, sometimes while I was still speaking. As he played, he often slouched in his chair, yawned, and held his instrument or mallets loosely and without conviction.

Unlike the other study participants (who often had no words to describe their experiences or who gradually constructed their descriptions), William typically had an immediate and definitive response to my questions or comments. He was quite articulate and never seemed to need time to think about what he was going to say. He tended to be verbally interruptive.

Portrait of William

William and I had three sessions together, each one lasting approximately 40 minutes. In that time, he played a total of 10 improvisations. Of these, none were solo nonreferential, three were duet nonreferential, six were solo referential, and one was duet referential (see Table 2). Three of the four

categories are thus represented. Units were selected on the basis of how they illuminate varied aspects of William's experience.

Rhythmic Elements. William was able to integrate his playing with a pulse and sustain rhythmicity; however, he often chose to play in a disintegrated fashion. He was also capable of imitating and initiating short rhythmic patterns. Salient in William's rhythmic playing was a tendency to repeat specific dotted and syncopated fragments. These short motifs (three to four beats) appeared in both his nonmelodic and melodic improvisations. Although most of his rhythmic playing was in duple time, William occasionally and abruptly launched into 3/4 and 6/8 meters. He was the only study participant to use these meters significantly.

Tempo was rarely stable. Variability was especially salient in two referential improvisations that had many changes in speed, both gradual and sudden.

Tonal Elements. There was a notable lack of tonal center, melody, and harmony in William's improvisations. Although he played the metallophone for several pieces, he never demonstrated distinct melodic contours or coherent phrases. The only harmony occurred as random and fleeting bi-lateral beating on the metallophone.

Timbre. William used a great variety of timbres in his pieces and changed sounds often. Sometimes he selected more than one instrument, as in "A Part of My Personality That I Usually Keep Hidden," a referential improvisation in which William played the agogo bells, rainstick, triangle, jinglestick, and bongos.

Table 2
William's Improvisations

	Type	Instrumentarium
#1*	Duet Nonreferential	William—cabasa Susan—doubek
#2*	Duet Nonreferential	William—claves Susan—soprano glockenspiel
#3	Solo Referential "My Outspoken Personality"	William—bongos
#4	Solo Referential "A Part of My Personality That I Usually Keep Hidden"	William—agogo bells, rainstick, triangle, jinglestick, bongos
#5	Duet Referential "Blah"	William—alto metallophone Susan—tubano
#6*	Solo Referential "Annoyed"	William—alto metallophone
#7*	Solo Referential "Sad"	William—rainstick, guiro
#8	Solo Referential "Happy"	William—bongos, metallophone
#9	Solo Referential "My Inside and My Outside"	William—rainstick, ganza
#10	Duet Nonreferential	William—tubano Susan—tambourine

Note: Shading indicates improvisation was included in study analysis.

*See IAP analysis in Appendix C and hear the improvisations at: www.barcelonapublishers.com (go to the title page Qualitative Inquiries in Music Therapy)

Texture. Texture was also highly variable. Even when playing on just one instrument, William was inclined to exhaust its timbral possibilities by changing his playing configurations. For example, in one piece he played the rainstick by tilting, shaking, and rolling it while simultaneously tapping it against various surfaces.

Volume. William's intensity varied more than any other player's. His use of volume spanned all five variability gradients, from rigid to random. The greatest variability occurred in a piece entitled "Sad" in which William played the guiro with both gradual and abrupt changes ranging from *pianissimo* to *fortissimo*.

Noteworthy was William's unexpected use of volume at the ends of his solo pieces. For instance, in three of his lively and loud pieces on the metallophone, he finished with a descending scale followed by a soft, ascending glissando. And in "William's Outspoken Personality," the energy that he accumulated on the bongos through subdivision, loud tremolos, and syncopated rhythmic figures suddenly dissipated with four soft and idle strikes. In these cases, volume was connected to unresolved tension.

William's Verbal Meanings

At times William was hypervocal with distinct scarcity of content in his disclosures, as in the following exchanges:

- Susan: Wow, you used a lot of different instruments. Talk about what you did.
William: Um, I started with one at the start, and then I tried something new. And then I wasn't feeling it, and then I tried something else that was new and I didn't really like it, and then I tried something else that was new and didn't really like it; tried something else and then I liked it. And then I went back through, the same way; got to do the same thing over and over again. Try something new and if I don't like it, I keep trying until I make myself to like it.
- Susan: Can you talk about what about that felt sad or sounded sad?
William: Um, that certain things make me sad sometimes, but just a little bit like this, just a little bit. And then other things make me really sad and sometimes a little bit, and it can go from really not so sad to really sad and be really, really sad, and not so sad...

I noticed that William seemed to contradict himself at times, as in the following examples:

- Susan: Are you bored or just tired?
William: Tired. My medication makes me really tired.
Susan: Are you tired more in the mornings?
William: Yeah, because I take it in the mornings.
Susan: Uh-huh. OK. Well maybe we need to do something a little bit more rousing to keep you awake, huh?
William: No, actually I'm really awake.
- Susan: And then the big scrapes [on the guiro], they got louder.
William: Let people know, I'm sad, leave me the hell alone.
Susan: That almost sounds angry.
William: No, not angry. I just don't want people messing with me when I'm sad. I like my own personal space...
Susan: ...you used two instruments this time.
William: Yeah, this one [rainstick] because it sounds like somebody's crying. Like tears.

- Susan: So when you are sad, are tears a part of how you express that?
 William: Sometimes, yeah. Sometimes I just get angry when I'm sad.

In addition to contradicting his own words, William periodically made statements that seemed incongruous with his actions and affect. For example, he claimed that improvising was “fun” and that it helped him feel good; yet there was usually nothing about the manner in which he played nor in his facial expressions to support this assertion.

The analysis of data from session transcripts revealed less than desired about the essence of William's experience in improvisation. However, two aspects did emerge. During one moment in our work together, I took that opportunity to ask William directly about the meaning of the experience of improvisation. His response indicated that he found meaning in the ambiguous and creative nature of the improvisational process:

- William: You can do many, many different things with it. You can make it loud, you can make it quiet, you can...I don't know how to explain it, but yeah. You can show many different kinds of situations and things with the beats and the music behind it.
 Susan: Uh-huh, different types of situations. Today it was different types of feelings.
 William: Right.
 Susan: So for you, what did this session mean, if anything? Did it have any meaning for you?
 William: Not really. I liked the music, it was fun. I mean, I don't know what the meaning would be for me.
 Susan: Hm-mm.
 William: It lets out my art—my creativity side.
 Susan: Lets out your creativity?
 William: Yup.

The conversation continued, and William revealed that he had written and published poetry. He stated his preference for poetry over music and said that he was able to express himself much better through writing than improvising because he could use words to describe “situations and real life experiences.” He said that with music “you can't reach out and say, ‘Here, look at this. This is what I'm saying.’” He believed that music without words did not provide the “full effect” and that even music with words was vague and subject to interpretation:

- William: Even with words, it depends on what you think about it and what you take it as.
 Susan: Hm-mm. Yeah, because as I think about what you played today, there were times when you were really busy, active. And as I listen to that, it could be worry, it could be anxiety, it could have represented excitement, it...
 William: It could mean anything.
 Susan: ...could have represented happiness. I mean, it could mean many, many different things. So it kind of depends on the person who's playing and what their intention is?
 William: It doesn't just depend on that, either. It depends on the person who's listening.
 Susan: Uh-huh. Say more about that. That's curious.
 William: Because it depends on how you take it as. If you're just, like, a regular person and just thinking a lot about love and whatever, then you're going to take every song you hear as about love. Or, if you're a person who's more open-minded and you just think about everything in life, like love, happiness, sex, whatever, I mean, whatever you think about, you know. You open your mind, and you open your heart to it, and you hear many different things in many different songs.

Whenever he was asked to listen to and reflect upon an improvisation, whether referential or nonreferential, William tended to focus on the designative meaning of the specific musical elements

employed. These meanings were not consistently applied. For instance, in various pieces his loud playing represented his outgoing and opinionated personality, feelings of anger, or unbridled happiness. Soft playing represented William's states of sadness, aggravation, or withdrawal. To William, quick tempos depicted his hyperactivity.

William made few comments of an interpersonal nature. The statements he made related to feelings of sadness or aggravation that caused him to keep "others" away. He did not verbalize anything directly related to the relationship between us, musical or otherwise.

Portrait of My Experience of Improvisation With William

Rhythmic Elements. When improvising with William, I created an assortment of rhythmic figures. In two of our duets, these patterns were undifferentiated from the pulse; in the third, I attempted to fit my rhythms with William's expressions and fell away from the pulse when I was unable to do so. I yielded to William in the establishment of tempo and changes therein.

Tonal Elements. I used a tonal instrument in one duet with William. In this piece, I created a variety of cohesive melodies within a clear tonality.

Timbre. Timbre did not appear as a significant feature of my improvisations with William, but in all co-improvisations I selected an instrument with a timbre that contrasted with his.

Texture. With William, texture appeared minimally in the data related to my organization of the elements, standing in stark contrast to his extensive use of textural variations.

Volume. Like William's, my volume was variable, with both gradual and sudden shifts in intensity.

My Verbal Meanings

The majority of my comments related to intrapersonal processes and relationships. Statements reflected my ambivalence toward William's music and improvisational processes. Comments related to our first duet indicate that I had formed a positive impression of William's abilities to make music. I was pleased that he was able to sustain rhythmic patterns and organize them into meaningful phrases, and I was impressed with his creative use of the cabasa. I thought that William's solo improvisation, "Sad," appeared to be executed with intent and authenticity. As I listened to three more of William's solo referential pieces, however, my sentiments were less favorable. The rhythmic tension and lackluster endings bothered me. I did not perceive William's playing as attentive or intentional, and the manner in which he played did not seem congruous with my notions of the given referents. During our last duet, I felt frustrated because I had trouble organizing my rhythmic patterns to fit what William was playing.

Remarks of an interpersonal nature were scarce. Out loud, I acknowledged William's use of pulse and tempo to organize our co-improvisation in a meaningful way. I commented on his sad affect during "Sad" with the intent of validating what I perceived as congruent emotional expression. In notes related to my work, I wrote that I heard my rhythmic expressions as an attempt to push William into compliance.

Case III: Hayley

Introduction

Hayley, 14 years old, was one of two children born of a Caucasian mother and a Native American father. She was tall and well-groomed, with long brown hair and almond-shaped, wide-set, brown eyes.

Both Hayley's mother and her biological father (whom her mother never married) were alcoholic. Hayley's stepfather sexually molested her periodically from age three. At age seven, Hayley began having suicidal ideation related to the abuse. In seventh grade, she began having difficulty in school and ran away from home on three separate occasions. Prompted by knowledge of the abuse,

Hayley's mother initiated divorce from the stepfather when Hayley was 12.

Hayley's primary diagnosis was Post Traumatic Stress Disorder. She had low self-esteem and difficulty concentrating. Her secondary diagnosis was Adjustment Disorder With Conduct Disorder, Acute, manifested in her difficulty following rules, lying, verbal acting out, and running away. Finally, Hayley had Major Depressive Disorder, which was most evident in her suicidal thoughts and hypersomnia.

Treatment goals for Hayley were to increase her ability to cope with angry feelings and improve communication with her parents, increase responsible behavior (i.e., accept discipline, use respectful language, and not run away), and increase her ability to process thoughts and feelings related to her sexual abuse.

General Responses

Hayley described herself as shy. In general, she spoke in a quiet voice, responding to many of my questions by shrugging her shoulders and saying "I don't know." When asked how she felt, she typically said, "OK" unless nudged to say more.

Hayley had difficulty making choices, such as which instrument to play or how to begin playing. Despite my reassurances that there were no right or wrong responses in improvisation, Hayley said she was "afraid of making a mistake." She seemed eager to please. Just as she was reserved in her verbal expression, Hayley appeared physically constrained in her playing, especially at the start of the project.

Portrait of Hayley

Hayley and I met for four sessions. Each session lasted approximately 40 minutes. In all, she created 15 improvisations. Of these, ten were complete data sets (with accompanying transcripts). There were two solo nonreferential, two duet nonreferential, four solo referential, and one duet referential (see Table 3). The pieces chosen for analysis represent all four categories and were chosen on the basis of their ability to reveal diverse aspects of Hayley's experience.

Rhythmic Elements. Hayley's rhythmic integration was inconsistent; her playing was fused at times and overdifferentiated at others. Often there was no discernable pulse in her music, and she resisted my attempts to ground her playing. There was little rhythmic variation in her pieces, and they were typically brief, averaging just over one minute. Her lack of integration created substantial tension.

The tempi of Hayley's pieces were both stable and variable. She appeared to change speeds in order to accommodate the rhythmic disintegration that resulted from sensorimotor difficulties. Hayley tended to slow down when she experienced difficulty conserving a rhythmic figure. She assumed the lead in establishing the pace of one duet improvisation and deferred to my tempi in the rest.

Tonal Elements. Hayley took a particular liking to the alto metallophone, using it in four improvisations. Her melodic constructions were characteristically confined; she used only a few pitches within a narrow range and she used them in a repetitive way. She did not form clear melodic ideas, and she did not organize her playing within a key center. Hayley used no harmony.

Timbre. Initially, Hayley favored the tubano. As the sessions progressed, she explored a slightly wider range of timbres. In all analyzed improvisations, Hayley used a single instrument.

Texture. As with timbre, Hayley's use of textural aspects became more pronounced as the sessions continued. On the metallophone, she expanded her playing configurations from simple strikes to include tremolos and *glissandi*, and she added changes in register to her repertoire.

Table 3
Hayley's Improvisations

	Type	Instrumentarium
#1*	Duet Nonreferential	Hayley—guiro Susan—bongos
#2	Duet Nonreferential	Hayley—doumbek Susan—maracas
#3*	Solo Referential “Sadness” (and anger)	Hayley—tubano
#4	Solo Referential “Sadness”	Hayley—tubano
#5	Duet Referential “Conversation With Josh”	Hayley—tubano Susan—doumbek**
#6	Duet Nonreferential (no recording)	
#7	Duet Nonreferential (no recording)	
#8	Solo Nonreferential (no recording)	
#9	Solo Referential “Emotions” (no recording)	
#10	Solo Referential “Mom’s Lullaby” (no recording)	
#11	Duet Nonreferential	Hayley—alto metallophone Susan—rainstick**
#12	Duet Nonreferential*	Hayley—alto metallophone*** Susan—alto metallophone
#13	Solo Nonreferential	Hayley—ganza
#14	Solo Referential “My Inside and My Outside”	Hayley—alto metallophone
#15	Solo Referential “Anxious to See My Dad”	Hayley—alto metallophone

Note: Shading indicates improvisation was included in study analysis.

*See IAP analysis in Appendix C and hear the improvisations at:
www.barcelonapublishers.com (go to title page Quantitative Inquires in Music

Therapy)

**Client selected instrument(s) for Therapist

***Therapist selected instrument(s) for Client

Volume. Hayley’s use of volume was equally stable and variable. She tended to follow my lead, whether increasing or decreasing in intensity. In one particular solo piece performed on the ganza, Hayley used an exceptionally wide dynamic range, from *pianissimo* to *fortissimo*. Changes were mostly gradual.

Hayley's Verbal Meanings

In the initial session, Hayley expressed feelings of nervousness. She also stated that she was shy, and these two aspects of her demeanor contributed to a paucity of verbal expression. When she did speak, Hayley's verbal expressions usually related to intrapersonal experiences, such as thoughts and feelings she had about the music and the music-making.

During our first session when Hayley was asked to comment on her experiences in improvisation, she said, "It was fun" or "It was different." Later in the session, Hayley became more forthcoming about what she was thinking and feeling. She formed a metaphor, saying, "I guess it'd be like life. Like you start out, and you're kind of curious about everything and then you go through life and then you die." She was describing her own musical process: exploring her chosen instrument (timbre, texture), moving through the piece (rhythm), and finally tapering off (volume) at the end. This reference led to a discussion about the accidental death of Hayley's friend, which had occurred just one day before our session.

For Hayley, improvising often seemed to be a difficult and uncomfortable undertaking. Comments were congruous with this notion; she frequently stated that it felt "weird" and that she was worried about how she was going to sound.

Rather than playing or discussing the feelings she was experiencing in the moment, Hayley tended to create and talk about emotions that she had experienced in other times and places. She spoke in generalities with a flat affect. After one particular piece, she said matter-of-factly, "It got out my anger. It got it out, I guess. Isn't that what you're supposed to do? Yeah, like with this little music thing?"

Like some of the other study participants, Hayley made connections between her organization of musical elements and specific feeling states, as in the following statements:

- Sadness was more like the softer sound I think, and anger was more like when I hit there [in the middle of the drumhead].
- [It was] kind of loud, but kind of soft, kind of like when you're crying...yeah, like if you cry, every now and then you'll get louder and then you'll go a little bit deep...like lower, and then louder again.
- Yeah, but I hit it a little harder... 'cause it represented the inside...hurt inside.

Hayley had specific associations with specific sounds. For example, she paired the timbre of the metallophone with images of rain and water flowing as she created one solo piece. In another session, the ringing sound of the instrument reminded her of background music for horror movies. Finally, the same sound triggered images of Hayley's mother singing a lullaby.

Hayley made very few comments of an interpersonal nature. After one duet, as we listened to and talked about the music, Hayley claimed responsibility for the ending of the piece, believing she had initiated changes in volume and tempo. The only other comments relating to our relationship through music were statements about a co-improvisation on the alto metallophone. Hayley felt a connection with me through a shared pulse and chose the piece as a favorite of the session because "we connected at the end." When asked to compare the experience of playing by herself and playing with me on the same instrument, Hayley noted that "there was more sound coming from us...and there was different pitches 'cause we made different sounds with the different mallets" but that the experience did not feel different in any way.

Portrait of My Experience of Improvisation With Hayley

Rhythmic Elements. I tended to play in a highly rhythmic way with Hayley, except in our referential piece, "Conversation With Josh." In this piece, my rhythms were chaotic, more like "sound spurts" than

developed patterns. I followed Hayley's tempo in one improvisation, slowing my playing along with a *ritardando* she initiated.

Tonal Elements. In our tonal duet, I played in both an overdifferentiated and undifferentiated manner. Tonal expressions were erratic in the beginning of the piece and became increasingly grounded in tonality as the music continued. My melodic configurations were varied.

Timbre. My timbre was stable and fused with Hayley's in our improvisation on the alto metallophone. In other pieces, timbre was both stable and varied. This element did not figure prominently in my co-improvisation with Hayley.

Texture. Texture was not mentioned once in the account of my organization of the musical elements, indicating that it was not a salient feature.

Volume. The level of my intensity in my improvisations with Hayley changed as much as it stayed the same. In one piece, I acted as leader and Hayley played according to the volume that I established.

My Verbal Meanings

Two particular improvisations generated an abundance of intrapersonal and interpersonal meanings for me. The first was a referential improvisation entitled "Conversation With Josh." In response to this piece, I wrote about the excitement I experienced as a result of the dynamic and immediate nature of the music. This was significant in that Hayley's prior improvisations (both solo and duet) had lacked vigor and reciprocity. I liked the sense of uncertainty, of not knowing what either one of us would play next. My comments also indicated that I felt dissatisfied with the abrupt ending, although I did not share that with Hayley directly.

The second piece of particular import was a duet on the alto metallophone. From the beginning, this piece represented my desire for musical intimacy. We shared an instrument at my request, and I took to heart the responsibility inherent in that decision. I felt a sense of duty to provide a safe, holding environment for Hayley's expressions. I wrote that settling into a pulse and shared rhythmic pattern contributed to our connectedness, and that her willingness to join with my pulse, tempo, and meter was a communicative act of significance, given that she had resisted my rhythmic overtures in previous improvisations. I also scribed that in developing an *ostinato*, I not only provided a holding structure for her, but provided myself a respite during which I could really listen to what was happening. My comments reflected that I was deeply moved by the beauty and tenderness of the ensemble and that this was one of the most meaningful improvisations that I had experienced with her.

Other statements from my work with Hayley related to my perceptions of her creativity, tenacity (length of improvisation), and rhythmicity. Each was noteworthy because these features were not the norm.

Case IV: Chrissy

Introduction

Chrissy, age 13, was tall and thin with long brown hair. She came from a chaotic family of five children. Her mother had a history of severe drug and alcohol abuse. Her father worked sporadically in construction. Chrissy's parents separated when she was six years old. Shortly after the separation, one of her mother's boyfriends physically assaulted both Chrissy and her younger sister. From age 10 to 12, Chrissy lived with her father; at the time of this project, she was again living with her mother, who allegedly had been drug- and alcohol-free for two years.

Chrissy carried a variety of mental health diagnoses. Her Depressive Disorder was manifested in mood lability and irritability. Her Oppositional Defiant Disorder was evident in her verbal and physical aggression toward others, stealing, tendency to bully, unstable peer relations, and general defiance of authority. Just prior to her admission to IYS, the juvenile court had placed Chrissy in detention due to a

school suspension for fighting. She was described by site staff as being manipulative, clingy, demanding, and unruly.

Chrissy also had Attention Deficit Hyperactivity Disorder, which was revealed in her impulsivity, poor grades, and difficulty sleeping. Her medications included Risperdal and Zoloft.

General Responses

In our sessions, Chrissy initially presented herself as childish and dependent. Her voice was high-pitched and whiny, and her verbalizations were simplistic and concrete. Gradually, she revealed problematic aspects of her disposition, in particular, her impatient, angry, and spiteful way of interacting with peers in the program.

Portrait of Chrissy

Chrissy and I met for a total of five sessions. Sessions one through four lasted approximately 40 minutes. The final session was 15 minutes long. During our time together, Chrissy played 15 improvisations, including 1 solo nonreferential, 8 duet nonreferential, 4 solo referential, and 2 duet referential (see Table 4). A proportionate sample was chosen for analysis, particularly those pieces in each category that contained varied musical and/or verbal material for comparison with other selections.

Rhythmic Elements. Chrissy's rhythmic expressions ranged from fused to overdifferentiated. In other words, at times her playing converged with an underlying pulse, and at other times she played in contrast to it. She was capable of forming and sustaining well-developed rhythmic patterns. Chrissy's signature rhythm was a syncopated figure in duple meter. She was prone to using this rhythm in both nonmelodic and melodic improvisations and was very aware of its presence. Interestingly, Chrissy's tempi were the most stable of all participants between improvisations and the most random within one particular referential improvisation, "Angry Conversation."

Tonal Elements. Only one of Chrissy's improvisations involved the significant use of a melodic instrument, the alto metallophone. In this piece, she played with no tonal center, no cohesive melodic patterns, and no harmony. Pitches were randomly yet evenly placed.

Timbre. At the beginning of the project, Chrissy was quite eager to play the instruments. She found the drums to be highly stimulating and tended to play the tubano most often with mallets. Over time, her use of instruments grew more varied, and she began selecting multiple instruments for single improvisations, both prior to and during the actual pieces. Chrissy experimented with different sounds on each instrument she selected.

Texture. Texture was both rigid and variable in Chrissy's playing. Particularly in the final sessions, she became more confident using a variety of playing configurations. At one point, she tapped the claves together while sliding one across the head of the drum.

Volume. Chrissy's intensity was rigid or stable in some improvisations and variable in others. She used volume to create cyclic tension in one piece. In another, she assumed leadership on the doumbek. In this same piece, she struck the drum so hard that her hands became numb.

Table 4
Chrissy's Improvisations

	Type	Instrumentarium
#1	Duet Nonreferential	Chrissy—djembe (mallets) Susan—tambourine
#2	Duet Nonreferential	Chrissy—djembe (mallets) Susan—tambourine
#3*	Duet Nonreferential	Chrissy—djembe, tubano, handdrum Susan—tambourine, doumbek, cabasa

#4	Solo Referential “Sad, Depressed, and Guilty”	Chrissy—tubano (mallets), bongos (mallets)
#5	Solo Referential “Anger”	Chrissy—djembe, tubano, doumbek, claves
#6	Solo Referential “Happy”	Chrissy—handdrum, tubano
#7	Duet Nonreferential	Chrissy—doumbek Susan—maracas
#8	Duet Referential “The Tiger Rainforest”	Chrissy—doumbek, handdrum, cymbal, glockenspiel Susan—rainstick**
#9	Duet Nonreferential	Chrissy—talking drum Susan—guiro
#10	Solo Referential “Angry”	Chrissy—djembe, claves, handdrum, doumbek (mallets)
#11*	Duet Referential “Angry Conversation”	Chrissy—tubano (mallets) Susan—tambourine
#12	Duet Nonreferential	Chrissy—doumbek Susan—guiro**
#13	Duet Nonreferential	Chrissy—bongos (mallets) Susan—alto metallophone
#14	Duet Nonreferential	Chrissy—tubano (mallets), handdrum (mallets) Susan—tambourine, cabasa, doumbek
#15*	Solo Nonreferential	Chrissy—alto metallophone

Note: Shading indicates improvisation was included in study analysis.

*See IAP analysis in Appendix C and hear the improvisations at:

www.barcelonapublishers.com (go to title page Qualitative Inquiries in Music Therapy)

**Client selected instrument(s) for Therapist

Chrissy’s Verbal Meanings

At first, it took a great deal of effort to elicit verbalizations from Chrissy. Her initial comments pointed to her insecurity; once she had what she considered success on the drums, she turned her attention to her enjoyment, saying, “I love this, I don’t want to stop,” and “It was fun, felt good.”

Chrissy made concrete associations with the music we created, stating, “At the beginning, it sounded like a giant was coming,” “This drum sounded like the tiger was coming,” and “The cymbal was like the wind.”

Although difficult for her to articulate in detail, Chrissy did experience immediate feelings while she played. Some of those included happy, excited, scared, and lonely. When asked, she indicated that she never felt sadness when she was playing. In our final session, Chrissy said, “...I made it loud for anger and stuff, ‘cause I have an anger problem, so that’s why I played anger a lot.” I asked her if when she played anger it was because she was feeling angry in that moment and she said that it was not; rather, her playing was a representation of how her anger feels when she feels it.

Interpersonal meanings revolved around Chrissy’s immediate responses to me and my music-making. For example, after attempting to play with me note-for-note, she stated that she was scared and frustrated because I was going too fast and she could not keep up. In another, she expressed that she liked the part in the music “where we came together, kind of made music instead of doing our own thing.” Finally, in “Angry Conversation,” Chrissy responded to the aspects of our playing that caused her to feel

like she was really arguing with another person: our differential timbres, the back-and-forth, forceful nature of our expressions, and the “interruptions.”

When given a choice, Chrissy preferred to play with me, saying she was lonely when playing solo improvisations. Asked if the sessions had any meaning for her overall, Chrissy replied that they did not.

Portrait of My Experience of Improvisation With Chrissy

Rhythmic Elements. In all but one referential improvisation with Chrissy (“Angry Conversation”), my playing was grounded in a pulse. I formed varied rhythmic figures in duple meter, including syncopated patterns, and imitated many of Chrissy’s expressions.

I both led and followed with respect to rhythmic elements; however, I mostly depended on Chrissy to establish initial and evolving tempi. There were a few times when I maintained a steady pulse while Chrissy moved from one instrument to another.

Tonal Elements. I played one tonal instrument with Chrissy, the alto metallophone. In this piece, I grounded my melody in D Dorian. Phrasing was complete and symmetric.

Timbre. As a rule, I played one or two instruments in my co-improvisations with Chrissy. In cases where I played more than one instrument, it was not uncommon for me to select one during the course of the improvisation, in response to an instrument that Chrissy had chosen in the moment. In two instances, she determined my “voice.”

Texture. Overall, I tended to incorporate Chrissy’s playing configurations into my own improvising. These included single strikes, polyphonic playing with two mallets, shaking, scratching, and tremolos.

Volume. Volume was a significant aspect of my playing with Chrissy. I both maintained and varied volume levels in our co-improvisations, often in response to her changes. In one referential piece, changes were sudden and extensive, and here, volume was used along with rhythmic elements to create substantial tension.

My Verbal Meanings

Initially, Chrissy was hesitant and lacked confidence. Thus, a good share of my comments were directed at encouraging her to attempt to make music or acknowledging the expressions she had just made. Examples of such statements include, “Yeah, yeah. Don’t be shy,” “You’re doing great, don’t quit,” and “Whatever comes out is just fine. Just do what feels right.”

There were times that I registered surprise at something that Chrissy had done. For example, in one session she was particularly lethargic and was complaining of fatigue, yet she played with significant energy and intention. In another, I was baffled by Chrissy’s decision to align with my playing, note-for-note. This was nothing she had ever done before, and it took me by surprise. In another piece, “Sad, Depressed, and Guilty,” I was taken aback by both the uncharacteristic brevity of Chrissy’s playing and the tenderness she expressed through tempo and volume.

I shared a few comments with Chrissy of an interpersonal nature. The piece, “Angry Conversation” stirred in me a sense of immediacy that I revealed as pleasurable. I also described to her that I could feel a low level of anger as we played, and that my persistent and interruptive playing reflected my stubborn nature. In another improvisation, I told Chrissy that I felt musically interconnected through our shared pulse and rhythmic figures.

Case V: Tanisha

Introduction

Because I was a volunteer at ITU, and in accordance with agency policy, I was not allowed to view

Tanisha's files. The following information was gathered from brief, informal interviews with Tanisha and site staff.

Tanisha turned 14 years old during the study. She was African-American with light brown skin and a stern face that brightened considerably when she smiled or giggled. Her arms were covered with superficial scars that agency staff assumed had been self-inflicted.

Tanisha never knew her mother or father. From the time she was born until the present, she had been in and out of foster care, group homes, and residential treatment facilities. In all, she had been in 23 different placements. Prior to coming to ITU, Tanisha had been in a foster home for over a year and was close to being adopted. It was said that she sabotaged the adoption process by acting out.

General Responses

Tanisha's response to improvisation could be described as a blend of polite obedience, childlike curiosity, and interpersonal caution. Her affect was mostly flat, yet punctuated with artificial smiles during conversation and heartfelt giggles while playing. It appeared as though she laughed both when pleased and when embarrassed following what she perceived as a failed attempt to produce, imitate, or conserve a certain sound.

Overall, Tanisha seemed to avoid verbal expression. I found it difficult to sustain a dialogue with her about her experiences in improvisation. She typically answered questions in one of two ways: either she was terse, or her responses were run-on sentences without much focus. She tended to ask questions about the instruments as a diversion from conversation about her thoughts and feelings. I noticed she frequently dissociated while I was speaking to her and also while she listened to the recorded improvisations.

Portrait of Tanisha

In all, Tanisha and I met three times. She played 2 solo nonreferential, 6 duet nonreferential, 3 solo referential, and 1 duet referential improvisation, for a total of 12 pieces (see Table 5).

Rhythmic Elements. Tanisha's playing was highly rhythmic. She was able and frequently elected to play with a clear, unwavering pulse. Her rhythmic figures were simple but well-formed, and these were repeated both within and between her improvisations. Tanisha tended to imitate my rhythmic patterns as well. She was able to alter the rate of her playing in a fluid manner, and she both initiated tempi and followed my lead.

Tonal Elements. Tanisha used the soprano glockenspiel and the alto metallophone in her improvisations. On the first instrument, her playing was more rhythmic than melodic, as she repeated a dotted rhythm in a random sequence of ascending pitches. On the metallophone, Tanisha formed complete melodic ideas with a variety of tonal patterns. She did not establish a clear tonal center. Tanisha did not create harmony.

Timbre. The instruments held great attraction for Tanisha. She was especially drawn to the crash cymbal and the soprano glockenspiel, which she recalled having played in kindergarten. In her very first improvisation, Tanisha moved from one instrument to the next, exploring seven different voices in a random sequence. As a rule, however, Tanisha played a single instrument in each improvisation. She found numerous ways to produce sound on each one and seemed particularly attentive to changes in timbre. In one of our last improvisations, when Tanisha was feeling depressed, she selected the triangle—an instrument with limited timbral potential—and played it with an uncharacteristic lack of expression.

Texture. Tanisha's playing was entirely monophonic. As indicated above, she did vary timbre frequently and did this primarily through altering her playing configurations.

Volume. Tanisha's use of volume was both stable and variable. She tended to depend on me to establish levels of intensity. As a rule, she played at a *mezzo-forte* level, saying she did not like to be loud. In one of her solo pieces, a sustained *pianissimo* on the crash cymbal created a high level of tension; she was the only participant to use a subdued volume level in this way.

Table 5
Tanisha's Improvisations

	Type	Instrumentarium
#1	Duet Nonreferential	Tanisha—soprano glockenspiel, rainstick, claves, finger cymbals, crash cymbal, agogo bells, cabasa Susan—bongos, finger cymbals, doumbek, djembe
#2*	Duet Nonreferential	Tanisha—ganza Susan—doumbek
#3	Duet Nonreferential	Tanisha—guiro Susan—bongos
#4	Solo Referential "Fear"	Tanisha—soprano glockenspiel
#5	Solo Referential "Angry"	Tanisha—soprano glockenspiel
#6*	Solo Referential "Loneliness"	Tanisha—crash cymbal (brushes)
#7*	Duet Referential "Angry Conversation"	Tanisha—bongos (mallets) Susan—tubano, cymbal
#8	Duet Nonreferential	Tanisha—triangle Susan—talking drum
#9	Solo Nonreferential	Tanisha—alto metallophone
#10	Duet Nonreferential	Tanisha—claves Susan—rainstick
#11	Duet Nonreferential	Tanisha—talking drum Susan—bongos
#12	Solo Nonreferential	Tanisha—alto metallophone

Note. Shading indicates improvisation was included in study analysis.

*See IAP analysis in Appendix C and hear the improvisations at:

www.barcelonapublishers.com (go to title page Qualitative Inquiries in Music Therapy)

Tanisha's Verbal Meanings

As noted above, Tanisha tended to avoid dialogue. When she did speak, she did not focus on her internal experiences, but rather talked about what had happened or what she had heard. She seemed resistant to sharing her feelings with me at times. After a series of solo improvisations based on emotional referents, Tanisha stated that it was easier to play feelings than to talk about them.

Tanisha claimed to enjoy improvisation, making statements such as "I like this," and "This was really fun." On one occasion, she described feeling "weird" in response to playing loudly, saying, "I don't really like being loud."

Tanisha made a few comments that reflected her tendency toward self-criticism. It seemed important to her to be able to maintain a steady pulse and conserve rhythmic patterns, especially when she was playing by herself. She made references to "messing up" and not being able to "keep a rhythm that was more steady." She mentioned that sometimes she played more softly than I did in order to hide her mistakes.

For Tanisha, sounds and the way they were put together frequently reminded her of other things and events. She described one improvisation as “somebody coming from the distance and you can hear them coming closer and closer...” The finger cymbals reminded her of a Barbie doll because they were small, and certain percussive sounds triggered images of “Jungle Book.” In one case, Tanisha described our co-improvisation as being like two tribes competing on the drums.

Musical communication was evident and seemed important to Tanisha. The improvisations she enjoyed the most were those in which we shared a pulse, engaged in rhythmic imitation, or playfully attempted to “keep up” with one another. After one duet, Tanisha said she thought the reason the piece sounded “dead” was because “we weren’t communicating...like before when we were actually listening to each other.”

Portrait of My Experience of Improvisation With Tanisha

Rhythmic Elements. My rhythmic integration spanned three gradients with Tanisha—fused, integrated, and overdifferentiated. Most of the time I played in a grounded fashion, using pulse and simple subdivision. My rhythmic figures were variable and more complex than those in improvisations with other participants. There was a fair amount of motif imitation between Tanisha and me, and most of the time I led the way. I was both a leader and partner in determining the tempi of our playing.

Tonal Elements. I did not play a tonal instrument in the analyzed co-improvisations with Tanisha.

Timbre. Just as I fused rhythmically with Tanisha, I also fused in timbre during our first improvisation together, synchronizing with her sounds on the finger cymbals. In the remaining pieces, my timbre was distinctly different from hers.

Texture. Texture variability revealed itself in changes in playing configurations. With Tanisha, I was a follower, responding to her configuration changes with identical or similar changes.

Volume. I was clearly the leader in establishing and changing volume levels in our co-improvisations. I tended to use less of a dynamic range with Tanisha than with other participants.

My Verbal Meanings

Comments of an intrapersonal nature reflected less of a focus on my own reactions and feelings and more of a focus on Tanisha’s musical expressions. I noted when she appeared to be enjoying an improvisation or a particular instrument; I commented on unusual aspects of her playing (such as when she organized volume in an atypical way), and I attended to her apparent motivation or intentionality. I perceived Tanisha as emotionally constricted, and I desired to help her relax and experience the freedom of true self-expression through music. Many of my comments to her reflected this desire to empower and reassure her that there were no expectations to “perform”:

- You can choose anything you like. I want you to know that it’s OK for you to play these instruments all different kinds of ways. There’s not one correct way.
- It doesn’t have to be like any beat you’ve ever heard before; you can just do your own thing.
- Music can be about self-expression, and sometimes you need to have a lot of different sounds to express yourself.

Other interpersonal aspects of my sessions related to my delight at having made a significant connection with Tanisha through our music-making. There were times that our respective playing somehow interlocked, and these moments were particularly meaningful to me when Tanisha recognized and valued them as well. Also meaningful were moments of playfulness, when the music felt like a game of give-and-take and the spontaneity brought us both to heartfelt laughter.

Case VI: Ralph

Introduction

Because I was a volunteer at ITU, and in accordance with agency policy, I was not allowed to view Ralph's files. The following information was gathered from brief, informal interviews with Ralph and site staff.

Ralph was a stocky, dark-haired, 12 year-old Caucasian male. He had been a resident of the ITU for approximately four months. Prior to that, he had lived with his grandmother and grandfather about 50 miles away. Ralph reported that his mother was seriously ill and had been hospitalized for some time. It was unclear whether the illness was physical or psychiatric in nature.

Site staff indicated that Ralph had slight perceptual and cognitive delays and that he was immature for his age. No diagnosis was revealed, although staff stated that he frequently had temper tantrums during which he yelled, kicked, and threatened others. It was presumed but unconfirmed that Ralph was taking medication to control his outbursts and other pathological symptoms.

General Responses

Ralph approached all sessions with eager readiness. He explored the instruments willingly and thoroughly. I was surprised that he was able to find unique ways of playing that none of the other participants had considered.

Like Chrissy and Tanisha, Ralph made periodic self-degrading comments during initial sessions, such as "I can't do it" and "I can't make that good beat." These statements may have reflected insecurity about his prowess in a new situation. They may also have indicated a poor self-image across contexts. In any event, Ralph did not give up in spite of his poor opinion of his own playing, and by our last session, all self-critical comments had ceased.

In general, Ralph initiated very little conversation about the music-making, and his responses to my probes were brief. It was difficult to discern, even at the end of the project, if this paucity of verbal expression was related to Ralph's wariness of a relationship with me, his reported cognitive delays and resulting concretization of experience, or a combination of these or other factors.

Portrait of Ralph

Ralph met with me 3 times and created 10 improvisations (see Table 6). Four pieces from Session 3 could not be audio-recorded because there was a nonparticipating adolescent in the room at the time the session occurred. The six remaining improvisations were analyzed.

These included three solo nonreferential, three duet nonreferential, and one solo referential piece.

Rhythmic Elements. Ralph was able to keep a steady beat on the instruments, but sometimes he elected not to do so. His playing spanned four gradients on the integration profile: fused, integrated, differentiated, and overdifferentiated. Ralph experimented with a variety of rhythmic motifs, including simple subdivisions and more complex syncopated patterns. He also used arrhythmic sound forms in his improvisations. Ralph's tempi were more stable in initial improvisations. In later works, he employed more variety through *ritardandi* and accelerating tremolos that served to create cyclic tension.

Tonal Elements. Ralph's use of the glockenspiel and metallophone were rhythmic in nature. He played each of them predominantly in a scalar fashion, up and down, with no distinct melody and no particular tonal center.

Table 6
Ralph's Improvisations

	Type	Instrumentarium
#1	Duet Nonreferential	Ralph—tubano (mallets), cymbal Susan—djembe
#2*	Duet Nonreferential	Ralph—agogo bells, glockenspiel, cymbal Susan—cabasa, tubano
#3	Solo Nonreferential	Ralph—guiro
#4*	Duet Nonreferential	Ralph—bongos, tubano, cymbal Susan—doubek, glockenspiel**
#5*	Solo Nonreferential	Ralph—bongos, tubano, claves, cymbal
#6	Solo Nonreferential	Ralph—cymbal, xylophone
#7	Solo Referential “Sadness”	Ralph—xylophone, rainstick, maraca, cymbal
#8	Duet Nonreferential	Ralph—tubano Susan—maracas
#9	Duet Referential “The Hospital”	Ralph—tubano, bongos, cabasa, cymbal Susan—glockenspiel
#10	Solo Nonreferential	Ralph—tambourine (mallets)

Note: Shading indicates improvisation was included in study analysis.

*See IAP analysis in Appendix C and hear the improvisations at:

www.barcelonapublishers.com (go to title page Qualitative Inquiries in Music Therapy)

**Client selected instrument for Therapist

Timbre. Ralph organized his use of timbre in varied ways. He enjoyed creating multiple sounds on each instrument, and he experimented with unusual combinations of sound, such as striking the finger cymbals lightly on the crash cymbal to combine the timbres, and using the butt end of the mallets to strike the metallophone. His favorite instrument was the crash cymbal on a stand, which he used in all but one of the analyzed improvisations. He used this instrument in a very meticulous fashion, typically striking it once at the end of a drum roll to signal the finale of a piece or to demarcate sections within a piece. In solo improvisations, this was one way he created a meaningful form for his music. In co-improvisations, he used it in the same manner and, as such, it became a means of communicating with me about his intentions.

Texture. As with timbre, Ralph's textures were highly variable. More than any other participant, Ralph played polyphonically, creating up to three layers of sound at any given time. It became a self-imposed challenge for him to figure out ways to play more than one instrument in a meaningful and coordinated fashion.

Volume. Volume was a significant feature of Ralph's improvisations. He used changes in intensity to create and release tension. More than the other participants, Ralph tended to pair dynamic changes with modifications in other elements, such as playing configuration (launching into a tremolo) and tempo (initiating an *accelerando*).

Ralph's Verbal Meanings

Ralph thought that improvisation was “fun and cool.” He repeatedly used these words to describe his music-making experiences and his creations. When pressed to go into more detail, Ralph would frequently provide an account of how the music resembled or referred to something else. For example, his rhythmic patterns reminded him of rap music, the gong of China and Chinese movies, and the loud

and soft playing of his mother and the ways in which they communicated.

In one particular improvisation, Ralph talked about feeling as though he “messed up” repeatedly. He told me he was trying to play the same beat throughout the improvisation and each time his rhythm changed he believed it was a mistake. The only part that felt right to him was the ending, which, like so many pieces before it, consisted of a tremolo leading to a single *fortissimo* cymbal crash.

Ralph commented that he took his anger out on the instruments rather than taking it out on himself. This was significant, in that he had a history of banging walls and engaging in other self-injurious behaviors when he felt frustration or rage.

Ralph initiated no statements related to the interpersonal aspects of improvisation. When asked if he was aware of my music during co-improvisations, he indicated that he was wrapped up in his own music. On another occasion, while listening to an audiorecording of a duet, Ralph was asked to identify moments of intermusical connection. He raised his hand frequently when we shared a common pulse or interwove our rhythmic figures.

Portrait of My Experience of Improvisation With Ralph

Rhythmic Elements. My tendency with Ralph was to play well-formed and diverse rhythmic phrases with a steady pulse. In most cases, I assumed the role of follower, allowing Ralph to determine rhythmic aspects of our improvisations. He often began each piece by counting “one-two-three,” which set the initial tempo. I imitated his motifs in all but one duet.

Tonal Elements. I played the glockenspiel in one improvisation; Ralph chose this instrument for me. My melodies were formed of repeated notes and short scalar passages in Phrygian mode. Phrases were symmetric.

Timbre. Timbre did not appear to be a significant feature of my co-improvisations with Ralph.

Texture. Like timbre, texture did not figure predominantly in my duets with Ralph. I both deferred to his changes in playing configuration (following his tremolos) and led him into changes (initiated a tremolo).

Volume. I tended to yield to Ralph’s volume, except in one improvisation in which I was attempting to catch his attention. In this particular case, my intensity varied abruptly.

My Verbal Meanings

As I listened to Ralph’s solo pieces, I found myself feeling pleased and impressed. He was able to play in an organized and expressive fashion, and he was fairly confident in spite of his verbalized self-doubts. I was particularly struck with the intentionality with which Ralph manipulated the musical elements to produce a desired result.

In general, I did not feel connected to Ralph through our music-making in the same way I experienced musical inter-relatedness with the other participants. Ralph was very focused on sounding the instruments and in forming his own creations, and I wrote that he seemed oblivious to me. As a result, I often felt like an observer rather than a participant, even during our duets. When this sense of estrangement occurred, I looked for ways to re-connect with Ralph, either by synchronizing with some aspect of his playing or by introducing a sudden change that captured his attention.

DISCUSSION

This section serves as a synthesis of the results presented above. The information that follows is divided into two parts. The first part relates to how the players organized the musical elements in service of meaningfulness, both intramusically and intermusically. In this section, I summarize, compare, and contrast findings related to how the participants went about employing rhythmic (pulse, tempo, meter, subdivision, rhythmic pattern and phrasing), tonal (modality, tonality, melody, and harmony), and sound

(timbre, texture, volume) elements into meaningful musical wholes in solo and duet improvisations.

The second part is organized according to intrapersonal and interpersonal meanings explicated by analysis of the textual data. In each of the two parts, I present findings for the participant data first, followed by findings related to my own experiences. Lastly, I make comparisons between the participants' and my experiences.

Organization of Musical Elements

Intramusical and Intermusical Findings: Participants

The Participants Were Inclined Toward Rhythmicity. Table 7 presents findings for the use of rhythm for all participants. Overall, among these adolescents,

Table 7
Meaningfulness Through Rhythm: Participants (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
ERICA	Fused (1) Integrated (1) Differentiated (7)	Stable (3) Variable (1)	Tense (2)	Follower (2) Leader (1)
WILLIAM	Fused (1) Integrated (1) Differentiated (2) Overdifferentiated (4)	Stable (4) Variable (1)	Tense (2)	Follower (2) Leader (1) Resistive (1)
HAYLEY	Fused (2) Integrated (1) Differentiated (1) Overdifferentiated (2)	Rigid (2) Stable (2)		Follower (1) Leader (1) Resistive (2)
CHRISSY	Fused (1) Differentiated (1) Overdifferentiated (2)	Stable (1) Variable (1) Random (1)	Calm (1)	Dependent (1) Leader (1)
TANISHA	Fused (2) Integrated (2) Differentiated (1) Overdifferentiated (1)	Stable (3)	Tense (1)	Dependent (1) Partner (1)
RALPH	Fused (2) Integrated (1) Differentiated (3) Overdifferentiated (1)	Variable (1)		

rhythmic playing appeared to be preferred over arrhythmic playing. All individuals made a concerted attempt to align their music with a consistent pulse at some point in nearly every improvisation, whether solo or duet. For most participants, this inclination appeared at the start of each piece and recurred throughout. Every teen was able to create music with a steady beat, but only half were able to sustain a pulse for a two to three minute improvisation on their own. All participants “fell away” unintentionally at some point during their playing. The tendency to lose a pulse was reduced in duet improvisations. In general, rhythmic integration occurred just slightly more than rhythmic disintegration, the profile gradients ranging from fused to overdifferentiated across cases.

Rhythmicity Was Hampered by Various Factors. Some participants' inclination toward rhythmicity was hampered by sensorimotor challenges. In other words, the adolescent's desire to play in an even fashion was somewhat limited by his or her ability to sustain control over the physical production of sound. On the drums, some players played more rhythmically when using mallets; others played more rhythmically when using their hands. Certain individuals had difficulty manipulating certain instruments due to the fact that each hand had a different function to perform, as with the cabasa, claves, and talking drum, for example.

Two individuals mentioned that their lack of rhythmicity was related to their present psychological functioning. Fatigue, confusion, and depression were among the feeling states mentioned as having influenced these players' ability to find a beat. For these individuals, an awareness of the arrhythmic nature of their playing was a source of discouragement or frustration. During retrospective listening, these players tended to evaluate their playing in a negative way.

Signature Rhythms Were Common. Five of the six participants had signature rhythms that they employed consistently, both within singular and across all improvisations. These rhythms appeared in solos and duets as well as referential and nonreferential improvisations. It was not uncommon to find these rhythmic figures expressed on the melodic instruments as well. It is uncertain to what extent the participants were aware of this tendency to repeat rhythmic motifs as they constructed music. At least one player was aware that a syncopated pattern permeated her improvisations; she commented more than once on how difficult it was to avoid this rhythm in spite of her desire to play something else.

The Use of Tempo Was Varied. Tempo varied across all cases. Here, as with rhythmicity, certain participants appeared to modify tempo more in response to their lack of control over the sensorimotor aspects of sound production than their activated desire to change the rate of their playing. These tempo changes were subtle or fleeting.

At other times, individuals freely and deliberately used a wide range of tempi, and this occurred most often in solo and referential improvisations. Across participants, variability of tempo ranged from rigid to random. Findings for tempo appear in Table 8.

Table 8
Meaningfulness Through Tempo: Participants (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
ERICA		Stable (2) Variable (3)		
WILLIAM		Stable (1) Variable (2) Contrasting (1)	Tense (1)	Leader (2)
HAYLEY		Stable (1) Variable (2)		Leader (1)
CHRISSEY		Stable (2) Variable (2) Random (2)		Leader (1)
TANISHA		Variable (1)		Dependent (1) Partner (1) Leader (1)
RALPH		Stable (1) Variable (2)	Cyclic (1)	

Rhythmic Elements Provided for Intermusical Connections. Intermusical connections were established by all but one participant through the organization and manipulation of rhythmic elements. Specifically, links were forged during co-improvisation through shared pulse, tempo, meter, rhythmic figure (synchronously and imitatively), and, in a few cases, phrasing. As reflected in the autonomy column of Table 7, the adolescents assumed multiple roles in these intermusical relationships. Three individuals were both followers and leaders, and two of these were also resistive. Two depended on me to establish rhythmic figures, and one of the participants was a partner in the process.

The Participants Were Limited in Their Tonal Expressions. These participants' ability to use tonal elements in a meaningful manner appeared to be restricted. Although a fairly equal number of tonal and rhythmic improvisations were included in the analyses, each adolescent played fewer tonal than rhythmic pieces (see Tables 1–6). Only one participant elected to use the chromatic xylophone; the others opted to play instruments whose scales were diatonic.

Only one of the participants, Tanisha, established a clear tonality in her improvisations, as can be seen in Table 9. If players did gravitate toward any pitch, it was usually the lowest bar on the instrument that they were using at the time. Players emphasized a given note over another by frequency of use only.

Table 9
Meaningfulness Through Melody: Participants (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
ERICA	Differentiated (2) Overdifferentiated (1)	Stable (2)		
WILLIAM	Overdifferentiated (1)	Stable (1)		
HAYLEY	Differentiated (1)	Variable (1)		
CHRISSY	Overdifferentiated (1)		Hypotense (1)	
TANISHA	Fused (1) Integrated (1)	Variable (1)		
RALPH	Overdifferentiated (1)			

They did not use intervallic relationships such as leading tones or V–I progressions to create a tonal center.

Tanisha was the only player to organize her pitches into a cohesive melody, and she did so only briefly. Most of the adolescents' improvisations were characterized by one of three types of tonal constructions: (a) motoric patterns that incorporated random pitches, (b) repetitive fragments of a narrow range (two to three pitches), and (c) ascending and descending scalar passages.

In one duet improvisation, a participant appeared to imitate the tonal structures I initiated, but this intermusical connection was so vague and fleeting, it was not significant enough to include in the autonomy column of Table 9.

Surprisingly, none of the adolescents used harmony. Only one individual played polyphonically, and he did so in what appeared to be a random fashion for less than 10 seconds.

Timbral and Textural Variability Was Notable. As shown in Tables 10 and 11, timbre and texture were used significantly and were the most frequently varied elements. This may be because these elements were easier than others for a novice player to manipulate through choice of instruments and playing configurations.

All players used more than one timbre on a single instrument, and all but one tended to use multiple instruments for their improvisations. Some participants stuck to one or two voices in their initial

improvisations, then used timbre more intentionally and fully in subsequent pieces.

Half of the participants created significant tension with frequent changes of timbre and the use of harsh sounds or combinations of sounds. In five duets, three individuals helped to define my timbre

Table 10
Meaningfulness Through Timbre: Participants (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
ERICA	Fused (1) Differentiated (1)	Stable (1)		
WILLIAM		Variable (3)		
HAYLEY	Fused (1)	Stable (2) Variable (1)		
CHRISSEY		Rigid (1) Stable (1) Variable (2)	Tense (1)	Leader (1)
TANISHA		Rigid (1) Stable (1) Variable (3)	Tense (1)	
RALPH		Variable (4)		Leader (1)

Table 11
Meaningfulness Through Texture: Participants (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
ERICA		Stable (2) Variable (1)		Leader (2)
WILLIAM		Variable (4)		Leader (1)
HAYLEY		Variable (3)		
CHRISSEY		Rigid (1) Variable (1)	Cyclic (1)	Dependent (1) Leader (1)
TANISHA		Stable (1) Variable (3)		
RALPH		Variable (3)		Follower (1) Leader (1)

by selecting instruments for me.

Multiple textures were employed by each participant as well. The most commonly employed textural feature was playing configuration, which was frequently varied by most participants (see Table 11). Unconventional textural combinations appeared in the improvisations of two particular individuals. These included tapping the claves while sliding them across the head of a drum, scraping the finger cymbals across the surface of the crash cymbal, and striking the rainstick with a mallet while simultaneously tapping it on the floor. Textural diversity was a particular hallmark of this group.

Intermusical connections were made through the use of texture (playing configuration). Four of the participants led me in and out of tremolo patterns. One participant was completely dependent as she attempted to synchronize with both my rhythmic figures and playing configurations.

Register was not used significantly, except by one individual who played identical pitch

sequences in low and high registers of the metallophone to reflect polarized features of a given referent.

Volume Was Organized Differentially in Nonreferential and Referential Improvisations. Intensity was fairly constant at a *mezzo-forte* or *forte* level across participants for nonreferential improvisations. However, it seems noteworthy that although generally unwavering in their volume, every adolescent created at least one improvisation in which there were intentional and extreme changes in intensity, as reflected by data in the variability column in Table 12. All of the participants thus demonstrated that they were capable of initiating intentional dynamic changes. This feature appeared

Table 12
Meaningfulness Through Volume: Participants (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
ERICA		Stable (5) Variable (3)		Leader (2)
WILLIAM		Rigid (1) Stable (1) Variable (2) Contrasting (1) Random (1)	Tense (1)	Leader (1) Resistive (1)
HAYLEY	Fused (1)	Stable (2) Variable (2)	Tense (1)	Follower (3)
CHRISSY		Rigid (3) Stable (3) Variable (2)	Cyclic (1)	Leader (1)
TANISHA		Stable (1) Variable (1)	Tense (1)	Dependent (1) Follower (1)
RALPH		Stable (3) Variable (2)	Cyclic (1) Tense (1)	

most often in referential improvisations and was exclusive to solo playing. In these pieces, volume appeared to be used by the participants primarily to create and resolve tension.

Intramusical and Intermusical Findings: Therapist

I Was Inclined Toward Rhythmicity. Data related to my use of rhythmic elements appear in Table 13. While my music ranged across all five gradients of integration throughout the study—from undifferentiated to overdifferentiated—it was typically integrated. I tended to provide a rhythmic ground more often than not, playing with a clear meter defined primarily by accents. I used a wide variety of rhythmic patterns with all players, including syncopated figures. However, when rhythmic disintegration was imminent or actual, either in the participants’ or my own playing, I typically returned to pulse and simple subdivisions. At times, I bent the pulse to accommodate the participants’ uneven playing.

I Used Tempo to Establish Musical Relationships. My use of tempo often related to my desire to form musical relationships with the participants. Typically, the adolescents began the improvisations and thus established initial tempi. I accepted their pace and more often followed them rather than leading or resisting their fluctuations (see Table 14). In this way, I was attempting to communicate that I heard and accepted their offerings.

I Was Free Yet Organized in My Tonal Expression. I played a melodic instrument in four of the improvisations that were analyzed. Typically, my playing was undifferentiated from a tonality (see Table 15), and my melodies were complete and coherent musical ideas. I used a variety of straight and syncopated melodic patterns in both duple and triple meters, and I organized these into symmetrical phrases, as a rule.

In one duet, I built an *ostinato* on the interval of a fifth, but I did not use harmony in any other significant way.

I Used Timbre and Texture Less Autonomously Than Other Elements. As indicated in Table 16, I used timbre both as a stable and variable feature of co-improvisation. On three occasions, my timbre was fused with the participant's. In five of the total improvisations, three individuals chose my instrument or instruments for me, and thus defined limits for my use of timbre.

In duet improvisations, I tended to match the playing configurations of the participants, as indicated in Table 17. In particular, I often followed their lead in moving in and out of tremolo patterns.

I Used Volume to Establish Musical Relationships. As shown in Table 18, volume variability and autonomy were salient in my duets with five of the six adolescents. My playing fell within three variability gradients: rigid, stable, and variable. I assumed either a dominant or accommodating role in my use of volume, never both with any individual. This may have been because each adolescent tended to either lead or follow with respect to volume, and I assumed the complementary role. In any event, I organized my playing intensity to make a clear connection with the adolescents and empower them, either by following their lead or by leading them into more engaged and assertive playing.

Table 13
Meaningfulness Through Rhythm: Therapist (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
With ERICA	Fused (1) Integrated (2)	Variable (1)		Follower (2) Leader (1)
With WILLIAM	Undifferentiated (1) Differentiated (1)	Variable (2)		Follower (1)
With HAYLEY	Integrated (2) Overdifferentiated (1)	Variable (2)		Follower (2) Leader (1)
With CHRISSY	Integrated (2) Overdifferentiated (1)	Variable (1)		Dependent (1) Follower (2) Leader (1)
With TANISHA	Fused (3) Integrated (1) Differentiated (1)	Variable (2)		Leader (2) Resistive (1)
With RALPH	Fused (1)	Variable (1)		Dependent (1) Follower (1)

Musical Reciprocity Contributed to Meaningfulness. In most cases, intermusical connections with the participants were weak or short-lived. There was, however, one individual with whom I felt a strong and fairly consistent intermusical relationship throughout the study. We frequently shared pulse and tempo; we synchronized with and imitated each other's rhythmic figures (which were varied and complex); and we moved freely in and out of dynamic, timbral, and textural changes. We took turns leading and following in our organization of many of the musical elements. The fluidity and reciprocity of our playing contributed to its meaningfulness for me.

Table 14
 Meaningfulness Through Tempo: Therapist (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
With ERICA		Stable (1)		Follower (1)
With WILLIAM				Follower (2)
With HAYLEY				Follower (1)
With CHRISSY		Random (1)		Dependent (2) Follower (1) Leader (1)
With TANISHA				Partner (1) Leader (1)
With RALPH				Follower (2) Leader (1)

Table 15
 Meaningfulness Through Melody: Therapist (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
With ERICA				
With WILLIAM	Undifferentiated (1)	Variable (1)		
With HAYLEY	Undifferentiated (1) Overdifferentiated (1)	Variable (1)		
With CHRISSY	Undifferentiated (1)			
With TANISHA				
With RALPH	Fused (1)			

Table 16
 Meaningfulness Through Timbre: Therapist (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
With ERICA	Fused (1)			
With WILLIAM				

With HAYLEY	Fused (1)	Stable (1) Variable (1)		
With CHRISSY		Variable (1)		Dependent (2)
With TANISHA	Fused (1) Differentiated (1)			
With RALPH				

Table 17
Meaningfulness Through Texture: Therapist (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
With ERICA	Fused (1)	Variable (1)		Follower (1)
With WILLIAM		Variable (1)		Follower (1)
With HAYLEY				
With CHRISSY				Follower (2)
With TANISHA				Follower (1)
With RALPH				Dependent (1) Leader (1)

Table 18
Meaningfulness Through Volume: Therapist (Incidence)

PARTICIPANT	Integration	Variability	Tension	Autonomy
With ERICA	Integrated (1)	Stable (1) Variable (1)		Follower (1)
With WILLIAM		Variable (2)		
With HAYLEY		Stable (1) Variable (1)		Leader (1)
With CHRISSY		Stable (1) Variable (2)		Dependent (1) Follower (1)
With TANISHA		Rigid (1)		Leader (3)
With RALPH		Variable (1)		Dependent (1) Follower (2) Leader (1)

Verbal Meanings

Intrapersonal and Interpersonal Findings: Participants

Overall, it appears as if the experience of music improvisation for these particular adolescents was highly intrapersonal in nature. Analysis of comments made about the overall experience of improvisation as well as about specific pieces revealed that there were several features common to multiple cases. These characteristics are outlined in what follows, with supporting examples from raw data appearing in session transcripts.

Improvisation Was Enjoyable. At some point during the project (usually in the initial stages), all participants spoke of their enjoyment of the experience of improvisation:

- Erica: I said this is fun.
William: I liked it. That was fun.
Hayley: It was fun. It was good because it was fun.
Chrissy: I love this. I don't want to stop.
Tanisha: This was really fun.
Ralph: I like to make music...[it feels] fun and cool.

The connection between pleasure and meaningfulness was not specifically explored within this study. However, the fact that music making was attractive to the participants contributed to their immediate and sustained engagement with the process of improvising, a necessary condition of meaningfulness.

Improvisation Involved Specific Preferences. Related to enjoyment was the issue of personal preference. Preferences figured into the improvisational experience for all participants. Likes and dislikes were expressed through choices made and dialogue about the improvisations:

- Erica: I don't like that [deep sound] too much. I don't know, I just don't like it.
William: I like this one. I want to try that [cabasa].
Hayley: I liked that improvisation and I know why, 'cause I like the rain...and I liked that one too 'cause we connected at the end.
Chrissy: I liked where we came together, kind of made, like, music instead of doing our own thing.
Tanisha: I love the sound of the rainstick.
Ralph: I like that cymbal.

Improvisation Challenged Perceptions of Musical Competence. At the same time that it was enjoyable, improvisation also challenged the adolescents' perceptions of competence. Many of the youth made self-disparaging remarks or comments that indicated self-doubt. They questioned their ability to play a certain instrument, a certain rhythm, and so forth:

- Erica: I'm not very good at it. I didn't get it right, like what I wanted to play or how I wanted to play it.
William: I didn't know how to, what to play or anything.
Hayley: I guess I'm not giving myself credit.
Chrissy: I can't do this. This sounds awful.
Tanisha: I kept messing up on being able to keep a beat that was more steady.
Ralph: I kind of messed up, though. I got the beat and then I, like, missed some notes.

All but one of the players stopped at least once during an improvisation due to self-doubt that they articulated. All of these individuals continued with verbal encouragement, however. Fortunately, moments of despair were often balanced by moments of triumph, in which the participants felt good about what they had played.

Improvisation Was an Effective Means of Self-Expression. All of the teens communicated their belief that improvising aided them in the expression of their emotions, whether immediate feeling states evoked by the music itself or contrived expressions of feeling states that had been experienced in another time and place. In some cases, this musical improvisation was preferred to other modes of expression:

- Erica: I really got a lot of feeling out.
 William: I'm feeling annoyed so I just made annoyed sounds.
 Hayley: It got out my anger.
 Chrissy: You can really play anger on that [doubek]
 Tanisha: It's easier to play than to talk.
 Ralph: I finally had to get my anger out with something, so, instead of hitting the wall and making noise, I could make noise with that.

Improvisation Allowed for the Expression of Simultaneous Feelings. There were some cases in which the adolescents described what they played or heard as a reflection of simultaneous feelings, as in the following examples in which anger and sadness were paired:

- Erica: There was a little bit of confusion and a little bit of anger that I...let out of it. [I hear] a little bit of anger and sadness, yeah, some sadness too.
 Hayley: I think it represented anger too...anger and sadness.
 Ralph: When you feel sad, like, you want to bash somebody...yeah, the xylophone and the rainstick [represented sadness]...[for anger] I hit the cymbal.

Improvisation Was Energizing and Motivating. Many participants thought that music improvisation served to energize and motivate them when they were in need of physical or psychological activation:

- Erica: I want to play something energizing.
 William: It feels good to play it, it just gives life a rhythm. Gives me a rhythm to keep going to.
 Hayley: I'm waking up just a little bit.
 Chrissy: I just want to keep going and going and going, it's so energizing!
 Tanisha: I liked the thing at the end when I was trying to keep up with you and you kept going faster and faster.

Improvisation Involved Novelty, Which Was Valued. There were aspects of novelty and freshness that were valued by the participants:

- Erica: That's awesome! I've never seen one of these before.
 William: I marked my own beat!
 Hayley: That was different. Uh, a good different.
 Chrissy: It felt good because I was doing different beats and different instruments instead of always doing like I usually do.
 Tanisha: In here, you go through the same routine every single day, and with these [instruments] you get to try something new.

The importance of novelty—again, in eliciting and sustaining interest and engagement in the improvisational process—was further reinforced by comments of one individual who said that she wanted to stop coming to the sessions because she had grown bored with the instruments available to her.

Specific Elements Represented Specific Feeling States. Most individuals articulated a perceived connection between feeling states in both referential and nonreferential improvisations and specific musical elements employed. Volume and tempo were most often mentioned as being related to emotional aspects of the player:

- Erica: [Listens to *accelerando*] Here my heart's getting faster. Now it's like paranoia. I can't get rid of the fear.
- William: If I'm thinking about something happy, then I play loud. If I'm thinking about something that aggravates me or that I'm sad about, I play quiet.
- Hayley: Sadness was more like the softer sound, I think, and anger was more like when I hit [the middle of the drum]...it got louder.
- Chrissy: 'Cause angry is [hits drum at *fortissimo* level] louder, and happy is like [plays rhythm at *mezzo-forte*] smoother. [Guilty] is kind of like, real quiet.
- Tanisha: Usually when I'm angry I'm not too loud, I'm like, whatever. I just keep to myself.
- Ralph: That's the end of my sadness. It was quiet.

Obviously, aspects of loud, soft, fast, and slow held unique and, at times, multiple meanings for each individual.

Improvisation Evoked Associations. Concrete associations with the music were prevalent among the adolescents. At times, certain timbres triggered specific images. The timbre of the rainstick was associated with rainstorms, sadness, and crying. The drums reminded two participants of tribes in a jungle and one of thunder. Drums also evoked the image of someone or something coming closer and created a feeling of anticipation and excitement. The crash cymbal conjured up images of oriental gongs and Jackie Chan movies, while the glockenspiel caused one participant to reflect on a lullaby her mother used to sing to her and another to think of wind chimes.

Meanings Were Predominantly Intrapersonal. The participants made far fewer comments of an interpersonal nature than those relating to intrapersonal experiences. It could be that the adolescents simply did not perceive the experience of improvisation as meaningful on an interpersonal level. It is also possible that the interpersonal meanings generated through co-improvisation were not seen as significant enough to be recognized by the participants.

Additionally, some of the adolescents may have perceived the process as interpersonally meaningful but were unable or unwilling to talk about their experiences in interpersonal terms. In some cases, the adolescents' overall difficulty expressing their innermost thoughts and feelings may have come into play. In other cases, the participants may have resisted talking about connections made through musical co-improvisation because of a lack of trust in me or comfort in our relationship. The brevity of our relationship and the fact that I may have been perceived as wielding power as an authority figure could have had an impact here.

Developmental readiness may have been an influential factor as well, in that some of the adolescents were so focused on their own musical and personal experiences at times that they could not attend to the intermusical or interpersonal aspects of improvisation.

It seems that there are numerous factors that may have contributed to the sparseness of data related to the participants' interpersonal meanings. Comments that did appear seemed to be of two types.

The Adolescents Revealed Feelings of Inadequacy. As improvisation exposed the participants' perceptions of musical inadequacy and as they acknowledged their feelings, it became obvious that sometimes this aspect of their experience was not only intrapersonal—having to do with the relationship between their music and how they perceived or felt about themselves—but interpersonal as well—having to do with the relationship between their music and how they perceived or felt about me. For example, one player repeatedly reminded me that the experience of improvisation was new to her and that she was

not sure how to proceed. When she made what she thought was a “mistake,” she typically stopped playing and commented that she was just getting used to the instrument, the situation, and so forth. In essence, she was expressing her embarrassment and a need for my acceptance and reassurance in order to continue. It is likely that my presence affected the way she felt about the experience of making “mistakes,” and that she would not have felt embarrassed had I not been there.

Another individual stated that she played more softly than I did because she thought she kept making rhythmic mistakes. She was thus manipulating one musical element (volume) to hide her perceived inadequacy in another (rhythmic). She may also have been saying that she felt inadequate when she compared her playing to my own. This same individual had talked about musical competition between us on two other occasions.

Finally, one youth told me that she was afraid of “messaging up” because she was attempting to synchronize with my playing and I was going too fast. This was her way of communicating that I needed to empathize with her and, perhaps, adjust my expectations for her “performance.”

The Adolescents Valued Musical Connectedness. The second kind of interpersonal comments related to positive connections that were made between a participant’s playing and my own. Most often, these connections were rhythmic in nature, such as when we convened around a common pulse or tempo or imitated one another’s rhythmic patterns. Statements relating to this aspect of interpersonal meaning were as follows:

- Chrissy: I liked it where we came together, kind of made, like, music instead of doing our own thing.
- Hayley I liked that one [improvisation] too because we connected at the end. I felt it at the end.
- Tanisha: I liked where we were taking turns following and leading and then we would switch how we played the instruments....I liked the thing at the end when I was trying to keep up with you and you kept going faster and faster.

When asked, one individual indicated that he had been wrapped up in his own playing and had not been aware of my music; however, upon listening to the audiorecording of one piece, he was able to identify moments when we were “really playing together.” Another player made no references to our relationship during the project, but spoke about how his sounds communicated certain meanings to “others.”

Intrapersonal and Interpersonal Findings: Therapist

Improvisation Evoked Feelings. As with several of the participants, many of my comments revolved around emotional states. I experienced immensely diverse feelings at varying levels of intensity while listening to and improvising with each participant. Some of these included boredom, disappointment, excitement, anxiety, confusion, irritation, surprise, anger, captivation, serenity, intimacy, enjoyment, invigoration, and dissatisfaction. Some of these feelings were articulated during dialogue with the individual, and some appeared in my field notes or reflective journal. The only negative experience I revealed to the participants was boredom; interestingly, the two individuals to whom I admitted feeling disinterest stated that they shared this same sentiment.

There were a few improvisations in which I felt a sense of musical prowess. This seemed to occur when I perceived that I had contributed complex or well-timed rhythmic figures to the improvisation. Conversely, I felt ineffective and inept during other pieces.

Many of my intrapersonal comments reflected a curiosity or pleasure about something that was occurring. For example, I was pleased with the participants’ ability to create, imitate, or sustain rhythmic patterns. I was also impressed with their creative uses of the instruments, particularly when a youth had not previously demonstrated such creativity.

I Sometimes Judged the Improvisations. I found that at times I judged favorable or unfavorable certain aspects of the participants’ playing. For example, I prized improvisations that appeared to convey

authenticity more highly than those pieces that did not. I also tended to value improvisations that were structured in some way, whether rhythmically, melodically, or formally. Finally, I valued those pieces that created in me a sense of intimacy with the player or a pleasant feeling state such as serenity or pride.

Interpersonal Aspects Were Both Shared and Withheld. For me, the interpersonal aspects of the experience of improvisation were multi-faceted. Data reveal that sometimes I expressed the interpersonal aspects of my experience directly to the participants, and sometimes I did not. There were three primary types of conditions or situations in which I did not share my thoughts and feelings with the adolescents. The first was related to my own expectations about how the information would be received. If I sensed that sharing a particular thought or feeling would somehow disturb a participant or compromise our relationship or the process of improvisation in the future (for instance, revealing that I doubted their authenticity or felt annoyed by their resistance to my musical initiations), I tended to remain silent and register these notions in my field notes or journal. If I believed that the individual's need to verbally process the improvisation was more urgent or important than my own, I turned my attention to their experiences and again wrote about my own thoughts and feelings in my notes. Finally, there were times when I was not sure exactly what I was thinking or feeling or if my experience was pertinent to my unique relationship with the participant or, perhaps, a manifestation of counterproductive countertransference. (Issues of countertransference are discussed briefly below.)

It dawned on me during the final stages of analysis that in withholding some of my perceptions about the products and processes of co-improvisation, I was limiting the potential for co-construction of meaning. When disclosure was one-sided, a foundational prerequisite of co-construction was missing.

Meaningful Connections Occurred Through Musical Communication. I felt a significant connection with three of the six participants. With two of these individuals, I found meaning predominantly in our musical exchanges. (With the third, meaningful connections occurred more in our verbal exchanges.) Interestingly, when asked about their responses to our co-improvisation, the two participants with whom I felt a musical connection stated that they did not share my sentiments. Both of them said that, although it sounded different (more simultaneous pitches, louder dynamic level), it felt no different to play with me than to play on their own.

Musical incidents that contributed to meaning in my interactions with the adolescents included sharing a pulse with the other player or converging on a shared pulse after a period of rhythmic disintegration, imitating or interlocking rhythmic figures, merging with one another's tremolo (especially with accompanying increases in intensity), providing a rhythmic or tonal holding environment while the other player is exploring, and synchronizing at the end of a piece, bringing it to a natural close.

Comparison of Participant and Therapist Experiences

As indicated by all of the data pertaining to participant and therapist experiences, there was both overlap and disparity in the way the adolescents and I ordered our sounds into meaningful music and in the specific meanings we ascribed to that music and the experience of creating it.

Our organization of the musical elements was similar in the following ways:

1. Both the participants and I were inclined toward rhythmicity (integration with a pulse).
2. Both the participants and I used rhythmic elements to establish musical connections with each other.
3. Neither the participants nor I used harmony in our improvisations.

Our organization of the musical elements was different in the following ways:

1. The participants had difficulty sustaining rhythmicity at times (integration with a pulse), whereas I did not.
2. The participants tended to repeat "signature" rhythms, whereas I tended to create variability

in my rhythmic figures within and between improvisations.

3. The participants tended to establish tempo and changes therein, whereas I tended to follow their lead.
4. The participants had a limited and somewhat disorganized tonal vocabulary, whereas my expressions were unencumbered and grounded in specific tonalities.
5. The participants demonstrated notable leadership in timbral and textural variability and creativity, whereas I tended to defer to their sounds and playing configurations.
6. The participants used volume significantly in the creation and release of tension, whereas I used it to support or encourage assertive playing.

The meanings we ascribed to the experience were alike in the following ways:

1. Both the participants and I had emotional reactions to what we were hearing and/or playing.
2. Both the participants and I believed that we were able to express a range of emotions through spontaneous music-making.
3. Both the participants and I experienced moments of inadequacy and moments of competence.
4. Both the participants and I valued moments of musical interconnectedness through shared rhythmic features.

The meanings we ascribed to the experience were different in the following ways:

1. I articulated a greater diversity of feeling states than did the participants.
2. The participants experienced more pleasure related to the novelty of the improvisational experience than did I.
3. The participants identified clear connections between certain elements (volume and tempo) and specific feeling states, whereas I made no such connections.
4. The participants experienced concrete visual and auditory associations in response to the music more frequently than did I.
5. I verbalized more comments of an interpersonal nature than did the participants.

CONCLUSIONS

Throughout data collection and analysis, I reflected on the integrity of the methodological procedures I was implementing. My overarching concern was whether or not these procedures allowed the phenomenon of the experience of improvisation to unfold naturally and fully. I was also concerned that the procedures allowed for the just and respectful treatment of the participants throughout the entire process. As a result of these reflections and in response to immediate observations and intuitions during the sessions, I made ongoing changes in the procedures; these are outlined below.

The following were changes during data collection:

1. *The participants and I did not listen to every audiorecording of every piece as originally planned.* This change occurred as a result of the participants' expressed desire as well as my in-the-moment hunches that listening would have been disruptive to the overall flow of the session.
2. *The participants and I did not verbally process every improvisation.* Sometimes it did not feel right to talk at length or in detail about an improvisation. Other times, the adolescents resisted talking and I honored their resistance.
3. *I did not share my thoughts and feelings about every improvisation with the participants.*

There were times when it did not seem appropriate to share my impressions.

The following were changes during data analysis:

1. *I delayed my analysis of certain improvisations.* At times I found it necessary to delay my analysis of the pieces in order to hear them more clearly and describe them more accurately, especially with respect to rhythmic integration and tension.
2. *I developed a coding system based on intramusical, intermusical, intrapersonal, and interpersonal relationships.* At one point during the analysis, I launched into interpretive writing. This clearly was not the focus of the study; once my research consultant pointed that out and I realized what had happened, I developed a system for coding the data that enabled me to account for every statement in my analysis and thus stay true to the task.

The following was a change during the writing of the report:

1. *I modified the research questions so that they aligned with what the data were revealing.* I noted above that as the musical data emerged, it became apparent that I was gaining information about how the participants organized the musical elements in order to create meaningful music. I changed the wording accordingly.

Personal Significance of the Study

Reflections on Verbal Facilitation

When I first began the interview process with the pilot participants, I was uncertain about how to proceed, and I lacked confidence in my ability to elicit data about the experience of improvisation. This uncertainty was quite apparent in my verbal conduct in initial sessions: As I began transcribing the sessions, I noted that I had stumbled over my words, filled in uncomfortable silences with meaningless chatter, and missed golden opportunities to respond to participants' comments in a way that may have enriched their descriptions of their experience. It dawned on me that each of these responses was a reflection of my anxiety, stemming from my lack of experience with this style of interviewing. With each new session, and as my relationships with each participant deepened, I was able to be more relaxed, more comfortable with silences, and less prone to overlook invitations into thoughtful, productive dialogue about the research questions.

I learned that I tended to rely on certain verbal techniques more than others. For example, I often used repetition in the sessions. If a participant said, "We both slowed down at the end," I would echo, "Yes, we both slowed down at the end." At first, this technique seemed like a good way to acknowledge and validate the participant's contributions. After awhile, however, I started to wonder if this technique was overused, that is, if the participant was aware of and perhaps annoyed by it. As a consequence, I began to use repetition less frequently, instead employing paraphrasing, silence, or minimal verbal responses such as "uh-huh" and "OK."

One of the most important insights occurred a few weeks into data collection. In order to check integrity of the method, my research consultant reviewed some of my early session transcriptions. With his input, I was able to see that, although I was attempting to maintain an open and flexible interview style, I was in fact still managing the sessions in an effort to influence the results. This tendency was not so apparent to me as I read the transcripts, but as I listened again to the session recordings it became more evident. I could hear in both content and tone of voice that I was, periodically, leading certain participants in a particular direction, putting words in their mouths, or asserting or validating my own hunches or assumptions rather than eliciting theirs.

I also noticed that my probes sometimes seemed to limit response options for the participants. It was obvious to me in retrospect that more open-ended questions might have yielded more thoughtful

responses.

My consultant suggested that one reason I verbalized so much in each session was that I had not sufficiently prepared the participants to play and respond to the improvisations, and that consequently they needed a great deal of verbal guidance. With that in mind, I added a brief introductory statement to each and every session, the purpose of which was to remind the participants of the aim of the study and some of the ways in which they might focus their verbal reflections. Following is an example from an actual session:

Susan: I am doing a study because I'm very interested in how kids experience making music, what it's like for them to make music. And the kind of experience I'm interested in is called improvisation, where we just make up music as we go...And some of the things you can talk about would be how you felt as you were playing, what you were thinking about, what those improvisations, those sounds might mean to you...what you hear when you listen back...maybe there are surprises in the music, those kinds of things. Does that make sense?

Reflections on Improvisation

As I progressed through this project, I took note of my musical role and responses in each improvisation. One important insight was that in attempting to give the participants choices throughout the sessions, I was at times overwhelming them. The following dialogue is a clear example of this tendency:

Susan: What kind of a thing do you want to play for yourself?
 Erica: Maybe something upbeat.
 Susan: OK. Do you want to play...I can give you some words, like "anxiety" or your "safe place." I could give you the word "energy" or the words "positive feelings" or "grounded." Do you know what that means, do you have a sense of what I mean when I say "being grounded?"
 Erica: Yeah.
 Susan: Being "centered"...
 Erica: (fidgets on the instruments, plays for about 20 seconds on the doumbek)
 Susan: (interrupts playing) Erica, I'm trying to help you focus a little bit.
 Erica: Yeah, I'm trying to. Um...
 Susan: OK, let's take it one decision at a time. Do you want to play by yourself or with me?
 Erica: I want to play with you.
 Susan: Do you want...

Erica's visible retreat from our interaction to the instrument was a clear and poignant signal to me that I needed to modify my approach.

I noticed that this same tendency appeared when I introduced the participants to the instruments during the first and second sessions. Sometimes I gave the participants more information than they needed in order to play the instruments effectively. Fortunately, this tendency became obvious to me during the first few transcriptions, and I was able to make an immediate adjustment with subsequent participants. I also more carefully selected instruments for each session, taking care not to offer more choices than necessary. For example, I typically did not duplicate timbres unless it was strategic to do so.

I was not surprised to find that my initial musical inclinations in some ways paralleled the verbal proclivities identified above. For example, I tended to play more often than not in the duets, just as I tended to talk more than remain silent. I had to make a concerted effort to make spaces in the dyadic improvisations in which the client's voice could be heard. I also had to work at balancing the number of duet and participant solo improvisations during each session. If I was not conscious of this aspect, I tended to play on all or nearly all improvisations when the decision was left up to me. I noticed that sometimes I became slightly agitated if a solo improvisation continued beyond two minutes, especially if

it was not grounded in a pulse or if it consisted of excessive repetition. I also noticed that when I was not playing with the participant, I found it more difficult to stay present to the music, and thus more difficult to recall the details of the experience.

Another significant finding was my propensity for establishing and maintaining a rhythmic ground in dyadic improvisations, as mentioned in the previous chapter. With all participants, I often felt as though my most frequently assumed role was to be a source of stability upon which “musical” (well-integrated) phrases could be built. When the participants requested that I begin an improvisation with a beat, as they sometimes did, I honored that request. When I could sense a pulse emerging from what the participants were playing, as frequently happened, I typically latched on and increased my volume in order to strengthen the rhythmic ground. At times I found myself bending the pulse while continuing it in order to accommodate the unevenness of the participants’ playing. When I sensed that participants were struggling to maintain a rhythmic motif, I usually made certain that I was playing the pulse or a simple subdivision thereof.

This urge to construct a rhythmic ground may have reflected a tacit bias that rhythmically integrated sounds have greater potential to develop into objects of beauty than disintegrated sounds, and furthermore, that the more beautiful an improvisation, the more meaning can be derived from it. I was reminded of a powerful statement in Miles and Huberman (1994): “Our beautiful theories need little data to convince us of their solidity, and we are not eager to encounter the many brutal facts that could doom our frameworks” (p. 242). As I reflected on this, I could not negate the fact that the participants’ awareness of disorder in their own playing, for example, could lead to a meaningful insight or feeling about their current functioning—an experience they may not have if I were to cover up the disintegration by constantly imposing a pulse. Moreover, I could not overlook that I have experienced rich meaning in creating and/or listening to music that has no discernable rhythmic ground.

Finally, I noticed certain idiosyncrasies in my dyadic playing related to meter, rhythmic pattern, and form. Whether these tendencies affected the essence of the participants’ experience of improvisation is unclear.

Reflections on Countertransference.

Although countertransference was not the focus of the present study, this dynamic materializes to some degree in all clinical work and thus should be acknowledged. Classic definitions of countertransference point to the therapist’s unconscious response to the client’s transference; more recent definitions have expanded to include all that the therapist brings to the relationship with the client, whether unconscious or conscious (Bruscia, 1998). Obviously, I can only discuss the manifestations of countertransference of which I am currently aware.

In the immediacy of the sessions, countertransference was most obvious to me when I experienced sudden or extreme shifts in emotion. The feelings that came to the surface most quickly were frustration or anger, helplessness, and boredom, and these sometimes occurred in succession. For example, when Erica played the drums in her characteristic unchanging manner, I felt myself becoming annoyed. When she resisted my attempts to push her “off center,” I felt powerless as a therapist. I then found myself losing concentration and daydreaming, which is not unlike the dissociation that Erica struggled with.

Countertransference was also evident in my work with William. When I perceived that he was playing or verbalizing in an inauthentic manner, I grew impatient. I felt angry with William for what I viewed as an intentional thwarting of my attempts to meet him in the music making. Although he had the proficiency to improvise with great musical sophistication, he withheld, most often creating simplistic pieces with little form or expressivity. I felt helpless to intervene, and I compensated by pulling away emotionally, dulling my anger into eventual apathy. Interestingly, a mix of anger and apathy was precisely what William himself typically revealed during our sessions.

As I listened to the audiorecordings of the sessions, I became aware of further countertransference reactions such as fusing with a participant’s timbre or rhythm when it was unnecessary or contraindicated, providing a rhythmic ground in order to feel needed, adding rhythmic

flourishes to reinforce notions of my own musical competence, and ignoring or resisting a participant's musical gesture.

It is quite possible that countertransference influenced my decisions about what to share with the participants during the verbal processing of our improvisations. At times, my need to be liked may have superseded my need to point out incongruencies or discuss difficult feelings. In addition, my need to be right may have manifested in a tendency to articulate definitive and premature interpretations about the meaning of the music, as when I suggested Erica's "Safe Place" was like a protective womb.

Reflections on the Analysis of Improvisation.

During the actual sessions, I discovered that often I could not make sense of what I had just heard or played. I believe this was because the IAP profiles and scales were not yet firmly entrenched in my vocabulary as a researcher. In retrospect, it might have been helpful to have an abbreviated list of relevant profiles and scales within sight so that as I listened or played, I could have made mental notes about what occurred. Perhaps a consistent protocol for in-the-moment listening would have been helpful also. Unfortunately, these potential remedies did not dawn on me until after the data collection period was over, even though I had written in my journal about my frustrations with this aspect of the process.

I learned a great deal through the process of aural analysis of the recorded improvisations. I was a novice in this area, having attended just one training in the IAPs prior to beginning my own data analysis. Thus, it took me a long time to analyze and describe each piece—between 30 and 120 minutes, depending on the length and complexity of the music. I became quicker at this task as the study progressed, which suggests that practice may lead to greater efficiency.

As recommended by Bruscia (1987), I tried to allow the character of the improvisation to determine whether I would analyze by profile or scale (element). However, I noticed that I most frequently ended up focusing on a profile, subsequently analyzing the ways in which the various elements related to that profile.

It was fairly easy for me to discern the salient elements and processes upon my first hearing, and I generally felt confident with my own appraisal of this dimension, even after repeated listenings. However, in the next stage of analysis, I learned that I was not as focused in my listening as I would have liked to be. Sometimes I had trouble maintaining my concentration on one element or process in isolation; at other times, I had difficulty listening to the composite in order to perceive the influence of one element or process on another. Often, it took 10 or 15 auditions before I was convinced of my own assessment of even one element or process. Here again, I became more efficient and confident with practice.

One particularly troubling aspect of analysis was that I occasionally began to hear a pulse in solo and dyadic improvisations when my peer colleague (who was trained in aural analysis of improvisation) did not. In other words, I was again managing the phenomenon (this time with the perception of pulse and rhythmicity in the music) in order to create the outcome that I was hoping for. On some level, I wanted the participants' playing to be organized, and so I not only tended to provide a steady pulse when we played together but I sometimes heard the musical object as being more rhythmically grounded than it may have been.

Fortunately, I discovered quickly that this tendency to infer a pulse in what I was hearing was stronger when I analyzed the improvisations immediately after a session. If I allowed the improvisation to settle for a day, I could more effectively bracket this predisposition or employ positioned listening (Bruscia, 2001) in order to hear the music as it really was. Also, as I gained more and more musical data from each participant, it became easier to hear trends toward arrhythmicity that I could not deny.

I noticed some patterns in my reactions to specific profiles. Having identified my inclination to hear the participants' playing as aligned with a pulse more often than it may have been, I became overly cautious with my use of the integration profile. My analyses started to reflect the reverse phenomenon, that is, perceiving the absence of an underlying pulse when one was actually present. This could have been a further manifestation of my black and white approach to understanding. With increasing experience, I was able to employ the integration profile in a more balanced fashion. When I was confused

or uncertain about my analysis, I consulted with a colleague who had more expertise in the use of the IAPs, and he either validated or disputed my findings.

The variability profile emerged as the most active of all profiles, and the easiest musical process for me to perceive. This may be because I tend to think in a linear manner and can thus quickly discern changes over time. Tension was the most difficult for me to identify, perhaps because anticipatory tension (as with tremolos and cymbal crashes, for example) was lessened with each subsequent hearing. In other words, once I knew what was coming, the tension related to that musical event was greatly diminished. I grew acclimated to other kinds of tension as well, such as that created by the sound of a particularly harsh instrument. In response to this awareness, I began my analysis of salient processes with tension rather than variability.

Reflections on Working With Adolescents

I encountered some surprises in the process of improvising with the adolescent participants. Because my previous experiences with adolescents and improvisation had been so positive and fruitful, I began this study with the assumption that every individual would find the musical instruments and process of improvisation appealing and engaging. This was not the case. One female participant declined music therapy on two separate occasions and disclosed in the final interview that she had become disinterested. She stated that she had grown tired of playing the same instruments over and over again and speculated that had there been new instruments in every session, she would have been less bored. Another participant appeared to be bored, as shown by his facial affect, posture, and mannerisms. A third individual, although active and engaged in most sessions, described certain improvisations as “boring” and “dead.”

I also expected that the participants would enjoy listening to their improvisations after they played. However, only one teen took obvious delight in this aspect of the session, smiling or laughing each time. Most of the participants appeared apathetic, and one resisted more often than not. I speculated about what was going on (boredom, embarrassment, insecurity), and wondered in hindsight whether the participants should have had the option of listening to their improvisation privately and either writing down their responses or discussing their reactions in the ensuing session. Those who chose to listen did so attentively.

I learned that the adolescents, no matter how articulate they were, had difficulty describing the experience of improvisation. I frequently heard comments such as, “I don’t really know,” “I can’t describe it,” and “It’s hard to explain.” I believe this was related to the ineffable aspects of music making, but I also think some of it had to do with the participants’ lack of a musical vocabulary. They simply did not know how to talk about what they had played or heard in musical terms. As a rule, they were able to identify whether the music was loud or soft and fast or slow, but they could not as easily find words to talk about aspects of rhythmic figure, meter, phrasing, melody, tonality, timbre, or texture. Seemingly as a result of this, some of the participants created metaphors to communicate what they had heard.

Implications for Clinical Improvisation With Adolescents

Although I had worked with adolescents for many years, I learned a great deal about structural, musical, and interpersonal aspects of improvisational work as a result of my involvement in this project. I will address each of these topics in turn. Here, structural aspects refer to the environmental and organizational features of the improvisation session itself. Musical aspects refer to the features of the improvisational process and all of the tasks related to its implementation. Interpersonal aspects refer to the features of the relationship formed between the client and therapist as they affect and are affected by the improvisational process.

Structural Aspects

One of the first structural questions that must be addressed is: When is individual versus group improvisational therapy indicated for adolescents? I purposely incorporated individual sessions into the design of this study, in part because I believed that rapport would develop more quickly, leading to more open expression. After thoughtful consideration, I am not sure that this was the case. Although there were some moments of intimacy between us, it seemed as if the participants and I often kept each other at arm's length.

During the tail end of this project, I held two group sessions with all of the PHP participants at IYS, including two of the study participants. I did this at the request of the IYS staff members, who said that the teens who were not involved in the project had repeatedly expressed an interest in playing the drums. I noticed that the two research participants, Hayley and Chrissy, were very alert and engaged in the music making and verbal processing. They were eager to show off to their peers all that they had learned about the instruments. They contributed meaningfully to the improvisation, and they spoke about it with a refreshing openness and in greater detail than I had previously witnessed in the individual sessions. I reflected on this disparity, and one of Gaston's (1968) considerations immediately came to mind: *The potency of music is greatest in the group*. I believe this to be particularly true with improvised music, in that each member contributes his or her own unique, ever-changing, and often unpredictable voice to the whole. When six players improvise as compared to two, there are more possible intermusical relationships to be formed.

Another structural decision involved the type and number of instruments included in the sessions. With adolescents—particularly those who are difficult to engage due to depression, attention deficits, or resistance—preference is well worth considering. The participants in this study demonstrated clear preferences, favoring the drums to all other instruments, both nonmelodic and melodic. It may be that drums best met these teens' developmental needs for the effective release of pent-up energy and the organization of ineffable feelings into meaningful expression. The participants most often selected the tubano, doumbek, and bongos. The djembe was difficult for them to hold and balance, and the talking drum, although appealing in its sound, took more coordination than most teens could muster. The tonal instrument most preferred was the alto metallophone. Instruments played with the least interest or passion included the claves, agogo bells, and maracas. Choosing instruments that allow for meaning-making may be a less formidable task for the therapist who is armed with the knowledge of what particular sounds are preferred and what instruments are effortlessly manipulated by their adolescent clients.

Based on findings from this study, it seems prudent to introduce instruments for improvisation gradually. In this way, the adolescents who tend to disengage quickly may stay involved for longer periods of time. By introducing instruments progressively, the risk of overwhelming the adolescents is also minimized.

The length of the session is a further structural consideration. In this project, sessions lasted up to 50 minutes. In most cases, however, participants seemed captivated for between 20 and 30 minutes. Because this was a research project rather than individual therapy per se, the sessions did not necessarily progress according to a preplanned structure. It is possible that a consistent and predictable structure such as Stephens suggests (1983) (warm-up, core experience/working through, closure) would enable the participants to sustain interest for longer periods of time. Attention problems may also be reduced in a group setting due to the increase of sensory stimulation.

A final structural issue relates to the sequence of referential and nonreferential improvisations. In this study, all participants began with several nonreferential pieces, at my request. Referential improvisations were added later. This decision was based on my concern that some individuals might develop enduring or negative associations with certain instruments used in the creation of particularly troublesome or unpleasant referents or that the participants might come to rely on the provision of a concrete referent and find it difficult to play without one. However, findings indicate that these study participants were actually able and willing to employ the musical elements more freely and creatively in referential pieces. They used a wider range of timbres, textures, dynamics, and tempi. They also tended to reveal more about their impressions of the referential pieces and the experience of creating them. Perhaps

referential improvisations could provide a strong initial impetus for a more complete exploration of the musical elements, thereby paving the way for more expressive—and potentially more meaningful—nonreferential improvisations.

Musical Aspects

In this project, the adolescents were inclined toward rhythmic playing. While there is certainly nothing wrong with this tendency, it may have limited their attempts at meaningful expression. In order to expand the potential for expression through arrhythmic playing, the therapist could model fluidity in her own playing. Carefully selected referents and instruments, such as the chime tree and rainstick that produce flowing sounds, might assist the adolescent in “breaking away” from rigidity.

In that the adolescents appeared to manipulate some elements more frequently and freely than others (e.g., timbre and texture), it might be wise for the therapist to include brief didactic exercises at the start of each session. Such exercises could be designed to help the adolescents explore the full ranges of all musical elements as well as practice various rhythmic and tonal figures in order to develop a more diverse musical repertoire. The use of modeling and cooperative practice in improvisational therapy as a means to increase expressivity is not uncommon (Shoemark, 1991). Based on my experience of this study and my own clinical work, I believe that the more tools for musical self-expression and communication an adolescent can develop, the more personally meaningful the musical experience can be.

As noted above, the participants in this study had difficulty finding words to articulate their experiences during the sessions. Just as structured playing exercises may help adolescents develop a more diverse improvisational vocabulary, exercises in listening and verbal reflection may help adolescents develop greater skill in describing improvisational products and processes. In that some individuals relied on metaphors to describe what they encountered, it would serve the therapist well to develop her own metaphoric vocabulary relative to music. In addition, the use of pictorial representations (graphs, sketches, etc.) may provide an important intermediary step for the individual who needs a tangible referent upon which to build his or her verbal descriptions.

Interpersonal Aspects

I believe the formation of strong interpersonal relationships with the participants was impeded by many factors. Most significantly, traumatic life experiences had made it difficult for these adolescents to trust other people, particularly adults. Five of the six participants had been seriously abused in their younger years by adult family members. One had lost a mother to a drug overdose, and one had never known her parents.

Time limitations also hampered interpersonal connections. Because the participants were only available during part of the day in the summer months, the number of sessions was limited. It could be that with more extended contact, I could have gained a deeper level of trust with the teens. I believe that over time, co-improvisations with certain individuals would have become more rich and communicative, and it might have become easier to talk about the experience of playing.

A third factor has to do with the role relationships that were established at the beginning of the project. Facility staff introduced me as a researcher, and the adolescents were told they were study participants. Although I observed group sessions within each of the two programs, I was not allowed to have any regular contact with the adolescents apart from their improvisation sessions. This made it difficult for the adolescents and me to get to know each other in a way that might have promoted more intimacy. A music therapist working with troubled adolescents would have the benefit of extended engagement and a more holistic view of each individual and their musical and personal tendencies.

One of the most significant findings of this study was that, at least in two cases, the most meaningful improvisations for me held little or no stated meaning for the adolescent participants. These particular experiences of co-improvisation evoked in me feelings of benevolence, gratitude, and well-being, and I was struck by the beauty of our mutual creations. The teens, on the other hand, did not appear to be particularly moved by these same improvisations, and, when asked, described the experience

of co-improvisation as feeling the same as playing by themselves. The lesson here is that the therapist must guard against making assumptions about the client's meaning-making process and the significance of her role in that process. Countertransference, when acknowledged and managed, may result in a fuller understanding of the improvisational process; when unexplored, it may lead the therapist to believe that the improvisational experience is more meaningful for the client than it really is.

Implications for Education and Training

My involvement in this study has strengthened my belief that adolescents with emotional and behavioral disorders can benefit in many unique ways from involvement in music improvisation. Unfortunately, only a handful of undergraduate programs in the United States appear to include training in this method as a regular and intentional feature of their curricula (Hiller, in progress). Internship sites with a focus on improvisation appear to be equally rare. As a consequence, entry-level clinicians often lack the necessary performance and facilitation skills required to competently and confidently lead clients in even simple improvisation experiences. It is my opinion that curricular reform is imperative; every therapist ought to be able to provide her adolescent clients with as many options for meaningful self-expression and communication as possible.

A further implication of the findings is that there is a need to develop in-the-moment listening skills for use in the improvisational situation. Clinical decision-making begins with assessment, which in improvisational therapy involves listening and observing. Perhaps even rudimentary training in the profiles, scales, and gradients of the IAPs could be implemented at the undergraduate level in order to heighten students' awareness of the musical processes inherent in improvised music. Interpretive uses of the IAPs may be more relevant for the graduate student or seasoned clinician.

Implications for Research

Although some of my initial questions were answered in the process of this inquiry, new questions were generated as well, some of which serve as fodder for future research.

One question relates to the connection between instruction in improvisation, skill in improvisation, and meaning in improvisation. I noticed that, in general, as the participants gained experience on and comfort with the various instruments through instruction, practice, and exploration, two things happened. First, they expanded their sound vocabulary; that is, they were able to produce a broader range of sounds. Second, the adolescents became more adept at manipulating the various musical elements in an intentional way. Not only did they have more sounds from which to sample, but they had more control over each of these sounds with respect to frequency, intensity, and duration. As they gained more control in this way, their music became more expressive — that is, it seemed to more fully and accurately represent how they were thinking and feeling in the moment of music-making. Did it also become more meaningful? Elsewhere in this report, I have alluded to a correlation between meaningfulness and expressivity (one's ability to make overt one's inner life). I believe this potential link requires further examination.

SUMMARY

The purpose of this qualitative study was to investigate meaning-making in clinical music improvisation with troubled adolescents. Each participant was involved in up to five improvisation sessions. The adolescents were asked to create nonreferential and referential improvisations, both alone and with me. After each improvisation, the participants and I listened to and/or talked about the piece. Selected improvisations were then analyzed using Bruscia's (1987) Improvisation Assessment Profiles and intramusical and intermusical relationships were discerned. Textual data from session transcripts and field notes were analyzed, and intrapersonal and interpersonal relationships were identified. Musical and textual data were compared, as were data relating to the teens' and my own experiences.

While the manner in which the musical elements were organized to create meaningful improvisations was unique to each adolescent, tendencies did appear across cases with respect to rhythmic integration, tonal expression, timbre, and texture (playing configuration). Analysis of the verbal meanings assigned to the improvisational products and processes also revealed commonalities among the adolescents, such as the perception that music evoked emotions and allowed for the expression of existing feeling states.

A comparison of the participants' and my music-making revealed both analogous and divergent tendencies. For example, both the participants and I were inclined toward rhythmicity and used rhythmic elements to establish musical connections with each other. Neither the teens nor I used harmony significantly in our improvisations. In contrast, the adolescents had difficulty sustaining a pulse and tended to establish and repeat signature rhythms, whereas my playing was more stable and my rhythmic figures more varied. The participants used volume as an expression of physical and emotional tension, while I used dynamics to validate or advance their expressions.

Verbal data revealed that both the teens and I had emotional reactions to our music-making and believed that we expressed a variety of feeling states through the medium of sound. Perceptions of musical inadequacy and musical competence were mutual experiences. Finally, there were times that we valued moments of intimacy created through shared rhythmic expressions. Not surprisingly, the adolescents typically experienced improvisation in a more concrete fashion than I did, relating volume and tempo to specific feeling states, and associating certain instruments and sounds with previous life experiences and memories.

Perhaps one of the main findings of this study is that co-improvisation did not always lead to perceived or stated meaningfulness for both improvisers. In fact, several different scenarios occurred: (a) some improvisations were described as meaningful by both the client and the therapist; (b) some improvisations were described as meaningful by one player and not the other; (c) some improvisations were described by both improvisers as lacking meaning; and (d) some improvisations may have been meaningful, but this meaningfulness was not declared out loud. (In this study, the choice to withhold one's perceptions of meaning may have stemmed from a lack of trust and rapport between the players, an inability to pinpoint or describe the experience, deficits in self-worth or self-confidence, or any number of other possibilities.)

Several new questions flow from the notion that an individual could find little or no meaning in an improvisational experience. For example, is meaningfulness an either-or phenomenon, or is it possible that a stated lack of meaning represents a point on a continuum of intensity or consciousness rather than a total absence? That is, does one's experience need to reach a certain level of perceptual or emotional significance or strength in order to be recognized or considered meaningful? If so, could the adolescents' psychiatric symptoms and pharmacological treatments have dulled their emotional awareness, thereby inhibiting their perceptions of meaningfulness? Furthermore, could perceptions of meaning be enhanced with sensory and emotional exercises related to the experience of music improvisation? And along these lines, is it possible to instruct an individual to create and perceive more meaning through improvisation, and if so, how is this best accomplished?

In retrospect, I wonder if the sensation of boredom was confused with meaninglessness. There were times when one or both players admitting to feeling bored and disinterested. Unfortunately, these

feelings were simply acknowledged and then dismissed; their relationship to meaning-making was not explored.

Were psychological mechanisms defending against the interpersonal intimacy and vulnerability that can result from shared experiences of meaning? In other words, did the perceived lack of meaning indicate each adolescent's stage of therapeutic development? Would improvisations and discussions have become more meaningful as rapport and ego strength increased? A related question involves the connection between the quality of the interpersonal relationship between the therapist and client as it relates to the quality of the music and the perceived meaningfulness. What aspects of the interpersonal (therapeutic) relationship allow for the most meaningful music and music-making experiences?

These many questions point yet again to the complexity of musical meaning-making and the pressing need for additional research. Discoveries related to this topic would not only be of interest to the music therapist working improvisationally with troubled adolescents, but would have relevance for all clinicians seeking to understand and deepen the experience of music therapy for their clients.

REFERENCES

- Aigen, K. (1995). Principles of qualitative research. In B. Wheeler, (Ed.), *Music therapy research: Quantitative and qualitative perspectives* (pp. 283–311). Phoenixville, PA: Barcelona.
- Aigen, K. (1996). The role of values in qualitative music therapy research. In M. Langenberg, K. Aigen & J. Frommer (Eds.), *Qualitative music therapy research: Beginning dialogues* (pp. 9–34). Gilsum, NH: Barcelona.
- Aigen, K. (1997). *Here we are in music*. St. Louis, MO: MMB Music.
- Aigen, K. (2001). Music, meaning, and experience as therapy. *Nordic Journal of Music Therapy*, 10, 86–99.
- Amir, D. (1990). A song is born: Discovering meaning in improvised songs through a phenomenological analysis of two music therapy sessions with a traumatic spinal-cord injured young adult. *Music Therapy*, 9 (1), 62–81.
- Amir, D. (1996). Experiencing music therapy: Meaningful moments in the music therapy process. In M. Langenberg, K. Aigen & J. Frommer (Eds.), *Qualitative music therapy research: Beginning dialogues* (pp. 109–129). Gilsum, NH: Barcelona.
- Amir, D. (2001). Layers of meaning. *Nordic Journal of Music Therapy*, 10, 209–220.
- Ansdell, G. (1996). Talking about music therapy: A dilemma and a qualitative experiment. *British Journal of Music Therapy*, 10, 4–16.
- Arnason, C. (2002). An eclectic approach to the analysis of improvisations in music therapy sessions. *Music Therapy Perspectives*, 20, 4–12.
- Brooks, D. (1989). Music therapy enhances treatment with adolescents. *Music Therapy Perspectives*, 6, 37–39.
- Bruscia, K. (1987). *Improvisational models of music therapy*. Springfield, IL: Charles C. Thomas.
- Bruscia, K. (Ed.). (1991). *Case studies in music therapy*. Gilsum, NH: Barcelona.
- Bruscia, K. (1995). The process of doing qualitative research: II: Procedural steps. In B. Wheeler (Ed.), *Music therapy research: Quantitative and qualitative perspectives* (pp. 400–427). Phoenixville, PA: Barcelona.
- Bruscia, K. (1998). Standards of integrity for qualitative music therapy research. *Journal of Music Therapy*, 35, 176–200.
- Bruscia, K. (2000a). The nature of meaning in music therapy. *Nordic Journal of Music Therapy*, 9, 84–96.
- Bruscia, K. (September 25, 2000b). The improvisation assessment profiles revisited. In IAP Revisited [online], Forum of the *Nordic Journal of Music Therapy*. Available: <http://www.hisf.no/njmt>.
- Bruscia, K. (2001). A qualitative approach to analyzing client improvisations. *Music Therapy Perspectives*, 19, 7–21.
- Clendenon-Wallen, J. (1991). The use of music therapy to influence the self-confidence and self-esteem

- of adolescents who are sexually abused. *Music Therapy Perspectives*, 9, 73–80.
- Denzin, N. (1978). *Sociological methods*. New York: McGraw-Hill.
- Dvorkin, J. (1991). Individual music therapy for an adolescent with Borderline Personality Disorder: An object relations approach. In K. Bruscia (Ed.), *Case studies in music therapy* (pp. 219–230). Gilsum, NH: Barcelona.
- Edgerton, C. (1990). Creative group songwriting. *Music Therapy Perspectives*, 8, 15–19.
- Edison, C. (1989). The effect of behavioral music therapy on the generalization of interpersonal skills from sessions to the classroom by emotionally handicapped middle school students. *Journal of Music Therapy*, 26, 206–221.
- Flower, C. (1995). Control and creativity: Music therapy with adolescents in secure care. In M. Heal & T. Wigram, (Eds.), *Music therapy in health and education* (pp. 40–45). London: Jessica Kingsley.
- Forinash, M. (1992). A phenomenological analysis of Nordoff-Robbins' approach to music therapy: The lived experience of clinical improvisation. *Music Therapy*, 11 (1), 120–141.
- Forinash, M. (1995). Phenomenological research. In B. Wheeler (Ed.), *Music therapy research: Quantitative and qualitative perspectives* (pp. 367–387). Phoenixville, PA: Barcelona.
- Forinash, M. (2000). I have to wait for the moment that I'm doing music to figure out what the meaning is. *Nordic Journal of Music Therapy*, 9, 74.
- Forinash, M., & Gonzalez, D. (1989). A phenomenological perspective of music therapy. *Music Therapy*, 8, 35–46.
- Frisch, A. (1990). Symbol and structure: Music therapy for the adolescent psychiatric inpatient. *Music Therapy*, 9 (1), 16–34.
- Gardstrom, S. (1987). Positive peer culture: A working definition for the music therapist. *Music Therapy Perspectives*, 4, 19–23.
- Gaston, E. (1968). *Music in therapy*. New York: MacMillan.
- Giorgi, A. (1970). *Duquesne studies in phenomenological psychology, volume I*. Pittsburgh: Duquesne University Press.
- Gladfelter, N. (1992). *The effects of listening and progressive relaxation on the anxiety level of adolescent males*. Unpublished master's thesis, Western Michigan University, Kalamazoo, MI.
- Haines, J. (1989). The effects of music therapy on the self-esteem of emotionally disturbed adolescents. *Music Therapy*, 8, 78–91.
- Henderson, S. (1983). Effects of a music therapy program upon awareness of mood in music, group cohesion, and self-esteem among hospitalized adolescent patients. *Journal of Music Therapy*, 20, 14–20.
- Hiller, J. (in progress). *A survey of clinical improvisation curricula in undergraduate programs*.
- Hiller, J. (1994). *Relationship between music and self-concept*. Unpublished master's thesis, Temple University, Philadelphia, PA.
- Hong, M., Hussey, D., & Heng, M. (1998). Music therapy with children with severe emotional disturbances in a residential setting. *Music Therapy Perspectives*, 2, 61–66.
- Jungaberle, H., Verres, R., & DuBois, F. (2001). New steps in musical meaning—the metaphoric process as an organizing principle. *Nordic Journal of Music Therapy*, 10, 4–16.
- Kenny, C. (1995). *Listening, playing, creating: Essays on the power of sound*. Albany, NY: SUNY Press.
- Lee, C. (1989). Structural analysis of therapeutic improvisatory music. *Journal of British Music Therapy*, 3, 11–19.
- Lee, C. (1990). Structural analysis of post-tonal therapeutic improvisatory music. *Journal of British Music Therapy*, 4, 6–20.
- Lee, C. (2000). A method of analyzing improvisations in music therapy. *Journal of Music Therapy*, 37, 147–167.
- Leeseberg, M. (1994). *Assessment of family relationships through musical improvisation*. Unpublished master's thesis, Temple University, Philadelphia, PA.
- Lehtonen, K. (2000). Music in life space: A “Lewin-like” viewpoint on the meaning of music and music therapy. *Canadian Journal of Music Therapy*, 7 (1), 19–38.

- Lehtonen, K., & Shaughnessy, M. (1997). Music as a treatment channel of adolescent destructivity. *International Journal of Adolescents and Youth, 7* (1), 55–65.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Mark, A. (1988). Metaphoric lyrics as a bridge to the adolescent's world. *Adolescence, 23* (90), 313–323.
- McFerran-Skewes, K. (2000). From the mouths of babes: The response of six younger, bereaved teenagers to the experience of psychodynamic music therapy. *The Australian Journal of Music Therapy, 11*, 3–22.
- McLeod, J. (2001). *Qualitative research in counseling and psychotherapy*. Thousand Oaks, CA: Sage.
- Merriam, S. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Meyer, L. (1956). *Emotion and meaning in music*. Chicago: University of Chicago Press.
- Michel, D., & Farrell, D. (1973). Music and self-esteem: Disadvantaged problem boys in an all black elementary school. *Journal of Research in Music Education, 21*, 80–84.
- Miles, M., & Huberman, A. (1994). Data management and analysis methods. In N. Denzin & Y. Lincoln (Eds.), *Handbook of qualitative research* (pp. 428–444). Cambridge, MA: Harvard Press.
- Montello, L., & Coons, E. (1998). Effects of active versus passive group music therapy on preadolescents with emotional, learning, and behavioral disorders. *Journal of Music Therapy, 35*, 49–67.
- Okun, B. (2002). *Effective helping: Interviewing and counseling techniques* (6th ed.). Pacific Grove, CA: Brooks/Cole.
- Patton, M. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, CA: Sage.
- Pavlicevic, M. (1997). *Music therapy in context: Music, meaning and relationship*. London: Jessica Kingsley.
- Pavlicevic, M. (2000). Music, meaning, and archaic forms: a response to Kimmo Lehtonen. *Journal of British Music Therapy, 2* (1), 14–18.
- Priestley, M. (1994). *Essays on Analytical Music Therapy*. Phoenixville, PA: Barcelona.
- Priestley, M. (1995). The meaning of music. *Nordic Journal of Music Therapy, 4*, 28–32.
- Rio, R., & Tenney, K. (2002). Music therapy for juvenile offenders in residential treatment. *Music Therapy Perspectives, 20* (2), 89–97.
- Rubin, H., & Rubin, I. (1995). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage.
- Ruud, E. (1998). *Music therapy: Improvisation, communication, and culture*. Gilsum, NH: Barcelona.
- Saroyan, J. (1990). The use of music therapy on an adolescent psychiatric unit. *Journal of Group Psychotherapy, Psychodrama & Sociometry, 43* (3), 139–141.
- Shoemark, H. (1991). The use of piano improvisation in developing interaction and participation in a blind boy with behavioral disturbances. In K. Bruscia (Ed.), *Case studies in music therapy* (pp. 219–230). Gilsum, NH: Barcelona.
- Skaggs, R. (1997). Music-centered creative arts in a sex offender treatment program for male juveniles. *Music Therapy Perspectives, 15*, 73–78.
- Slotoroff, C. (1994). Drumming technique for assertiveness and anger management in the short term psychiatric setting for adult and adolescent survivors of trauma. *Music Therapy Perspectives, 12*, 111–116.
- Steele, A. (1975). Three year study of a music therapy program in a residential treatment center. *Journal of Music Therapy, 12*, 67–83.
- Stephens, G. (1983). The use of improvisation for developing relatedness in the adult client. *Music Therapy, 3* (1), 29–42.
- Stige, B. (1998). Perspectives on meaning in music. *British Journal of Music Therapy, 12*, 20–27.
- Stige, B. (2002). *Culture-centered music therapy*. Gilsum, NH: Barcelona.
- Tervo, J. (2001). Music therapy for adolescents. *Clinical Child Psychology & Psychiatry, 6* (1), 79–91.
- Wells, N., & Stevens, T. (1984). Music as a stimulus for creative fantasy in group psychotherapy with young adolescents. *The Arts in Psychotherapy, 11*, 71–76.
- Wigle-Justice, R. (1994). Music therapy interventions for people with eating disorders in an inpatient

setting. *Music Therapy Perspectives*, 12, 104–110.

Wyatt, J. (2002). From the field: Clinical resources for music therapy with juvenile offenders. *Music Therapy Perspectives*, 20, 80–88.

APPENDIX A

TRANSCRIPTION EXCERPT

- TH: What do you think you need today?
E: I don't know. I feel weird; I'm just (big sigh) kind of out there.
TH: It's a hard day?
E: (nods)
TH: You said you're tired?
E: Yeah, I was scared to go to sleep last night, I don't know why. (E starts playing tubano with mallet)
TH: Do you want me to play with you or do you want to play by yourself?
E: Um, you can play too.
TH: OK. How about if you choose an instrument for me to play? Something that would go well or help you?
E: Probably another drum would help, actually. Yeah.
TH: Which one, do you think?
E: Um...(big pause)... Probably that one, like a lighter sound.
TH: The doumbek?
E: Yeah.
TH: OK.
E: That's the first time playing with these things.
TH: With the mallets?
E: Yeah, I don't really like them too much. 'Cause I don't know how to play them. I know you make your wrists like kind of...you play with your wrists, right?
TH: Yeah, you can, it kind of depends on the sound that you want. A lot of drummers hold them, they call it bicycle grip, like you're riding a bike. (TH demonstrates, E imitates) Yeah, just like that. You don't have to use mallets, you know. You can use your hands too. It's a completely different feeling.
E: Yeah, I know. (E continues to play with mallets)
TH: There are shorter mallets, if that would help.
E: That's got a really deep sound, whoa!
TH: Does it bother your ears?
E: A little bit, but...(E continues with mallets, then switches to hands)...I'll play with my hands, is that all right?
TH: OK. Do you want to just play freely? Or would you like to play something in particular, like your mood or where you'd like your mood to be, or just play?
E: Just play. That's how I feel. (E laughs)
TH: That's fine.
E: Can you start a beat first so I can follow? 'Cause that would be better.
TH: All right. What kind of a beat do you want?
E: Maybe working up to faster and then, yeah, whatever.
TH: So start slower and work up to faster?
E: Yeah.
TH: OK.
- (Improvisation = 3min 35sec)
- E: (E ends abruptly) OK...(sighs, laughs, then sighs again)...man! (laughs)
TH: What's going on?

E: That was good, made me feel better.
TH: Uh-huh. In what way?
E: Um...I really got a lot of feeling out. Closing my eyes really helped.
TH: Does it help? That's good to know.
E: Yeah, it helps me concentrate on what I'm doing, 'cause, yeah, wow, that was good! (E laughs)
TH: When you say, "get feeling out," what kind of feeling do you mean?
E: Uh, I don't know, I'm kind of frustrated. Yeah, yeah. (E laughs)
TH: You've got some frustration. Do you need to play some more frustration?
E: (taps drum) Yeah! (laughs)
TH: OK, let's do that. Just go. (E starts on tubano, TH joins on doumbek)

(Improvisation = 3min)

E: Ah, geez. OK. (big sigh) Yeah.
TH: Yeah? Can you talk a bit more about what's happening when you play?
E: Um (big sigh). I don't know, like...like when I play the drums it helps me, like, relieve a lot of anger 'cause it's pounding something and ah...like right now like I've got a lot of emotions, I guess. I'm just, mostly angry, er, I don't know why, just, (laughs) just, like, frustrated and (plays drum) like I don't know how to express it, except by this, and....I don't know. (E laughs)
TH: It seemed like you tried to play with a real strong pulse. (TH demonstrates on drum) Does that help you express it?
E: (tentatively) Yeah...yeah a little, yeah it does. If I get a beat, like if I actually get one, I'll feel better about it. I guess it makes me feel good because I'm accomplishing something I guess, accomplishing something in music, on the drum, more like, really. And um, I don't know, drums make me feel so good so it's like emotion...(voice trails off)
TH: It's like what?
E: Emotion pouring out.
TH: Yeah, yeah. You know, if you hand somebody a drum and you say, "play your anger," a lot of times it doesn't sound musical, it's just...(TH gestures pounding on drum)...a release.
E: Yeah.
TH: And I kind of have the sense that you were holding back a little bit...?
E: Yeah...
TH: In expressing yourself. Are you?
E: Yeah, a little bit.
TH: OK. Do you feel like you need to hold back?
E: I don't know. I don't even know what I'm really angry about. That's what I'm trying to get at. 'Cause sometimes you'll, I know for me, I'm angry but I don't know exactly why and I'll figure out why I'm angry 'cause sometimes I'll forget.
TH: Uh-huh.
E: And I just have that feeling...
TH: (long pause) Do you need to play out some more?
E: (pause) Can I see that drum? (points to doumbek)
TH: This one?
E: Yeah. Let's see.

APPENDIX B

IMPROVISATION ASSESSMENT PROFILES (IAP) AND SCALES (MUSICAL ANALYSIS)

The IAPs (Bruscia, 1987) serve as a model of client assessment based upon clinical observation, musical analysis, and interpretation of improvisation. In the IAPs, the client's improvisations are analyzed according to six profiles, with each profile consisting of separate scales for each musical element. The profiles and scales used in this study are:

1—**Saliency**: This profile deals with how certain musical elements are given more prominence and control than others. The five gradients are:

Receding Conforming Contributing Controlling Overpowering

Abbreviations for scales in this profile were not used in the study.

2—**Integration**: This profile deals with how simultaneous aspects of the music are organized. The five gradients are:

Undifferentiated Fused Integrated Differentiated Overdifferentiated

Abbreviations used in this study for the scales in this profile are:

RHY INT—Rhythmic Integration (Figure-Ground and Part-Whole)
MEL INT—Melodic Integration (Figure-Ground and Part-Whole)
HAR INT—Harmonic Integration (Figure-Ground)
TEX INT—Textural Integration (Part-Whole and Register & Configurations)
PHR INT—Phrasing Integration
TIM INT—Timbre Integration
VOL INT—Volume Integration

3—**Variability**: This profile deals with how sequential aspects of the music are organized and related. The five gradients are:

Rigid Stable Variable Contrasting Random

Abbreviations used in this study for the scales in this profile are:

TEM VAR—Tempo Variability
MET VAR—Meter Variability
RHY VAR—Rhythmic Figure Variability
MEL VAR—Melodic Figure Variability
TON VAR—Tonal Ground Variability (Modality & Tonality)
HAR VAR—Harmonic Variability
TEX VAR—Texture Variability (Overall, Roles, Register, and Configurations)
STY VAR—Style Variability
PHR VAR—Phrasing Variability
TIM VAR—Timbre Variability

VOL VAR—Volume Variability

4—**Tension:** This profile deals with how much tension is created within and through various aspects of the music. The five gradients are:

Hypotense Calm Cyclic Tense Hypertense

Abbreviations used in this study for the scales in this profile are:

RHY TEN—Rhythmic Tension (Figure-Ground and Rhythmic Figure)
TON TEN—Tonal Tension
MEL TEN—Melodic Tension
HAR TEN—Harmonic Tension
TEX TEN—Textural Tension
PHR TEN—Phrasing Tension
VOL TEN—Volume Tension
TIM TEN—Timbral Tension

5—**Congruence:** This profile deals with the extent to which simultaneous feeling states and role relationships are congruent. The five gradients are:

Uncommitted Congruent Centered Incongruent Polarized

Abbreviations for scales in this profile were not used in the study.

6—**Autonomy:** This profile deals with the kinds of role relationships formed between the improvisers. The five gradients are:

Dependent Follower Partner Leader Resister

Abbreviations used in this study for the scales in this profile are:

RHY AUT—Rhythmic Autonomy (Ground and Figure)
TON/MEL AUT—Tonal/Melodic Autonomy
HAR AUT—Harmonic Autonomy
TEX AUT—Textural Autonomy
PHR AUT—Phrasing Autonomy
VOL AUT—Volume Autonomy
TIM AUT—Timbre Autonom

APPENDIX C

IAP ANALYSIS OF SELECTED IMPROVISATIONS

(Note: These improvisations can be heard online at www.barcelonapublishers.com)

Excerpt 1—Hayley: H1 Nonreferential Duet

IAP Summary: This was a monothematic improvisation of 1 minute and 30 seconds on two instruments, guiro (Hayley) and bongos (Susan). The texture was two parts for each instrument: a scrape and a tap on the guiro and a scrape and a strike on the bongos.

Rhythmic grounding was highly variable in the first half of the piece. In the second half there was a shared pulse most of the time, and a consistent 6/8 meter was established and maintained until the end of the improvisation. Tempo was fairly stable, except for a slight acceleration in the middle of the piece and a pronounced *ritardando* at the end.

The rhythmic figure that Hayley established was unchanging. There was high rhythmic variability in my playing.

Volume remained constant until the end, when both of us played a *decrecendo*. Tension was produced by the lack of rhythmic integration in the first half and the timbre of the scrape on the guiro.

Leadership alternated in this piece; Hayley initiated both changes in tempo and I established meter and initiated the *decrecendo* at the finale.

IAP Analysis of the Music: Throughout the piece, Hayley seemed to find meaning in maintaining the rhythmic theme (scrape, tap-tap or scrape, tap-tap-tap) that she established at the beginning (RHY VAR-STABLE). Her theme did not waver, in spite of the rhythmic variability in my playing (RHY AUT-RESISTIVE). Ungrounded at first, Hayley's rhythmic configuration became more organized half way through the piece, aligning with the pulse (RHY INT-INTEGRATED) and falling more consistently within the meter that I maintained (RHY AUT-FOLLOW).

Hayley did not initiate any changes in volume in her playing (VOL VAR-STABLE). The most noticeable change in volume occurred at the very end when she became gradually quieter in response to my *decrecendo* (VOL AUT-FOLLOWER).

Hayley initiated both shifts in tempo that occurred (RHY AUT-LEADER, TEM VAR-VARIABLE). These were changes in different directions, with a slight but noticeable *accelerando* at the midpoint and an emphatic slowing to close the piece. Timbre was stable throughout (TIM VAR-STABLE).

My playing was mostly integrated with the pulse (RHY INT-INTEGRATED), except when I was attempting to align a downbeat with Hayley's playing (RHY AUT-FOLLOWER) or when I was trying to effect change in her rhythmic pattern (RHY AUT-LEADER). I created many different rhythmic figures during the course of the improvisation (RHY VAR-VARIABLE), and all but one (scratching) were bound to 6/8 time. I slowed my playing in response to Hayley's *ritardando* (RHY AUT-FOLLOWER).

My volume was stable (VOL VAR-STABLE), except for the synchronous *decrecendo* I led at the close of the piece (VOL AUT-LEADER).

My timbre on the bongos was varied (TIM VAR-VARIABLE). The scratching pattern I used was motorically and timbrally analogous to the scraping pattern Hayley used on the guiro (TIM INT-FUSED)

Excerpt 2—Hayley: H3 Solo Referential (“Sadness and Anger”)

IAP Summary: This improvisation was 55 seconds in duration and was based on the referent, “Sadness and Anger” Hayley played the tubano. There was one timbre and one texture represented throughout.

The entire piece was built upon a series of phrases of irregular length consisting of subdivisions on the rim (produced by alternating R-L strikes) followed by an accented strike in the middle of the drumhead. This theme continued without variation and coincided with a pulse only occasionally.

Tempo was moderate and stable, as was overall volume at *forte*. The piece ended suddenly on the rim, prior to the accented strike. Hayley created tension in the lack of rhythmic integration, the unevenness of the phrase length, and the abrupt ending.

IAP Analysis of the Music. Hayley created a cyclical rhythmic theme that did not vary significantly over the course of the improvisation (RHY VAR-STABLE). She did not relate this theme to a ground with any consistency (RHY INT-DIFFERENTIATED). Her phrase length was highly variable (PHR VAR-VARIABLE). Volume did not change noticeably (VOL VAR-STABLE), nor did timbre (TIM VAR-STABLE).

As I listened to Hayley play, my attention was focused on her use of subdivisions and volume and the cyclical manner in which they created and released tension. The erratic placement and number of subdivisions leading up to the strike served to accumulate tension, and the accented strike itself at the end of each phrase served to release it somewhat (RHY/VOL TEN-CYCLIC). However, because each phrase began immediately after the previous without pause, there was never an overall feeling of tension resolution. The incomplete cycle at the end contributed to the unresolved nature of the piece.

Excerpt 3—Hayley: H12 Duet Nonreferential

IAP Summary: This co-improvisation on the alto metallophone was 3 minutes and 10 sections in duration. It had three main sections. The first and second were delineated by a change in tempo and rhythmic figure, and the second and third were separated by a change in texture (solo-accompaniment) and tonality. In that we were sharing one instrument, one timbre was represented throughout.

In Section 1, Hayley played a series of subdivisions on three adjacent notes in the lowest range of the instrument, which were not integrated with a pulse. I played scalar passages on the high notes, also arrhythmic. There was no tonal center. Volume remained constant at a *pianissimo* level except for a series of repeated, accented *forte* notes that I played and a synchronous *crescendo* on another repeated note. At the close of Section 1, I introduced a dotted rhythmic pattern in duple meter. Tension was produced by the lack of rhythmic integration at the start and the unexpected accented notes.

Section 2 was characterized by a slowing from the previous segment along with increasing rhythmic integration with the pulse and between players. Hayley introduced a simple rhythmic motif in duple meter that became the basis for this section. As in Section 1, there was no tonal center. Volume was unchanging at *forte*.

In Section 3, Hayley played a solo over my accompaniment. These two parts were rhythmically integrated for most of this section. The solo was comprised of subdivisions, played in the middle and upper ranges of the instrument and organized into phrases of consistent length that were separated by an eighth rest. Hayley used intervals of seconds, thirds, and fourths. The solo was tonally differentiated from the accompaniment, an ostinato that was centered on F and C and played harmonically for a few repetitions, then melodically until the end of the piece. Dynamic levels were fused and largely unchanging at *mp*. Two configurations were represented, single strikes and *glissandi*.

Hayley determined the tempo and rhythmic figure for Section 2. I led the changes in volume, initiating the *crescendo* in Section 1, the *forte* dynamic level in Section 2, and the *decrescendo* at the conclusion of the piece.

IAP Analysis of the Music: Rhythmic grounding and integration of Hayley’s playing changed as this piece unfolded. Initially, she did not play with a discernable pulse and did not integrate with mine (RHY INT-DIFFERENTIATED, RHY AUT-RESISTIVE). As she moved through the second

and final segments, her playing became more rhythmically organized and connected (RHY INT-INTEGRATED). There was little variability in her rhythmic playing, as she used subdivisions from beginning to end (RHY VAR-STABLE). She both responded to the manner in which I used the rhythmic elements (fusing with the underlying pulse provided by the ostinato) (RHY INT-FUSED) (RHY AUT-FOLLOWER) and initiated her own modifications (creation of new rhythmic figure and accompanying change of tempo at Section 2) (TEM AUT-LEADER).

Although Hayley did not play according to a tonal center, per se, there were fleeting moments of tonal alliance with the ostinato accompaniment in the final section (MEL INT-DIFFERENTIATED). She began the piece with a narrow range of notes in a pattern that she had used in previous improvisations. At the conclusion of the improvisation, her melodic statements expanded to include sequences and intervals greater than those she had played in the past. Her repeated notes, less than 30 seconds into the piece, were not only a departure from her personal repertoire, but from the established character of the music (MEL VAR-VARIABLE).

Hayley created tremolos on the interval of a third, which she had not previously done (TEX VAR-VARIABLE). Hayley's volume levels blended and coincided with mine (VOL INT-FUSED). She followed my changes in dynamics, including the crescendo in Section 1 and the decrescendo at the finale (VOL AUT-FOLLOWER).

In the beginning, my music lacked a pulse (RHY INT-OVERDIFFERENTIATED). With the introduction of the dotted rhythmic figure in Section 1, I became grounded in pulse, tempo, and meter (RHY INT-INTEGRATED). I used a variety of rhythmic figures throughout the piece, but most of these were oriented around subdivisions of the pulse (RHY VAR-VARIABLE). I followed Hayley's lead into a slower tempo at the start of Section 2 and at the end of the piece (RHY AUT-FOLLOWER).

My playing started out tonally ungrounded (MEL INT-OVERDIFFERENTIATED) but became increasingly grounded as the piece evolved (MEL INT-INTEGRATION). I used a variety of melodic patterns (MEL VAR-VARIABLE).

At one point, I was playing a series of melodic figures centered on F, and when I began the ostinato on F-C and G-C, I was squarely in that key, as reinforced by the tonic-dominant relationship and movement from the second scale degree to the tonic (HAR INT-FUSED).

My volume varied and included both sudden, drastic changes (accented, repeated notes) and predictable, gradual changes (*crescendi* and *decrescendi*) (VOL VAR-VARIABLE). There was no change in timbre (TIM VAR-STABLE).

Excerpt 4—Tanisha: T2 Duet Nonreferential

IAP Summary: This nonreferential duet lasted 1 minute and 45 seconds. Tanisha played the metal ganza with the metal striker and I played the doumbek. Tanisha used three playing configurations on the ganza: scraping, striking, and shaking. I used striking and rolling with my fingertips on the rim of the drum. Simultaneous timbres were quite different from one another.

This piece was comprised of both synchronous and antiphonal playing. There were two discrete rhythmic patterns used. Tanisha initiated the first of these, a duple figure comprised of quarter and eighth notes. I introduced the second, an eighth note followed by two eighth rests and two sixteenth notes. Tanisha often filled in the rests with two eighth notes of her own.

Tanisha's rhythmic variations were minimal in that she mostly played subdivided patterns. My rhythmic variability was moderate. For most of the piece, the rhythms were either fused or integrated with a ground. There were two departures from a stable tempo: a series of slow scrapes that Tanisha played followed by brisk tapping in the original speed, and an *accelerando* which I initiated shortly thereafter. Volume remained stable at *forte*.

IAP Analysis of the Music. Tanisha found several ways to create and combine sounds on the ganza (TEX VAR-VARIABLE, TIM VAR-VARIABLE). There was stability in her rhythmic expressions, as reflected in the uniform nature of her patterns (RHY VAR-STABLE), and their fusion or integration with the pulse (RHY INT-FUSED, RHY INT-INTEGRATED). She assumed both leader and follower

roles. She established the original tempo and slowed it mid-way through the piece; she also synchronized with my tempo change and rhythms at the very end of the improvisation (RHY AUT-PARTNER).

Like Tanisha, I constructed meaning through rhythmic stability. Although my rhythmic figures were more complex and varied than hers (RHY VAR-VARIABLE), there were no dotted or syncopated values. All rhythmic figures fit neatly into the established duple meter (RHY INT-INTEGRATION) and at times were fused with Tanisha's (RHY INT-FUSED). As stated above, there was a partnership in that we took equal responsibility for determining tempi (TEM AUT-PARTNER).

Excerpt 5—Tanisha: T6 Solo Referential (“Loneliness”)

IAP Summary: This improvisation was based on the referent, “Loneliness.” Tanisha elected to play the crash cymbal with one felt mallet and one wire brush. She played for 2 minutes and 10 seconds, using two timbres created by three separate playing configurations: a strike with the mallet head, a strike with the brush handle, and a scrape with the brush.

The content of this piece can be described as an even mixture of rhythmic and random play. Sporadically, Tanisha used one distinct duple rhythmic theme, a dotted eighth/sixteenth unit followed by two eighth notes, a quarter note, and a quarter rest. (This figure appeared frequently in Tanisha's other rhythmic and tonal improvisations.) These rhythmic expressions were grounded in a pulse. In between the figures, she played random strikes and scrapes of varying volume, ranging from *pianissimo* to *mezzo-forte*. Tempo was slow overall, but variable.

IAP Analysis of the Music: Meaning was made in the creation of several different kinds of sounds with one instrument (TIM VAR-VARIABLE) at different levels of intensity (VOL VAR-VARIABLE). Tanisha's playing both coincided with a pulse (RHY INT-INTEGRATED) and did not coincide (RHY INT-OVERDIFFERENTIATED). Although Tanisha did not play in a consistent tempo (TEM VAR-VARIABLE), the overall pace of the piece was slow.

Salient in this improvisation was a lack of salience. That is, each of the musical elements that Tanisha used seemed to contribute equally to the composite sound (TIM SAL-CONTRIBUTING, TEX SAL-CONTRIBUTING, VOL SAL-CONTRIBUTING, RHY SAL-CONTRIBUTING). Also noticeable overall was an accompanying lack of tension (TEN-HYPOTENSE). I had the sense that the music was floating rather than moving forward through time.

Excerpt 6—Tanisha: T7 Duet Referential (“Anger”)

IAP Summary: The referential for this piece was “Anger.” Tanisha played the bongos with rubber mallets, and I played the tubano and crash cymbal with a felt mallet. The “conversation” lasted 1 minute and 5 seconds.

The piece consisted of three brief parts. Section 1 was characterized by a lack of pulse and a series of cymbal crashes followed by both synchronous and responsive sound “spurts” (random hits and quick tremolos ending with accented strikes) on both drums. I established the volume, which remained stable at *fortissimo*.

I struck the cymbal twice and Tanisha echoed these beats, thereby establishing a pulse that marked the beginning of Section 2. We fused rhythmically and timbrally on the two drums, accelerating slightly through a series of 14 motifs comprised of a quarter note followed by two eighth notes. Tanisha initiated a tremolo, with which I merged.

I began the final section with a series of 5 cymbal crashes, four of which Tanisha played with me. The dynamic level remained at *fortissimo*. There was no shared pulse in the final moments of the improvisation; my playing was arrhythmic and Tanisha's was metered. The ending was abrupt. Tension was created in this piece through volume, lack of rhythmic integration, and the harsh timbre of the crash cymbal.

IAP Analysis of the Music: Tanisha's musical expressions in this improvisation were formed from a mixture of stability and change. Her timbre remained consistent (TIM VAR-STABLE), as did her volume (VOL VAR-STABLE). In Section 2, her unchanging rhythmic figure was fused to an unwavering pulse (RHY VAR-STABLE, RHY INT-FUSED).

Change and unpredictability occurred in Tanisha's lack of rhythmic integration in Section 1 (RHY INT-DIFFERENTIATED), her movement from a series of simple strikes to a tremolo at the end of Section 2 (TEX VAR-VARIABLE), and her shifts in tempo. Tension appeared in the volume (VOL TEN-TENSE), timbre (TIM TEN-TENSE), and lack of rhythmic stability (RHY TEN-TENSE).

The volume of this piece was salient because of its extreme and unchanging nature (VOL VAR-RIGID). The instruments that I selected were well-suited to loud, accented declarations, and I used them steadily in this manner.

The formal structure of the improvisation was also notable. I contributed to the chaotic character of Section 1 (RHY INT-DIFFERENTIATED), the organized nature of Section 2 (RHY INT-FUSED), and, in that I chose not to align with Tanisha's measured playing in Section 3 (RHY AUT-RESISTER), the return to disorderliness in the final moments of the piece.

I led in certain aspects of the music (VOL AUT-LEADER) and followed in others (TEX AUT-FOLLOWER).

Excerpt 7—Ralph: R2 Duet Nonreferential

IAP Summary: This monothematic piece was 1 minute and 25 seconds in duration. Ralph played the agogo bells, the soprano glockenspiel with wooden mallets, and the crash cymbal. I played the cabasa and the tubano. Five timbres and eight different playing configurations were represented in all: strikes on the outside and tremolos on the inside of the agogo, strikes on the glockenspiel and cymbal, taps and scrapes on the cabasa, and strikes and tremolos on the tubano.

Ralph alternated between the glockenspiel and the agogo, playing subdivisions and simple rhythmic patterns in duple meter. His playing was grounded in a pulse about half of the time. There was no tonal center and Ralph did not form cohesive melodies on the barred instrument. He played mostly repeated notes and ascending and descending scalar passages, with occasional random intervals of a fourth and smaller. Tempo varied widely.

I played a basic beat and subdivisions, as well as imitated Ralph's rhythmic figures and created my own. A series of synchronous strikes on the glockenspiel and tubano led to a tremolo on the agogo and tubano and a final *forte* cymbal crash. Combined volume varied from *mezzo-forte* to *fortissimo*, with a *crescendo* on the tubano during the final tremolo. Tension was apparent in the lack of integration with a pulse and the climactic tremolo leading up to the crash.

IAP Analysis of the Music: In general, Ralph's playing was highly variable in all aspects except for volume (VOL VAR-STABLE). He used a variety of timbres (TIM VAR-VARIABLE). He created diverse rhythms in many different tempi (RHY VAR-VARIABLE, TEM VAR-VARIABLE). There was no tonal center (MEL INT-OVERDIFFERENTIATED) and no melodies formed. Although there was no definable form to this piece, Ralph imposed structure in that he started the sounds, established the initial tempo, and asserted the cymbal crash as the finale. He followed my tremolo (TEX AUT-FOLLOWER).

I took cues from Ralph, including the starting tempo and subsequent changes (TEM AUT-FOLLOWER) and volume for the piece (VOL AUT-FOLLOWER). I also imitated his rhythms (RHY AUT-FOLLOWER). I launched a tremolo, which Ralph joined (TEX AUT-LEADER). My original rhythmic figures were diverse (RHY VAR-VARIABLE) and my volume fluctuated throughout the piece (VOL VAR-VARIABLE).

Excerpt 8—Ralph: R4 Duet Nonreferential

IAP Summary: Ralph played the bongos, tubano, and cymbal for this improvisation. He chose the doumbek and the soprano glockenspiel for me to play. The piece was 1 minute and 35 seconds in length. Ralph said, “I’ll make three beats and then we start.”

The improvisation was organized into three parts. In Section 1, Ralph established a steady beat on the bongos, punctuated by single strikes on the tubano and cymbal. I played a repetitive rhythmic figure consisting of quarter and eighth notes. Ralph crashed on the cymbal to signal the start of the next section. Volume was stable at *forte*.

Section 2 was a brief segment during which I created four distinct melodic phrases on the glockenspiel in Phrygian mode and duple meter followed by four ascending *glissandi*. I used mostly repeated notes and scalar passages. Ralph “accompanied” me on the bongos with what appeared to be a syncopated motif that was only occasionally integrated with my pulse. He provided a second crash to indicate the transition to the final section. The *glissandi* and the crash were at a *fortissimo* dynamic level.

The last section began with Ralph playing the pulse lightly on the cymbal while I returned to my previous rhythmic figure on the doumbek. Ralph moved to the tubano and initiated a tremolo. We played a *crescendo* together, and Ralph ended the improvisation with a single, *fortissimo* crash.

IAP Analysis of the Music: As in previous improvisations, Ralph experimented with sounds and combinations of sounds throughout this piece (TIM VAR-VARIABLE, TEX VAR-VARIABLE) as well as with changes in the intensity of his playing (VOL VAR-VARIABLE). His rhythms were both glued to a steady pulse (RHY INT-FUSED) and separate from it (RHY INT-DIFFERENTIATED), depending on whether he was directing the outcome of the music or not. A cymbal crash once again took on significance for Ralph, both as a signal to change instruments and as the final climax of the piece (TIM AUT-LEADER).

In Section 1, I assumed the role of rhythmic ground, playing clearly-formulated rhythmic phrases with a steady pulse (PHR INT-INTEGRATED, RHY INT-FUSED). With respect to tempo and volume, there was shared autonomy in this piece. In Sections 1 and 3, Ralph determined the tempo and volume and I followed his lead (TEM AUT-FOLLOWER, VOL AUT-FOLLOWER). In Section 2, I established these elements on the glockenspiel (TEM AUT-LEADER, VOL AUT-LEADER), as well as the meter and phrase length, both of which Ralph resisted (MET AUT-LEADER, PHR AUT-LEADER).

Excerpt 9—Ralph: R5 Solo Nonreferential

IAP Summary: Ralph played this piece on the bongos, tubano, claves, and cymbal. It was 2 minutes in duration. There were three clearly defined sections.

Section 1 consisted of a series of subdivided rhythms on the claves in duple meter. These figures were precisely grounded in a pulse. Tempo did not waver. Volume was constant at *forte*.

Section 2 was comprised of uneven subdivisions on the tubano and bongos, which Ralph played alternately using one hand for each drum. The section ended with a steady, repeated pattern of eighth and quarter notes followed by a tremolo on the tubano and a crash on the cymbal.

The final section began seamlessly with single strikes on the cymbal in a slow then moderate tempo. Volume was *mezzo-piano*. Ralph modified the timbre by alternating between the head and the handle of the mallet on the edge of the cymbal. A crescendo over six steady strikes on the cymbal led to an accelerating tremolo on the tubano and a final crash. The piece ended at a *fortissimo* dynamic level.

Tension was cyclic, with volume and tempo assisting in the accumulation and release of energy.

IAP Analysis of the Music: Ralph’s creation was a sequence of climaxes followed by immediate decreases of sound mass and tempo (VOL TEN-CYCLIC, TEM TEN-CYCLIC). Rhythmic figures were clearly grounded in Section 1 (RHY INT-FUSED), and subdivisions played in remaining segments were occasionally aligned with a pulse (RHY INT-DIFFERENTIATED). Ralph exhibited freedom in his use of dynamics, employing gradual *crescendi* and *decrescendi* as well as abrupt changes (VOL VAR-VARIABLE).

What was meaningful for me in this improvisation was the manner in which Ralph integrated simultaneous musical elements of tempo, texture, and volume to produce the desired build-up and release

of tension (TEM TEN-CYCLIC, TEX TEN-CYCLIC, VOL TEN-CYCLIC). Furthermore, he capitalized on the timbre of each instrument (TIM VAR-VARIABLE), using the claves to form discrete, “crisp” rhythmic figures, the drums to produce full tremolos, and the cymbal to both build and release tension at critical moments in the improvisation.

Excerpt 10—Chrissy: C3 Duet Nonreferential

IAP Summary: This was Chrissy’s second attempt at her first improvisation with me. In the first trial, she played two distinct rhythmic patterns for 20 seconds, then stopped and declared, “I quit.” She was willing to try again immediately, however, and played the 4-minute improvisation as described below.

This piece was comprised of various sections defined by timbre change. Chrissy began playing the djembe, then added and switched instruments as the piece unfolded. I began with the tambourine and also switched instruments. In all, Chrissy played the djembe, tubano, and handdrum and I selected the tambourine, doumbek, and cabasa.

Section 1 commenced with Chrissy’s clearly formed rhythmic figures, two distinct dotted and syncopated motifs in duple meter. This rhythm was integrated with the pulse most of the time. I played pulse and subdivisions on the tambourine, using “half-note” tremolos (shakes) and strikes on the head. Volume was stable at *forte*. Tempo was moderate and unchanging. There was a brief pause (Chrissy adjusted the placement of the drum) during which I repeated one of the patterns she had previously stated.

Chrissy added strikes on the tubano in Section 2. She began in a rhythmic fashion, then played a series of random strikes and tremolos of unequal length and placement. I imitated her playing configuration with shakes on the tambourine and provided a pulse each time she returned to rhythmic playing.

The next segment occurred when Chrissy introduced a third distinct and highly-syncopated rhythm. I moved to the doumbek and played pulse, subdivision, and simple duple rhythms. There was a brief period of rhythmic disintegration and then a clear return to Chrissy’s first rhythmic theme in the original tempo. Volume continued at *forte*.

Chrissy switched to the handdrum and djembe for Section 4. I continued on the doumbek. This section resembled the one before in that we began playing in a rhythmic fashion, lost the beat, then returned to metered playing. There was a period of fusion during which we both played subdivisions. I used accents to define a brief period of 6/8 meter, after which Chrissy returned to her initial dotted rhythm in a slightly quicker tempo. I exchanged the doumbek for the cabasa and tapped the pulse for a few measures until Chrissy ended the piece with random strikes. Volume remained steady at *forte*.

Chrissy took the lead in this improvisation, determining the beginning, ending, initial tempo, volume, phrase length, and textural changes. Tension in the piece was most evident during periods of rhythmic disintegration.

IAP Analysis of the Music: Chrissy used various musical “voices.” She explored four different timbres, singularly and in combination (TIM VAR-VARIABLE).

Most obvious in this piece was Chrissy’s recurrent use of one particular syncopated rhythmic theme. She introduced this figure in the beginning of the piece and it appeared in each of the three remaining sections. This theme was firmly fused to the pulse (RHY INT-FUSED). There were, however, periodic intervals of disintegration (RHY INT-DISINTEGRATED) throughout the improvisation. Often times, when Chrissy’s playing fell away from the pulse, she would create a tremolo that led back into her rhythmic theme.

There were no discernable changes in the intensity of Chrissy’s playing (VOL VAR-STABLE), nor were there significant modifications of tempo (TEM VAR-STABLE).

I deferred leadership of this first improvisation to Chrissy (RHY AUT-FOLLOWER, TEM AUT-FOLLOWER, VOL AUT-FOLLOWER, TEX AUT-FOLLOWER). I did initiate a change in meter from 4/4 to 6/8 time, although this shift was quickly defeated by Chrissy’s restatement of her rhythmic theme.

During much of this improvisation, I functioned to provide a ground for Chrissy's syncopated figures by maintaining the pulse. I also kept a beat going while she was in transition from one instrument to the next.

Excerpt 11—Chrissy: C11 Duet Referential (“Angry Conversation”)

IAP Summary: This improvisation was based on the referent “Angry Conversation.” Chrissy had been arguing with two of her peers just prior to the session, and she was feeling mad but did not know how to express it.

She played the tubano with felt-headed mallets, and I played the tambourine. We each employed two textures on our instruments: Chrissy used single strikes and tremolos, and I played single strikes and shakes. The piece was monothematic and was 2 minutes in duration. I began and Chrissy ended.

This improvisation can be characterized as a series of random sounds and silences. There was no rhythmic ground, and the pace varied. At times we played in a call-response fashion, imitating the number or character of the other's strikes. At other times we played concurrently, in “phrases” of unequal lengths. Volume ranged from *mezzo-forte* to *fortissimo*.

IAP Analysis of the Music: Chrissy played with great and unrelenting force. Her dynamic level did not vary throughout the piece (VOL VAR-STABLE). Her playing was not grounded in a pulse, and she did not form rhythmic figures (RHY INT-OVERDIFFERENTIATED). Chrissy changed tempi drastically and abruptly (TEM VAR-RANDOM). Her timbre remained consistent (TIM VAR-STABLE).

Although I began at a *fortissimo* dynamic level, my intensity decreased toward the end of the piece (VOL VAR-VARIABLE). Like Chrissy, I was rhythmically ungrounded (RHY INT-OVERDIFFERENTIATED), and the rate of my expressions changed frequently (TEM VAR-RANDOM).

Excerpt 12—Chrissy: C15 Solo Nonreferential

IAP Summary: This was the only solo nonreferential improvisation that Chrissy played. She constructed this piece on the alto metallophone with rubber-headed mallets. It was 1 minute in duration.

Chrissy played single, even strikes in a slow tempo. Melodic material consisted of steps, small leaps, and repeated notes. There was no steady tonal center, although Chrissy returned to A frequently and outlined an A-minor triad twice during the piece. She held volume constant at *mezzo-forte*. Tempo varied, with a slight increase at the midpoint and a noticeable decrease paired with a series of subdivided, repeated notes near the end of the improvisation. There was no tension in this piece.

IAP Analysis of the Music: There was a simplicity and calmness to this improvisation, in that Chrissy played in a slow and steady manner and made no significant or abrupt changes to any of the musical elements she employed, including timbre (TIM VAR-RIGID), texture (TEX VAR-RIGID), tempo (TEM VAR-STABLE), and intensity (VOL VAR-RIGID). She used pulse and simple subdivisions exclusively (RHY VAR-STABLE) and used slow, evenly paced strikes unlike the syncopated rhythmic themes that had come to typify her other improvisations (RHY TENSE-CALM). Finally, because she did not develop melodic figures in a specific tonality, there was an absence of melodic tension (MEL TEN-HYPOTENSE).

I was most struck by the lack of melodic and rhythmic tension in this piece (MEL TEN-HYPOTENSE, RHY TEN-CALM). I also noticed the unwavering volume (VOL VAR-RIGID).

Excerpt 13—William: W1 Duet Nonreferential

IAP Summary: This was our first improvisation together, a monothematic piece lasting 2 minutes and 10 seconds. William played the cabasa and I played the doumbek. The piece was characterized by repetitive rhythmic motifs in duple meter, the first a dotted rhythm established and

sustained by William in the very beginning of the improvisation, and the second a subdivided phrase that I initiated, with a slight *crescendo* and an accent on the final note. Pulse was shared some of the time, but there were several periods of disintegration when one or both of us “lost the beat.” This occurred most frequently when William altered his playing configuration on the cabasa, from tapping the beads, to rubbing the beads, to shaking the entire instrument. Rhythmic variability was low, in that only two discernable patterns were used. The established patterns were played both simultaneously and imitatively.

Overall tempo remained constant. Volume began at *mezzo-forte*; it increased slightly with the *crescendi* and decreased to *piano* when William shifted to shaking the instrument. The piece diminished in rhythmic energy and volume at the end.

IAP Analysis of the Music: William used the cabasa to its fullest expressive potential, creating a variety of independent sounds and combining configurations (scrape-tap, shake-tap) to produce complex timbres (TIM VAR-VARIABLE, TEX VAR-VARIABLE). He was drawn to a rhythmic style of playing and demonstrated his ability to ground his rhythmic figures in a pulse (RHY INT-FUSED). However, he used a restricted range of motifs (RHY VAR-VARIABLE), returning frequently to the dotted rhythm he established at the very beginning of the improvisation.

William played in a consistent tempo, returning to the initial pace after brief periods of rhythmic disintegration (TEM VAR-STABLE). William did not initiate changes in volume; the intensity of his playing varied only in that shaking the instrument produced less volume than other playing configurations (VOL VAR-STABLE). He did not respond to my changes in intensity (VOL AUT-RESISTIVE). He took the rhythmic lead in this improvisation, establishing and re-establishing the tempo (TEM AUT-LEADER) and introducing the primary rhythmic theme, which I both imitated and doubled (RHY AUT-LEADER).

I took my cue from William for many aspects of this improvisation. I conformed to his tempo (TEM AUT-FOLLOWER), and, although I used a variety of rhythmic figures (RHY VAR-VARIABLE), I often “borrowed” his rhythmic motifs (RHY AUT-FOLLOWER). I also imitated his playing configurations, such as scratching the surface of my drumhead to mimic the action and sound of his scraping (TEX AUT-FOLLOWER).

I varied the intensity level of my playing (VOL VAR-VARIABLE), to which William did not respond noticeably.

Excerpt 14—William: W2 Duet Nonreferential

IAP Summary: This improvisation somewhat resembled a melodic solo with rhythmic accompaniment, consisting of three sections and a coda. William selected the claves, which he played in one manner, and I chose the soprano glockenspiel, which I played by striking and producing *glissandi*.

I began the piece with *glissandi* and repeated notes. William entered on the claves with clicks of variable rhythmic grounding. I continued with scalar passages leading to a series of repeated notes on C, which became established as the tonal center. At this point, we moved from rhythmic contrast and conflict to fusion, and the pulse was shared between us. Volume in this section was steady at *mezzo-forte* except for one slight *crescendo*, which I initiated.

Section 2 consisted of melodic motifs in triple meter and centered on C. William supported the melody with a simple pulse. Because there were no discernable accents in his playing, it was unclear whether we shared the meter. I introduced syncopation, and William broke pulse and subsequently paused. After I played two *glissandi*, William established a subdivided pulse in a slower tempo. Volume was unwavering at *forte*.

The third section was comprised of more clearly defined melodic phrases, this time in a shared duple meter. William and I used accent and subdivision with the phrase to define meter. The segment ended with a descending scale and an ascending arpeggiated C major chord. Volume was stable.

The coda was marked by a tremolo with a *crescendo*, which William initiated. I joined with him and then launched into 10 rapid, ascending *glissandi* at a *fortissimo* level. William paused during the *glissandi*, then played a final click to end the piece.

Tension was created by the *crescendo* in the final tremolo and in the loudness and speed of the

final *glissandi*.

IAP Analysis of the Music: William was both a leader and a follower in this duet improvisation. For much of the piece, he served as the accompanist, providing the rhythmic ground rather than specific rhythmic motifs (RHY AUT-FOLLOWER). He also synchronized with and imitated some of my rhythmic themes (RHY AUT-FOLLOWER). On the other hand, he did establish a change in tempo that defined the third section (TEM AUT-LEADER), and he initiated a tremolo at the end, with which I merged (TEX AUT-LEADER). Furthermore, he defined the finale of the piece.

There were no changes in the intensity of William's playing, perhaps due to the limited range of volume possible on the claves (VOL VAR-RIGID).

In this improvisation, I found meaning in musical variety, exploring many options within each of the musical elements. First, my playing configurations were diverse in that I employed single strikes, tremolos, and *glissandi* (TEX VAR-VARIABLE). I used the full range of pitches on the instrument, as well as a variety of means to establish and maintain a clear tonality (MEL INT-UNDIFFERENTIATED), such as playing repeated notes on the tonic, using scalar passages that terminated on C, and stressing the dominant-tonic relationship. I created an assortment of melodic and rhythmic figures in two different meters (MEL VAR-VARIABLE, RHY VAR-VARIABLE, MET VAR-VARIABLE). Finally, I used a wide range of dynamics, with both gradual and abrupt changes (VOL VAR-VARIABLE).

Although I took musical initiative in this piece, I also deferred to William's tempi and changes therein (TEM AUT-FOLLOWER).

Excerpt 15 William: W6 Solo Referential ("Annoyed")

IAP Summary: This improvisation was 2 minutes and 10 seconds in duration and was based on the referent "Annoyed." William stated that he had been "pretty happy" until he had become annoyed at a peer in the treatment program before the session. He played the alto metallophone with rubber-headed mallets in three ways: single strikes with open and muted bars, and a *glissando*.

William's playing was continuous. Sometimes he played in random pitch sequences, and sometimes he played identifiable rhythmic motifs within discernable meters. Two of the recurrent motifs were highly syncopated.

There was no tonal center, and William did not create cohesive melodies. His tonal material consisted of small and large leaps and repeated notes. Tempo was variable, as was volume, ranging from *piano (glissando)* to *forte*. William ended the improvisation with a slow, muted descending scale and a barely audible *glissando*.

IAP Analysis of the Music: William represented this referent through constant, uneven rhythmic motion. Most of his playing did not conform to a consistent pulse (RHY INT-DIFFERENTIATED), and tempo changed frequently (TEM VAR-VARIABLE). William used a variety of rhythms (RHY VAR-VARIABLE), repeating two distinct rhythmic motifs in two different meters (MET VAR-VARIABLE), both of which had manifested as themes in previous improvisations (RHY VAR-STABLE). His volume changed noticeably when he muted the bars and with the final *glissando* (VOL VAR-VARIABLE, TEX VAR-VARIABLE). There was no tonality established (MEL INT-OVERDIFFERENTIATED).

As I listened to William play this improvisation, the lack of consistent pulse was salient (RHY INT-DIFFERENTIATED), as was the use of both familiar and new rhythmic motifs (RHY VAR-STABLE, RHY VAR-VARIABLE). I noted William's change of playing configuration (TEX VAR-VARIABLE) and the resulting change in timbre (TIM VAR-VARIABLE).

Excerpt 16—William: W7 Solo Referential ("Sad")

IAP Summary: This referential improvisation was 2 minutes and 20 seconds in length and was based on the referent "Sad," which William selected. It was a monothematic "soundscape" consisting of

scrapes and taps on the guiro. William established no discernable pulse, nor did he use specific rhythmic patterns.

The tempo of William's scraping was highly variable, as was the volume, which ranged from *pianissimo* to *fortissimo*. Changes in speed and volume were both abrupt and gradual.

Near the end of the piece, William employed the rainstick, tilting it randomly. He ended the improvisation with a tap on the guiro and a thud of the rainstick on the floor. Tension was created in the lack of pulse and abrupt changes in tempo and volume (RHY TEN-TENSE, TEM TEN-TENSE, VOL TEN-TENSE).

IAP Analysis of the Music: There was no relationship between William's playing and an underlying pulse (RHY INT-OVERDIFFERENTIATED). In a sense, this aspect enabled him to make frequent and extensive modifications to the rate of his playing (TEM VAR-CONTRASTING) and to turn his attention to nonrhythmic expression. He used both instruments in multiple ways to produce multiple timbres (TEX VAR-VARIABLE, TIM VAR-VARIABLE), and he varied volume greatly and randomly (VOL VAR-RANDOM).

I found the contrasts in this piece most meaningful. William employed drastic changes in tempo and volatile changes in volume (TEM VAR-CONTRASTING, VOL VAR-RANDOM).

Excerpt 17—Erica: E 10 Solo Referential (“Night Fear”)

IAP Summary: The referent for this improvisation was “Night Fear.” This is a monothematic improvisation of 4 minutes and 20 seconds based on Erica's feelings of terror the night before the session. She used the tubano with soft mallets and did not vary her timbre or texture significantly.

The entire piece was characterized by Erica's use of subdivisions of various tempi. These subdivisions included simple divisions of the basic pulse and accents. Initially periodic, these accents helped to define duple meter; eventually they were erratically placed. Erica's beating was integrated with a pulse only some of the time.

Erica modified her volume only slightly, with a small *decrescendo* in the middle and near the finale.

Erica's noticeable changes in tempo included a gradual acceleration of subdivisions into a tremolo and alternating *accelerandi* and *ritardandi* to close the piece.

IAP Analysis of the Music: Erica's use of near-constant subdivisions (RHY VAR-STABLE) indicates that she found some meaning in the accumulation of tension that occurs when the pulse is doubled (RHY TEN-TENSE) and in the physical energy required to sustain this. Further contributing to the tension in the music was the overall lack of rhythmic integration with a pulse (RHY INT-DIFFERENTIATED). A *decrescendo* coupled with a *ritardando* at the very end of the piece (TEM VAR-VARIABLE) served to bring natural closure to this sustained intensity of energy.

Once Erica began to play, it seemed to me that the piece resembled many of her previous improvisations: Her playing was not grounded in a consistent pulse (RHY INT-DIFFERENTIATED); there was little rhythmic variability (RHY VAR-STABLE); and I could apprehend only slight nuances of change in dynamics, timbre, and texture (VOL VAR-STABLE, TIM VAR-STABLE, TEX VAR-STABLE).

I experienced a high degree of tension created by the ungrounded subdivisions and random accents (RHY TEN-TENSE), and in the unpredictable changes in tempo (TEM TEN-TENSE).

Excerpt 18—Erica: E11 Solo Referential (“My Safe Place”)

IAP Summary: “My Safe Place,” 2 minutes and 50 seconds in duration, was a monothematic piece built upon a referent that had its genesis in the previous improvisation (see “Night Fear” above). Erica played the rainstick and the soprano glockenspiel with a wooden mallet. Two timbres were represented, with one playing configuration for each.

Characterizing this piece were phrases of varying lengths comprised of groups of adjacent notes and skips of a third. There was no tonal center and Erica did not form cohesive melodies. After about 50 seconds, she moved from rhythmic disintegration to the establishment of a fairly consistent underlying pulse that continued almost to the finale. A repetitive duple rhythmic figure made up of dotted quarter notes and eighth notes emerged and appeared occasionally.

The rainstick sounded randomly at a *piano* volume level throughout the piece, which was aborted due to an interruption in the room. Overall volume was fairly stable at *mezzo-forte*. Tempo remained constant. The piece ended abruptly due to an interruption in the room.

IAP Analysis of the Music: Erica used two distinct timbres in this piece, with the rainstick serving as an occasional ground to the tonal figures produced on the glockenspiel (TIM INT-DIFFERENTIATED). Although disintegrated at first (RHY INT-DIFFERENTIATED), Erica's rhythmic expressions became connected with a pulse and remained so for most of the improvisation (RHY INT-INTEGRATED). Her phrase length was variable (PHR VAR-VARIABLE).

Erica did not use variety in her melodic constructions (MEL VAR-STABLE), playing mostly adjacent notes in two-note groupings. These expressions were not grounded in a particular tonality (MEL INT-OVERDIFFERENTIATED) although they fell within the chromatic scale afforded by the instrument (MEL INT-FUSED). Erica did not vary volume to any significant degree (VOL VAR-STABLE).

I was particularly aware of Erica's lack of tonal ground in this piece (MEL INT-OVERDIFFERENTIATED). I also noticed that her intervallic patterns were narrow and mostly unchanging (MEL VAR-STABLE).

Excerpt 19—Erica: E13 Duet Nonreferential

IAP Summary: This was a duet of considerable length (8 minutes and 40 seconds) that occurred during our fourth session. Erica played the doumbek with rubber-headed mallets and I played the tubano.

Erica stated that she needed “a beat to play on.” I thus began the improvisation by providing a rhythmic ground (one half note followed by two quarter notes) in a moderate tempo. Throughout the piece, I sustained the ground by playing pulse, subdivisions, and simple rhythms in duple meter such as an eighth note and two sixteenth notes followed by two eighth notes, a quarter note, and a quarter rest. I consistently accented the first and/or third beats of the pattern.

Erica also played pulse, subdivisions, and rhythmic themes in duple meter. During the piece, our playing was mostly undifferentiated, fused, and integrated, although there were periods of extreme rhythmic differentiation during which time I continued to play the basic pulse. There were also incidences of rhythmic imitation.

Tempo remained generally steady throughout. Volume remained steady at *forte*. Tension in the piece came from the sustained subdivisions and moments of separation from the underlying pulse.

IAP Analysis of the Music: Erica found meaning in attempting to [align](#) with the pulse as I established it (RHY AUT-FOLLOWER) and in sustained repetition of simple rhythmic patterns (RHY VAR-STABLE). Her playing configuration remained constant (TEX VAR-STABLE), and she did not vary her intensity significantly (VOL VAR-STABLE).

I created meaning in the origination and maintenance of the underlying beat of the improvisation (RHY AUT-LEADER). All aspects of my music-making were steady: tempo (TEM VAR-STABLE), rhythmic figures (RHY VAR-STABLE), meter (MET VAR-STABLE), timbre (TIM VAR-STABLE), texture (TEX VAR-STABLE), and volume (VOL VAR-STABLE).

Tension was cyclic, with volume and tempo assisting in the accumulation and release of energy.

IAP Analysis of the Music: Ralph's creation was a sequence of climaxes followed by immediate decreases of sound mass and tempo (VOL TEN-CYCLIC, TEM TEN-CYCLIC). Rhythmic figures were clearly grounded in Section 1 (RHY INT-FUSED), and subdivisions played in remaining segments were occasionally aligned with a pulse (RHY INT-DIFFERENTIATED). Ralph exhibited freedom in his use of dynamics, employing gradual *crescendi* and *decrescendi* as well as abrupt changes (VOL VAR-VARIABLE).

What was meaningful for me in this improvisation was the manner in which Ralph integrated simultaneous musical elements of tempo, texture, and volume to produce the desired build-up and release of tension (TEM TEN-CYCLIC, TEX TEN-CYCLIC, VOL TEN-CYCLIC). Furthermore, he capitalized on the timbre of each instrument (TIM VAR-VARIABLE), using the claves to form discrete, crisp rhythmic figures, the drums to produce full tremolos, and the cymbal to both build and release tension at critical moments in the improvisation.

APPENDIX D

ORGANIZATION OF MUSICAL ELEMENTS

Tanisha

Tanisha varied timbre on the metallophone as much as was possible (TIM VAR-VARIABLE). She used the entire range of the instrument, with one voicing configuration (TEX VAR-STABLE).

Tanisha formed two complete melodic phrases in Section 1 (MEL INT-INTEGRATED). Remaining melodic material comprised varied fragments, including ascending and descending scales, ascending and descending thirds, and repeated notes (MEL VAR-VARIABLE). All tonal material was fused to the Lydian mode, which was fixed on the instrument (MEL INT-FUSED).

In Section 2, Tanisha used one particular dotted rhythmic figure over and over again (RHY VAR-STABLE). (This theme was found in her other melodic and nonmelodic improvisations.) The figure was grounded in a basic pulse (RHY INT-INTEGRATED). Apart from this section, she modified tempo considerably (TEM VAR-VARIABLE).

Tanisha held volume constant within and between sections (VOL VAR-STABLE).

Erica

The rapid and somewhat uneven melodic intervals that dominated the A section of this piece resembled the subdivisions that permeated Erica's nonmelodic improvisations (see below) in that they coincided with a pulse about half of the time (RHY INT-DIFFERENTIATED). The patterns she executed were tense (RHY TEN-TENSE) and motor-based (L-R configurations) rather than melody-based. Erica's playing was not grounded in a tonal center, and she did not form cohesive melodies (MEL INT-OVERDIFFERENTIATED).

Erica seemed to find meaning in varying tempo both abruptly and gradually (TEM VAR-VARIABLE). She altered the speed in the B section and in the transitions between sections. These modifications provided a notable contrast to the ceaseless subdivisions of the A section.

Finally, although Erica maintained the intensity at *forte* for the majority of the piece (VOL VAR-STABLE), she initiated a significant *decrescendo* in the final section. In that there was no tonal grounding, this change in volume functioned to lessen the perceived tension and bring some closure to the piece.

APPENDIX E

VERBAL MEANINGS

Ralph

The first thing Ralph said when he was finished was, “I was just messing around.” When I asked how that felt, he replied, “Fun and cool” (INTRA-P). He went on to explain that the instruments caused him to think about his mom and about African drums and China (cymbal) and movies that he had seen (INTRA-P).

I asked Ralph if it felt different inside to play loud versus soft music, and he replied that it did. He likened playing loudly to yelling for his mom in another room and playing softly to speaking to someone as if they were close by (INTER-P). He said, “Talking is, like, not as nerve-wracking as, uh, yelling. That’s all I’ve got to say” (INTRA-P). He did not care to listen to the recording of his improvisation.

Erica

There was a fair amount of dialogue about this improvisation. Immediately after playing, as she often did, Erica sighed heavily. She said, “All right. That feels better” (INTRA-P). When asked to be more specific, she talked about having forgotten about her worries:

Erica: It just feels better, like I have some, uh, I don’t know. I just feel a little bit happier [laughs]. Yeah, I feel happier, that’s it. I kind of, like, I just, I don’t care. Yeah, I feel happier.

Susan: You don’t care...?

Erica: Yeah, like I don’t care, uh, I kind of forgot about my worries and stuff, like I forgot how I felt before. ‘Cause when I played I kind of forgot about it, like, afterwards, yeah, I felt like, I don’t know what it was, I just...yeah, I feel a lot better now.

Susan: I wonder what it is about making music that helps you forget about your worries...?

Erica: Yeah. [long pause]

Susan: What was it about playing the drums that allowed you to “check out” and forget?

Erica: Uh, beating on it. [laughs] Uh, I guess the sound of it, like, there was a little bit of confusion and a little bit of anger that I got out of it, that I let out and, uh, I guess I just escaped through whatever I was playing (INTRA-P).

Erica also said that once she had let out her confusion, she could talk more freely (INTRA-P). She explained, “I was feeling caged in and I guess I just let it out a little bit” (INTRA-P).

As we listened to the improvisation, Erica identified aspects of the improvisation that stood out for her. She said that the initial rhythmic ground that I provided was “too basic” (INTER-P). She explained, “I wanted something more complex because I was feeling more complex. I was feeling confused and different emotions all at once. I wanted something that would bring it all out” (INTRA-P). She heard anger, sadness, and worry in her playing.

When asked about her experience of playing the same thing versus something different from me, Erica said:

Well, I feel kind of happy when I play the same beat ‘cause it’s like, wow, I’m actually following a beat, you know. I’m actually doing this. ‘Cause I’ve never done that ‘cause I just

started playing this year, just a few weeks ago. And I'm like, then when I play differently, I kind of go with my own feeling...but even when I'm playing with somebody else, when I'm playing that same beat, I have my own emotions going on with it too (INTER-P).

Erica identified confusion in her playing, mostly when her rhythmic pattern fell away from the pulse (INTRA-P):

- Erica: There's my confusion right there.
Susan: Confusion. You hear confusion when the beat stumbles a little bit?
Erica: Yeah.
Susan: [stops music] So sometimes we're right together and it's very precise, and then sometimes you feel yourself stumble and that's what you're calling confusion?
Erica: Yeah. Yup. 'Cause that's what it is. I somehow, like, lose all of it. I'm just like, wait a minute. What am I doing?...

When we had finished listening, I asked Erica if she heard the music differently in the moment than she did when she listened after the fact. She said that when she played, she was concentrating on what she was feeling rather than what she was playing. Afterward, when she listened, she is able to hear the feeling represented through the sound. She said, "When I did play that, I really didn't think I did it right, 'cause it's like, I didn't hit that at all. And then when I listened to it, I was like, wow, that really does remind me of that [feeling]" (INTRA-P).

Finally, in closing I asked Erica if the improvisation had meaning for her and if so, if she could identify what the meaning was. She responded as follows:

Yeah, there is. I don't know. I guess, like, it does have meaning because it's expressing, you know, my emotion of what I was feeling at the time I was playing...then when I listened to that, it's what I was feeling too. I can feel that and I can hear that (INTRA-P).

In summary, Erica found meaning in the expression of her emotions through this improvisation and in being able to hear those emotions reflected back to her.

APPENDIX F

SAMPLE OF MUSICAL AND VERBAL DATA CHART

	INTRAMUSICAL Not Verbalized	INTERMUSICAL Not Verbalized	INTRAPERSONAL Verbalized	INTERPERSONAL Verbalized
1. Solo Nonreferential	Intramusical	Intermusical	Intrapersonal	Interpersonal
a. Ralph— tambourine	Organized playing with distinct rhythmic figures that were grounded in a consistent pulse (RHY INT-INTEGRATED)		Smiled during and after the improvisation but did not comment on its meaning	
	Played rhythmic figures that were grouped into predictable phrases (PHR VAR-STABLE)		Said he thought the instrument made a “cool sound”	
b. Ralph— bongos, tubano, claves, cymbal	Played a series of climaxes followed by immediate decreases of sound mass and tempo (VOL TEN-CYCLIC, TEM TEN-CYCLIC)		Said, “I was just messing around”	
	Fused rhythmic figures in Section 1 (RHY INT-FUSED)		Replied that it felt “fun and cool”	
	Occasionally aligned subdivisions in Sections 2 and 3 with a pulse (RHY INT-DIFFERENTIATED)		Explained that the instruments caused him to think about China and movies that he had seen	
	Exhibited freedom in his use of dynamics (VOL VAR-VARIABLE)		Indicated that it felt different to play loud versus soft music	
			Said, “Talking [playing softly] is not as nerve-wracking as yelling [playing loudly]. That’s all I’ve got to say”	
2. Duet Nonreferential	Intramusical	Intermusical	Intrapersonal	Interpersonal
a. Ralph—tubano, cymbal	Used multiple timbres and textures in this piece (TIM	Took the lead by initiating the tremolo (TEX AUT-	Described the experience as “OK”	Said he was not aware of my playing, but was wrapped up in his own

Susan—djembe	VAR-VARIABLE, TEX VAR-VARIABLE)	LEADER) and dictating the ending with the cymbal crash		music instead
	Did not consistently relate subdivisions to the beat (RHY INT-OVERDIFFERENTIATED)		Said he liked the beat because he was playing in a way that reminded him of rap music	
	Created phrases that were symmetrical and repetitive (PHR VAR-STABLE)		Indicated he was trying to find a steady beat on his drum	
	Did not significantly change the intensity of his playing (VOL VAR-STABLE)		Liked the middle the best because he enjoyed playing a drum roll leading up to a crash	
	Did not change tempo significantly (TEM VAR-STABLE)			
b. Ralph—agogo, glockenspiel, cymbal Susan—cabasa, tubano	Did not vary volume (VOL VAR-STABLE)	Followed my tremolo (TEX AUT-FOLLOWER)	Immediately said, “I had to add that, a little detail at the end” [cymbal crash]	Indicated there were many moments during the music when “we were really playing together”
	Used a variety of timbres (TIM VAR-VARIABLE)		Gestured toward the cymbal when asked what he liked best about the piece	
	Created diverse rhythms in many different tempi (RHY VAR-VARIABLE, TEM VAR-VARIABLE)			
c. Ralph—bongos, tubano, cymbal Susan—doubek, glockenspiel	Experimented with sounds and combinations of sounds (TIM VAR-VARIABLE, TEX VAR-VARIABLE)	Signaled the final climax of the piece with the cymbal crash (TIM AUT-LEADER)	Announced, “The end”	
	Experimented with changes in intensity (VOL VAR-VARIABLE)		Indicated that he thought he messed up repeatedly	
	Glued his rhythms to a steady pulse (RHY INT-FUSED)		Stated he was attempting to play the same beat throughout the entire improvisation	
	Separated his rhythms from the pulse (RHY INT-		Said he especially liked the finale	

	DIFFERENTIATED)			
			Stated that playing all of the instruments was “cool” but hard because he didn’t have enough hands	

3. Solo Referential	Intramusical	Intermusical	Intrapersonal	Interpersonal
a. Ralph—rainstick, metallophone, maraca, cymbal (“Sadness”)	Maintained a subdued volume for most of the piece (VOL VAR-STABLE)		Immediately stated, “That’s the end, the end of my sadness”	
	Did not sustain a consistent pulse or form rhythmic figures as had become his custom (RHY INT-DIFFERENTIATED)		Said, “I’m taking my anger out on the music instead of on myself”	
	Used diverse timbres and playing configurations (TIM VAR-VARIABLE, TEX VAR-VARIABLE)		Said, “When you feel sad, you want to bash somebody”	
			Used the metallophone and the rainstick to represent the sadness	
			Used the cymbal and maraca to represent the anger	

4. Duet Referential	Intramusical	Intermusical	Intrapersonal	Interpersonal
RALPH DID NOT PLAY ANY DUET REFERENTIAL IMPROVISATIONS				

