Hermeneutic Inquiry on Musical Gestures in a Music Therapy Context

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Abstract

This research project aimed at interpreting the gestures of two music therapists and their clients while they were engaged in playing or listening to music. The study incorporated transcriptions of four music therapy sessions, a systematic analysis of the transcriptions, and a hermeneutic inquiry to examine what is communicated via musical gestures and how the music therapist participants used the gestural repertoire of their clients to inform their interactions. The study showed that each dyad had characteristic gestural interactions which were shaped by clients' diagnoses, the music therapists' personal therapeutic style, the pre-existing therapeutic relationship, and other factors in the sessions themselves. The clients communicated their level of engagement, emotional state, attention, and relationship to the music partly through musical gesture. The music therapist participants generally recognized these musical gestures and processed them verbally, or through mirroring, prompting, or redirecting. The research suggests that further study into the role of musical gestures on a large scale, and in collaboration with diverse disciplines, could help music therapists augment their analysis of client behaviour, allowing them to better understand client intentions and motivations.

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I would also like to thank the incredible people I worked with directly to gather my data. Two music therapists and two music therapy clients, along with their families, dove wholeheartedly into this process with me and their generosity and openness made this project work. Thank you to all those people who helped with the logistics of my process- friends with video cameras, parents with a spare bedroom and a car. I could not have done any of this without all of your help.

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Chapter 1: Introduction

Study Source

I developed an interest in embodied cognition while completing my Masters of Music at the University of Glasgow in 2003. At that time, I was interested in how traditional musicians who have not been trained to read Western notation could possibly be visualizing the music they play. In retrospect, this was seemingly an impossible question to answer, and was certainly beyond the scope of my one year thesis project in Glasgow. Still, that question has led me to wonder about the relationship between our cognitive processes while making music, how those thoughts emerge through the body, and how this process affects the music we make.

After studying music therapy for two years, I have become even more fascinated with this question. The complex dynamics I have seen between myself and my clients seen as part of my practicum experiences at Concordia University have caused me to wonder how my own inner life is affecting the music I make, and how the client's process might be the same or different than mine. For me, musical gestures can be a way of observing these inner dynamics. It can be argued that musical gestures, then, in music therapy contexts are ways in which the music therapist and their clients communicate with each other nonverbally. I have observed in my own clinical work that each person uses their body in relation to the instruments and to making music to express their individual emotions and thoughts. These gestures were individualized and were affected by the relationship a person has to their instrument (whether they have training or not) and to the music therapist. The gestures may also be informed by a person's cultural context. I believe that music therapists may be able to use their observations of a client's gestures to inform their decisions (musically & nonverbally) within the context of improvisation and the therapeutic relationship in general.

I became fascinated with the idea of nonverbal processes in music therapy after taking a class at McGill University in my final year of studies with Dr. Marcelo Wanderley entitled "Gestural Control of Sound Synthesis". In this course, we examined how digital instruments could be employed using gestural input from musicians to create music. This is a burgeoning area of research with input from Musicology and Music Technology scholars. It concerns itself with the issues surrounding gestural control of music, including topics such as embodied cognition, sonification, gesture studies, computer programming, and technology design. In my readings for that course, I stumbled across the seminal idea for this project, Godøy and Leman's "Musical Gestures: Sound, Movement, and Meaning" (2010). I discovered the statement which would lead me to this project in an essay in an article by Jensenius (as cited by Godoy & Leman, 2010):

> "This also goes for the largely unexplored field of social identities in musical gestures, such as studying how different cultures or cultural subgroups have developed specific features of musical gestures and how they seem to work in various social contexts." (p. 13)

This statement led to questions about music therapy such as how musical gestures are seen and understood by both the music therapist and their client, how musical gestures may be different in music therapy than in other contexts (such as performance), how the therapist uses the gestures of their clients to inform the process of music therapy, and how this line of inquiry might help music therapists further attune to their clients.

Rationale for Study

This hermeneutic research project will be primarily focussed on musical gestures and how they act as a mode of communication between therapists and clients. A secondary focus

will be on how a client's context affects these gestures. Musical gestures are body movements which are associated with the act of making music, including postures, facial expressions, or movements acting directly on the musical instruments to make sounds (Godøy & Leman, 2010). Differing musical gestures will be studied in regard to the contexts of the therapist and client, which may include aspects like religion, ethnicity, race, social status, language, sexual orientation, nationality, or disability[1].

I have included a secondary focus on context for two reasons. Firstly, my previous studies in ethnomusicology have led me to approach my own clinical work and interests in music therapy from a cultural perspective. In my final year of study at Concordia University, I became interested in community and culture-centred music therapy theories developed by Brynjulf Stige, Denise Grocke, and Mercedes Pavlicevic. After a class in cross-cultural approaches in Creative Arts Therapies, I began to see the importance of taking context into account when working with clients. Secondly, in my readings on hermeneutic inquiry, the need for intensive study of culture and context became even more evident. Examining the context of oneself as researcher and the "text" (in this case, the transcript and analysis of the gestural content of music therapy sessions) is a fundamental part of the hermeneutic process.

Although many studies have been conducted on musical gestures and their meaning (Godøy & Leman, 2010; Marrin-Nakra, 2000; Tolbert, 2001) and the phenomenon of embodied cognition (Iyer, 1999; Leman, 2007; Leman et al., 2009; Leung, 2008), little work in the field of music therapy specifically has addressed the role of musical gestures in the therapeutic process. The meaning of these gestures has not been discussed, yet it is my suspicion that most music therapists intuitively recognize nonverbal (or musico-gestural) signals in sessions without overtly discussing them. It is hoped that in bringing these interdisciplinary sources

[1] As defined by Hays (2008).

together to construct a discussion around meaning of musical gesture in music therapy contexts, a new topic of discourse in music therapy will emerge.

Research Question

Formulating a research question for this study was a meticulous task. The idea of gesture as communication was always at the forefront of my mind as I navigated the body of possible questions I could be asking. My research question became, "What is communicated in the musical gestures of a music therapist and their client in a music therapy context?" Subsidiary research questions were also formulated after the main research question was solidified. These secondary foci, guided by my main research question, formed the structural framework for my inquiry. They are listed below:

a. What constitutes a musical versus a speech-accompanying gesture?
b. What kinds of different musical gestures can be seen within these taped sessions?
c. What kinds of reactions does a music therapist have to their client's musical gestures?
d. How does the music therapist use the client's gestural repertoire to inform the therapeutic relationship?

Operational definitions

Throughout the study, I used terminology that may at times be ambiguous to readers, including communication, musical gesture, and context. These terms are defined here to provide clarity. Communication is defined for the purposes of this project as an interaction between two people. Musical gestures are defined as bodily movements (facial expressions, fine, & gross body movements) associated with making sound and expression while listening to or playing music. Context is defined for the purposes of this study as the circumstances and

setting which surround an individual, such as family, ethnicity, age, gender, diagnosis and so on.

For the purposes of this project, a musical gesture is defined as a gesture which accompanies the playing of or listening to music, and will be analyzed from both phenomenological and functional perspectives. The gestures are not analyzed from intrinsic perspectives since member-checking was not a component of this study.

Assumptions

Beginning a study of this kind involves intrinsic assumptions about the nature of gesture. I began this research with the assumption that musical gestures would be self-evident and identifiable, and that they would be specific to each individual. I believed that there would be a significant portion of each session devoted to improvisation together, and that I could examine musical gestures in the context of free associative music-making. I thought this kind of social interaction (within a musical improvisation) would be an ideal environment to examine distinctive gestural patterns.

Furthermore, upon becoming aware of the clientele I would be working with, I began to form assumptions about the types of gestures I might see in the music. Initially, I believed that a client with autism would exhibit repeating patterns of gestures with few intentional, communicative gestures. I also believed that it would be challenging to identify communicative gestures in a client with full body paralysis. I thought that the effects of culture on gesture would be self-evident. Through the process of analyzing the data, new information emerged during each level of processing. Many other assumptions may also have existed and been dispelled by new discoveries during the analysis process.

Delimitations

Delimitations of the study include limiting the scope of the study to two sessions each with two dyads (music therapist & client) due to the amount of data to be analyzed in videotaped sessions. Due to the nature of the videotaping process, the clients were screened in collaboration with the music therapist before their participation is confirmed. They were screened for possible factors that may contribute to heightened anxiety or discomfort, such as severe mental health problems, current life circumstances, or other factors the music therapist participants flagged. This screening took the form of a brief telephone consultation with the music therapist. Criteria for inclusion were that the clients must have been working with the same music therapist for at least six weekly sessions so that their therapeutic relationship was sufficiently developed.

This study is delimited to analysis of the gestures associated with creation of music (i.e. playing instruments) only. The study does not include a discussion of all nonverbal behaviour in a music therapy session, nor does it include a discussion of verbal or musical exchanges in the music therapy sessions unless they have direct influence on the gestures themselves.

Limitations

The results (accuracy) of the analysis were dependent on my own ability to distinguish the salience and meaning of each gesture. The choice of a hermeneutic inquiry meant that the study focussed on finding meaning through both the data being analyzed as well as through self-inquiry and reflection on the analytical process.

I have chosen not to look at my own clinical practice because there is a fine distinction between hermeneutic and heuristic inquiry, and this is a line which for the purposes of this study I have chosen to make clear. Though the reflexive part of the hermeneutic inquiry will

include a discussion of my own context as researcher, the main body of the inquiry should be about the communication between the participants. If I was to be both a researcher and a clinician in this study, it may cause difficulty in maintaining this distinction. My limited experience with the populations of the clientele in this study may have contributed to a lessened focus on the analysis of the musical gestures.

In the original design for the study, Laban Movement Analysis (Guest, 2004) was going to be employed as a means of analyzing the gestural content. After taking some preliminary training in Laban Movement Analysis (hereafter referred to as LMA), I felt that the analysis would be better served by a method I was more familiar and experience with- musical analysis.

Summary of Research Paper

The body of research that supports this study is taken from many different disciplines, including cognitive science, musicology, music technology, dance/movement theory, and music therapy. A review of the literature on musical gestures and gestures in general shows that gestures are individual expressions of emotion, cognition, and context. Gestures can be analyzed quantitatively or qualitatively, since they are observable but their meaning is subjective. Recent research in embodied cognition shows that gesture synchronization can be used as methods of learning and attunement.

The methods employed in this study are outlined in the Methodology section. Rationale for choosing a hermeneutic inquiry to search for meaning of musical gestures is given. A simplified version of Interaction Analysis (Holck, 2007), hereafter referred to as IA, and a method of analysis developed for this study (based on Laban Movement Analysis) were used as a means of structural analysis, and a detailed description of this process is outlined. I include a

more detailed description of how participants were selected and the consent and videotaping processes.

The Results section of this research includes salient aspects of the transcription of musical gestures. A structural analysis of the musical gestures is integrated into each session's analysis. An in-depth hermeneutic exploration of my own process and my understanding about what has been communicated in the musical gestures in the sessions follows in the Discussion section. In the Conclusion, I summarize the theoretical basis for the study, my findings, and any theoretical implications for the study.

Chapter 2: Literature Review

Introduction

This review of literature encompasses an interdisciplinary understanding of how the inner experience of music is translated into outward, observable behaviours, specifically musical gestures. Several questions arose from the review, most importantly, whether a music therapist's understanding of the client's experience can be enriched by considering the client's gestures in light of that client's context.

Gesture and Context

A seminal work on the relationship of gesture and culture is seen in Kendon (2004). In this book, Kendon gives a succinct history of gesture studies and methodologies for gesture analysis in everyday settings. Robert Yelle (2006) discusses the creation of meaning in culture-specific gestures. According to Yelle:

> "The interpretation of gesture depends upon the knowledge of the appropriate cultural code, possession of which belongs to a group that may be co-extensive with an entire culture, as in the case of basic gestures of greeting; or that may be limited to a subgroup of savants of even esoteric initiates" (p. 237).

A broad literature review of the discourse of gesture and culture is seen in Kita (2009). Using many case studies from linguistics, Kita shows that spatial information and motion are conceptualised differently across cultures, that there are distinct cognitive differences in cultural gestures, and conceptions of motion vary across cultures. Lastly, Molinsky et al. (2005) conducted a study where participants are given a test determining whether they can distinguish between real and fake gestures of the new culture. They conclude that being able to accurately perceive gestures is correlated with intercultural competence (capability to adapt to & understand subtleties of a new culture, or context).

Music and Gesture

Musical gestures are defined by Godøy and Leman (2010) as "a meaningful combination of sound and movement" (p. ix). It could be argued that the authors mean "music" instead of "sound" in this definition, but the inclusion of "meaning" is a key factor. The movements must convey intentionality to be defined as gestures. Musicians who have been trained on their instruments have an intimate relationship between their bodies, the music, and the instrument. Several studies (Cadoz & Wanderley, 2000; Godøy & Leman, 2010; Iyer, 1999) show that even unconsciously, the musician relates aspects of the music to their body movements while playing.

Eitan and Granot (2006) consider how participants associate musical stimuli with images of motion. They found that all musical stimuli evoked certain images of motion and that musical-motion analogies are deeply rooted in the cognitive patterns of people, corroborating the assumption that musical ideas are mapped onto motor ones. Godøy and Leman (2010) draw on the works of many experts in the field of musical gestures. The book is a starting point for the study of musical gestures, and it calls for further research on music gestures and culture:

> "this also goes for the largely unexplored field of social identities in musical gestures, such as studying how different cultures of cultural subgroups have developed specific features of musical gestures and how they seem to work in various social contexts" (p. 34).

Cadoz and Wanderley (2000) portray a case study of a performing clarinettist whose gestures are found to be directly related to musical constructs like dynamics, timbral changes, and pitch. In the paper, the authors search for a definition of musical gesture, and find that there is no one simple definition of the word. A musical gesture can mean a figure in a composition

of a particular, identifiable quality, movements a musician makes when playing an instrument, or perhaps even movements made by those listening to music. Within the concept of musical gesture, there are many different functions of a musical gesture depending on how one analyzes them- from a phenomenological, a functional, or an intrinsic perspective (Cadoz & Wanderley, 2000, p. 4).

Embodied Cognition

Embodied cognition is an interdisciplinary field based in cognitive science which attempts to explain the way in which mind, body, and world interact to promote health. One of the key researchers studying embodied cognition in music is Marc Leman. In Leman (2008), he introduces his idea of second-person descriptions, which are those interpersonal relationships in which intention behind the musical gesture is understood. These relationships must be understood in terms of the personal action ontology (language of gesture dependent on individual experience) of each person.

In Leman et al. (2009), they had participants listen to a pre-recorded performance of unfamiliar Guqin music and move their arms in response to the music. What the authors found was that there was a strong correlation between the movements made by the performer when the piece was recorded (which the participants did not see) and the participants' own arm movements. They also found that these movements were strongly linked to functions of the music.

David Aldridge (1996) calls for more attention to be paid to the mind's influence on the body, especially in creative arts therapies. Aldridge contends that "meanings provide a bridge between cultural and physiological phenomena" (p. 107). His editorial is based on the idea that the body and its role as a social agent is increasingly a concern of post-modern discourse, and

that the expressive arts therapies are a particularly important part of this because "they emphasize the lived body as being sensed, not only as being said" (p. 108).

Iyer (1999) focuses on embodied cognition in West African and African-American music. He argues that pulse and meter are not discerned in the same way across cultures. Iyer further claims that there are embodied dimensions to all music which are dependent on the role of the rhythmic aesthetics of a type of music. A recent study published by Sedlmeier, Weigelt, and Walther (2011) found that participants' body movements, whether they were executed or even thought about, can affect musical preference.

Finally, and perhaps most significantly, is Overy and Molnar-Szakacs' (2009) review of recent scholarship on the mirror neuron system (MNS) and its significance for the understanding of "perception-action mechanisms, human communication, and empathy" (p. 489). The aforementioned model of a mimetic foundation for the human development of development of language and music making has been proven here to have a neuropsychological basis in the mirror neuron system. Mirror neurons are those that allow humans to observe, understand, and replicate the behaviours of others. The MNS is the cognitive model for intersubjectivity, and in it, movement plays a large role.

Music Therapy and Context

Several recent publications in the field of music therapy show a shifting focus for music therapists toward a discussion of culture. One of the key scholars on this topic is Joe Moreno, who coined the term "ethnomusic therapy". Moreno (1988) offers suggestions for using a variety of "world music" genres to work with clients from other cultures. Julie Brown (2001) gives an analysis of the meaning of music in various cultures. Brown's definition of culture here is more specific than Moreno's – it includes age, disability, religion, ethnicity, social

status, sexual orientation, and indigenous heritage. Brown states that "cultural empathy is a dynamic concept that is experienced in three human domains: emotions, cognitions, and behaviours" (p. 15). Noah Shapiro (2005) also discusses the importance of cross-cultural competency in music therapy.

Reilly (1997) discusses employing a gestural controller (a digital musical instrument that uses gestures as input) to analyze movements of clients with different diagnoses. When Reilly analyzed trials with two groups of music therapy clients, one with manic and one with depressive symptomatology, he found great differences in the range of movement between the two. Lem and Paine (2011) found that using sonification (which they define as digitizing movements & converting them to sounds) with physically disabled adults was effective as a free improvisation tool in music therapy, but that the extent of its effectiveness depended on the range of movements available to the participants.

Music therapy clients are typically not professional trained musicians, and so do not necessarily have the same highly developed relationship with their instruments. However, recent research on the mirror neuron system (Overy & Molnar-Szakacs, 2009) supports the idea that even mimetic movements, such as the synchronous movements when a therapist and client play in time, may be the basis for a successful therapeutic relationship.

Ruud (1998) presents a cohesive thesis on the role of music therapists as social researchers. He argues that music therapists can use hermeneutics and communications theory as a means to discover hidden meanings in improvisations. According to Ruud, "music anthropology... made me realize not only how deeply music is embedded in our culture but also to how great an extent it produces culture and transforms social organization" (p. 16).

Stige (2002) promotes a music therapy practice that is culture-centred, which he defines as having a "focus upon individuals and groups in context" (p. 207). He argues that as music therapists, it is important to "situate" our practice with the contexts of the institution, the community, the political sphere, and aesthetically (p. 209), and later promotes the use of hermeneutics as a means of analysis in culture-centred music therapy (p. 302).

Quantitative measures can be seen in the review above to be one of the main methods for analysing gestures (Ashley, 2004; Cadoz & Wanderley, 2000; Eitan & Granot, 2006; Godøy & Leman, 2010; Heloir, Neff, & Kipp, 2010; Iazetta, 2000; Keller, 2009; Leman, 2008; Leman, Desmet, Styns, van noorden, & Moelants, 2009; Marrin Nakra, 2000; Naveda & Leman, 2010; Reilly, 1997). This may be due to the fact that study of gestures in music is a relatively new mode of inquiry, and large data sets are necessary to support any claims made about relationships which may exist between the gestures and the music. Qualitative methods, however, are often very effective in discovering motivation and intention behind human action. For this reason, I have chosen to direct this study toward a more descriptive understanding of musical gestures and what they may mean for music therapists and their clients.

Music Therapy and Gesture

Discussions of music therapy and movement are uncommon in the current body of music therapy research. Even Ruud (1998) briefly discusses the role of gesture in analyses of improvisation as communication in music therapy. According to Ruud, "we can postulate that music is a language of the body, through gestures and so on" (p. 74). He later goes on to liken the music therapy experience to a text, which is comprised of "interplay among musical structures, the client's experiences, and the therapist's interventions" (p. 110). He argues that

music itself loves somewhere between the world on gestures and the world of language, and it is in the dialogue between these worlds that improvisation takes place.

Behrends et al. (2012) explored the effects of an interactional movement intervention on the development of empathy. They posit that this kind of intervention may help people with autism spectrum disorders develop empathetic relationships with significant others in their lives. According to the authors, "recognizing the body of another person as an expressive unity and the quality of one's own nonverbal expression (coordination of one's own bodily responses such as emotion-congruent gesture & posture) plays an important role throughout life" (p. 109). They define a reciprocal bodily interaction as the interaction between one's own perception and expression of oneself, the perception of the expression of another, and the interaction itself, which may take the form of "imitative/mimicry, complementary and contrasting elements" (p. 109). The authors also refer to several studies in music therapy with autistic clients that examine synchronous movements and their ability to enhance interactive abilities, which unfortunately have not been translated into English at the time of this study (p.111).

Links between music therapy and dance/movement therapy can be found in Goodill (2009). Goodill made an extensive study of the use of breathing in music therapy, and found that changes in breathing patterns can contribute to clients' sense of "body/mind integration and verbal/nonverbal congruence" (p. 266).

Ulla Holck discusses the significance of musical gesture to the music therapy relationship in "An Ethnographic Descriptive Approach to Video Microanalysis" (Holck, 2007). According to Holck, "combined with video microanalysis, the ethnographic approach is, furthermore, very useful in regarding small indicators or communication and interaction in music therapy with clients with severe communicative limitations" (p. 29). Holck's doctoral

study focuses on work with children with autism. Holck's method of IA, employed in this study as a model, includes looking at how deviations from established "norms" of communication and interaction in the therapeutic relationship can inform observers about the nature of the interaction. Temporality is easily established by music itself, which serves to organize all other elements in a music therapy session. Holck proposes a two-way analysis (vertical & horizontal) in which these deviations are examined in contrast to expectations (which are observable, for Holck, in gesture & facial expression) and an interpretation about the interaction can begin to emerge. The main guiding question for Holck's research is Wolcott's "What do people in this setting have to know in order to do what they are doing?" Examining the pre-existing knowledge of clients and therapists and their expectations based on this knowledge can therefore form the basis of interpretations of a third-party observer of a music therapy session.

Concluding Remarks

Scholarship in the field of cognitive psychology, creative arts therapies, music therapy, musicology, music technology, linguistics, ethnomusicology, and sociology all come together to form a fascinating body of work on gestures, culture, and music. Gestures and body language vary distinctly across cultures, and cultural context can contribute to the weight of the significance of gestures. The definition of what exactly a musical gesture is continues to be debated. The new field of embodied music cognition looks at music as a representation of thought which passes via the body and is translated into sound. The meanings of musical gestures are largely under-studied, and the work contained in this study is exploratory in nature.

Chapter 3: Method

Rationale and Definition

The methodology for this research project was an ethnographically-informed hermeneutic inquiry. Hermeneutic inquiry is a method first developed to interpret the meaning of the Bible in the Middle Ages. Modern secular hermeneutics was propagated by Hans Gadamer (Gadamer, 1960), Wilhelm Dilthey (Dilthey, 1996), and Paul Ricoeur (Ricoeur, 1990). This type of inquiry is defined as the theory of interpretation. The process of hermeneutic inquiry involves a deep reflexivity which investigates the researcher's historical and cultural context, and how it informs the interpretation of data. The researcher enters into the hermeneutic circle, moving back and forth between the data and the interpretation, in order to search for an increasingly objective account, and a deeper subjective understanding at the same time.

Stige (2002) and Wheeler (2005) both discuss the use of hermeneutic inquiry as a method to analyze interactions in music therapy sessions. Stige's main argument for using hermeneutics as a method of analysis in music therapy is that music itself and the interactions that occur in a music therapy session constitute a sort of text (p. 159). He discusses the importance of studying meaning in music, interactions, and texts alike. For Stige, music therapy research should aim toward an eclectic approach which encompasses hermeneutics, pragmatics, and empiricism (p. 307). Kenny et al. (2005) seek to define hermeneutics for all music therapy researchers. To summarize their view is beyond the scope of this paper, but their final remarks were some of the most influential for me as I embarked upon my own hermeneutic inquiry:

> "Hermeneutic research is not the type of inquiry that offers proof of the existence of any phenomenon, unless, of course, we want to say that we exist because we understand. It

is an open-ended and circular process that can be marked by diversity and creativity as well as increasing levels of understanding." (Kenny et al., 2005, p. 347).

Through undertaking the process of interpretation, I began to recognize the importance for music therapists to understand their client's gestures and how they themselves are interacting with them. In music therapy research, one exemplary study by Loewy (1994) uses hermeneutic inquiry analyze assessments done by a panel on videotaped sessions of an emotionally disturbed boy to determine how music therapists come to know and assess clients. This study and Holck's (2007) will be the models which inform my own inquiry.

Ethnographically-informed research connotes an approach to the music therapy session and to its participants as having contexts unto themselves. I was an observer of these contexts, and through my own observations only, have interpreted how the communication between the therapist and client informs their musical and inter-personal behaviours.

Reflexivity in the Hermeneutic Method: Personal Process

I kept a research journal throughout the research process. This is in keeping with qualitative research practices and especially with hermeneutic inquiry, which both call for a heightened sense of reflexivity within the researcher. Due to the nature of hermeneutic inquiry, I cycled between levels of interpretation, and part of that interpretation involves my own awareness of the contextual lens which is informing my analysis of the data. This journal formed the basis for the Self-Hermeneutic section which evolved throughout the process of the research, and provided me with valuable insights that grew from my first impressions of the clients and the therapeutic relationship even before the video analysis began.

Research Process

Participants.

The research design and procedures were initially approved by the Concordia University Research Ethics Review Board. I submitted a Summary of Protocols Form prior to contacting research participants. I then recruited the music therapist participants. I contacted several music therapists in nearby areas, and received replies from two. One agreed to participate in the research based on the description I provided for the study, and in turn, recruited a colleague who worked in the same facility with a second client. This music therapist was contacted because they were practicing in an area which was accessible to me, and had expressed interest in participating in the study. After initial contact, this music therapist suggested a second participant music therapist with whom I could work. I provided both music therapist participants with preliminary information about the study, including an overview of the research question, methodology, and procedures. I also provided them with information (including limitations) about the type of client I was seeking for participation in the study. For example, the client could not be part of a very vulnerable population, and they had to be available for two consecutive sessions. I allowed the music therapists to use their discretion in selecting individual clients for the study. I arranged a first meeting with the music therapist participants according to their availability. At this first meeting, I provided the music therapists with a letter of information about the study (see Appendix A) and a consent form (see Appendix B).

Following this meeting, I then met with the clients and their families to discuss the project, to answer any questions and obtain written and verbal consent. Consent was obtained through meeting with the families of each client to discuss the project. They were given the

details of the study, my aims, and hopes for the study, and were informed in detail about the procedures of the research (i.e. how the taping would take place). They were informed of possible benefits and risks associated with participation, and the fact that they could withdraw at any time. One client was of a legal age to sign consent yet due to paralysis had a legal guardian sign in her stead. She indicated her consent to participate through gesture. The second client was of an age requiring a guardian's signature. She was on the severe end of the autistic spectrum and could not give verbal consent. For the second client, verbal consent was given by and consent forms were signed by her legal guardians.

Data Collection.

According to the schedule of both participants, I arranged for four consecutive music therapy sessions of approximately thirty minutes which I videotaped. I arranged to set up the video camera in the music therapy room prior to these sessions but was not present for the sessions themselves. This was to ensure that there was a minimal effect on the gestures of the participants due to being observed, and also to minimize the anxiety level of the participants. The videotaped sessions were then transferred to a locked folder on my personal computer for transcription and analysis.

Data Analysis.

My analysis of the gestures began by using a simplified version of LMA as described by Guest (2004). LMA is a qualitative, descriptive model used to analyse dance movements. The aspect of LMA I concentrated on for the purposes of this project was effort analysis. "Effort" is the analysis of the intention behind a movement, and contains the subcategories of space (either direct or indirect), weight (strong or light), time (quick or sustained), and flow

(bound or free). Effort terminology was useful for me in my transcriptions to categorize and differentiate movements.

Holck's (2007) IA method is one based both in ethnography and in music therapy, which were felt to be particularly relevant to this project. IA involves in-depth analysis using music as a temporal organizing factor. This method involves levels of process analysis including session, episode, therapy event, and moment-by-moment. According to Holck, the "object of ethnographically informed research is typically the repeated actions, themes, or interaction patterns of everyday situations... repeated interactions between people show that these actually are interactions and not arbitrary parallel incidents" (p. 30). Holck recommends an analysis on two orientations- time on the vertical axis to show moment-by-moment co-occurrences, and time on the horizontal axis to who patterns over time. In this way, the analysis can show interactions between the music therapist and client and how the behaviour of one can influence the other, and at the same time how the behaviours change or stay the same over the session. Holck's hypothesis is that if a pattern is established, an outside observer can determine expectations of the participants. Deviations from the pattern can be determined by how the music therapist reacts to the client and vice versa.

The transcription method to combine these analyses was to use an Excel spreadsheet with headings for time, music therapist gesture, client gesture, musical content, verbal content, effort qualities, IA, and subjective notes. Time was organized in ten-second chunks for the purposes of consistency (see Appendix C). During the sessions I videotaped, ten seconds sometimes contained an immense amount of material and sometimes very little. The music therapist and client gesture columns contained objective observations such as "right hand moves upwards and touches guitar". Musical content was analyzed in terms of which

instruments were being played, chord progressions, tempo, dynamic level, and rhythmic qualities. Music was only notated in standard Western notation if it was particularly significant to the gestures of either the music therapist of client. Verbal content was transcribed in a similar manner. Effort qualities were transcribed in LMA continuums- Space (direct/indirect), Flow (bound/free), Weight (strong/light), Time (sustained/quick).

When transcribing the gestures, I noticed which occurred the most, which were repeated, which were most salient, and which were reflected by the therapist. I watched for which gestures were related to speech (speech-accompanying) and which were related to music making (musical gestures). As for the musical gestures, I observed which were related to creating the sounds on an instrument (instrumental gestures), which were expressive in nature (ancillary gestures) (Cadoz & Wanderley, 2000), and which were in reaction to the sounds created. Gestures can be analyzed as serving epistemic (perception of environment), semiotic (communication to the environment) and ergotic (material action) functions (Cadoz & Wanderley, 2000). The main focus of this analysis is on the semiotic function of gestures.

I found that the most intuitive and appropriate method for analysis of the transcriptions was something based on music analysis methodology. Because the aim of this research was to investigate musical gestures, and the fact that music already has its own method of analysis, I chose to look at the overarching structure behind the gestural interactions in each session in terms of tempo, duration, dynamic, harmony, melody, instrumentation, and phrasing. In terms of musical gestures, tempo equals frequency of gestures at any one point in time, or the speed at which they occur, duration equals length of time spent in each gesture, dynamic equals the size of gestures (i.e. they could be more subtle movements or grand, wide gestures), harmony equals the co-occurrence of gestures, or when the therapist mirrors a client gesture, melody

equals the sequences of gestures and if they reoccur, instrumentation equals what part of the body the gesture is performed by, and phrasing equals the repeated melodic patterns over the course of the session, or over the two sessions.

I then colour coded all transcriptions into four categories: some descriptions were incomplete and needed more information, while some were highly subjective and needed to be justified, some descriptions were assumptions, some began to delineate patterns or were repetitive behaviours, and some moments were quite obviously clearly indicative of interaction between the music therapist and their client.

During the analysis phase of the research, I cycled between the transcriptions (IA & music analysis), repeated observations of the original video recordings, and journaling in an effort to gain greater understanding about how the musical gestures relate to the interactions between the music therapist and client.

Hermeneutic Inquiry

I closely followed a method developed by Paul Ricoeur, as summarized by Schmidt (2006, p. 155). Ricoeur suggests that a hermeneutic inquiry can be executed with mindful analysis on three levels. First, an inquirer must analyze the text independent of the author's intention (distanciation). In this study, the "text" is comprised of the gestures, relevant musical elements, and transcription of any significant verbal content. So, the first step involves transcribing the gestures, speech, and music as objectively as possible, keeping all subjective analyses coded and separate from the actual technical descriptions of the gestures.

Second, Ricoeur suggests doing a structural analysis to determine the underlying form of the text (explanation- what does the text say?). In this study that analysis took the form of the IA and music analysis, as outlined above in the Data Analysis section.

Lastly, an inquirer must compare the context in which the text was created and the context of the inquirer themselves and then deepen the inquiry with respect to all of the information which was obtained in the first two stages (interpretation). In this study, this means that I will be analyzing the context of the music therapy sessions, including the relationship between the therapist and client, and the context of the milieu in which that relationship came to be. The final stages of the inquiry include consideration into how I am using my own context as a lens through which I am interpreting the data (the self-hermeneutic, or appropriation).

Chapter 4: Results

Introduction (Situating in Context)

This study was comprised of four music therapy sessions, two each with a separate music therapist/client dyad. Each session had a unique flow, feel, and style, just as each dyad had evident pre-established modes of communicating, and expectations that were set and met (or not). Since there is a sub-focus on context/culture in this project, I begin my discussion of the results with situating you, the readers, in the context of me, and my first impressions while conducting the research.

Music therapist- client dyads are referred to as Dyad 1 and Dyad 2. Pseudonyms are given for all participants. For Dyad 1, the music therapist was "Paul" and his client was "Samantha". For Dyad 2, the music therapist was "Korina" and the client was "Jennifer".

Dyad 1 had been working together for four years on a weekly basis, since Samantha was 2 years old. Their thirty-minute sessions are a combination of highly structured and client-directed music therapy. Samantha has a diagnosis of autism related to a genetic mutation. She is mainly nonverbal except for one to two word utterances and vocal sounds. The main feature of Samantha's speech is that it is highly repetitive, but significant. For example, when Samantha took Paul's hand to begin the first of the two taped sessions, she urged him on with "Go go go".

My first impressions of this dyad were that they were habituated to each other's company. Samantha appeared to be very familiar with the structure of the sessions, while Paul seemed in tune with small changes in Samantha's demeanor; this is analysed in detail in the gesture analysis below. Samantha and Paul were also rhythmically attuned from the moment they walked hand in hand to the music therapy room together.

Dyad 2 was comprised of a music therapist, Korina, who had been working with her client Jennifer for under a year. They were seeing each other for the first time after a two week hiatus when the videotaping began. Jennifer is a 28-year old woman who was left paraplegic after a car accident. Jennifer had previously been seeing Paul for an extended period before Korina took over, so music therapy was not an unfamiliar experience to her. Jennifer is completely nonverbal, but indicates choice with small hand movements. Both music therapists agreed that much of their basis for understanding Jennifer's emotional state is her facial expressions.

My own first impression of Jennifer was the same- although it may be possible to explain away via a more in-depth, technical micro-gesture analysis, it was evident that in Jennifer's eyes lay a wealth of meaning. Indeed, it can be seen below that an analysis of Jennifer's gestures on first glance may not provide an accurate picture of what Korina reacts to and is interacting with in the sessions. It seemed to me that Korina was particularly receptive to Jennifer's nonverbal language, especially in relation to her emotional state. She effortlessly recognized Jennifer's subtle facial expressions and interpreted them to mean that Jennifer had had enough for the day, or was happy, or was upset by some content in the songs they sang.

Results of Distanciation (Transcription)

The sessions were transcribed with a focus on the musical gestures and the interactions between music therapist and client. I transcribed significant musical and verbal moments if I saw that they were directly influencing the musical gestures themselves. I described the gestures in objective terms, such as "Samantha's left hand moves upward to brush away her hair on the left side of her face". The process of highlighting a pattern of movements when I

noticed it had occurred more than once began to reveal structures in the "text", which led me toward preliminary explanations about what the "text" was saying.

Dyad 1

Samantha and Paul: Session 1.

Samantha and Paul's sessions were music-based, with many music improvisation and instrument playing interventions. The sessions are quick-paced with short transitions between each intervention. Samantha played instruments, sometimes with hand over hand help from Paul. Samantha's gestures were repetitive on their own but also formed larger complex repeated phrases. In LMA terms, her gestures could be described as indirect, bound, strong, and quick, whereas Paul's were direct, more free, strong, and slower than Samantha's. The frequency of Samantha's gestures was very high, having up to six or seven gestures occurring within a ten second time span. The quality of the gestures was of quickness, unpredictability, and suddenness. Samantha's gestures were often directly in response to the music, especially since there was very little verbal content in Samantha and Paul's sessions.

Paul did not, as a rule, reflect Samantha's gestures. His gestures were infrequent compared to Samantha's, and were often employed to have a direct effect on Samantha's actions. There were moments in which he redirected, prompted, and attempted to guide Samantha to focus on the intervention. For example, he played tremolos on the guitar, which accompanied or prompted Samantha's head shakes. In this session, Paul invented a game of patty-cake with Samantha, and with gentle upward pushes, prompted her to remain in time with the rhythm of the music.

The frequency of gestures was such that it was necessary for me to analyze only the moments which involved some musical engagement. Each gesture was coded as a number. The

gestures were repeated often and with little variation, and so this proved a convenient way to look at overarching patterns present in this session and across both sessions with Samantha and Paul. The patterns that emerged are as follows:

1. When Samantha shakes her head back and forth, she tends to also make eye contact with Paul (which she does not otherwise do unless prompted first by Paul). Often, Paul plays a tremolo to accompany the head shake.

2. Samantha has a particular clap, in which she claps her right first into her open left hand palm. This clap often matches the rhythm of the music accurately. This gesture is often terminated with Samantha clapping her right hand over her mouth.

3. When Paul moves around the room, Samantha follows him with her gaze and her posture; remaining seated, she will turn her body to continue visual contact with what Paul is doing.

4. Samantha leans in and out with music frequently, which also reflects the rhythm of the music being played.

5. When Samantha becomes very excited (squealing, laughing, and smiling), she tends to bounce up and down on the circle drum she sits on, flaps her hands (with elbows bent up & hands shaking at shoulder height), and then slaps her thighs. This is a pattern that is repeated frequently, with some variance, over this session and their second session. I call this the "excitement dance" for convenience. This "dance" can also accompany negative excitement, or agitation (squealing, crying, screaming, & frowning). Paul often responds to the "dance" with a slow ritardando, a change in pace, or a change in music. Often, Samantha immediately follows this dance with a sudden stillness, shifting her

gaze to her upper left-hand side, and dropping her arms to her sides, with her hands touching the circle drum.

6. Almost always, Samantha accompanied the end of a song with putting her hands between her knees to touch the circle drum she sits on.

Samantha's preference for certain sounds and music is clearly communicated through her gestures. During this session, when a song she did not like began, she immediately clapped her hands over her ears and her gestures became frantically paced, bouncing up and down and flapping her hands quickly and suddenly. Her level of engagement is also clear through observation of her gestures. She reflects rhythms in her movements (particularly in her swaying, excitement dance, & hand gestures). The frequency of her movements is often directly correlated to an increase in the tempo of the music.

The patterns above form the basis for what we can consider as the expected gestural content of a session. The atypical moments in the first session between Samantha and Paul were:

1. An unexpected song was played, and Samantha moved quickly backward and put her hands on her ears.

2. Samantha followed a moment of stillness with moving her gaze to her right (typically, Samantha looks either to the left or straight ahead).

3. Paul invented a patty-cake game which kept Samantha in time with the music, and was later translated into a bell-tapping intervention.

4. Samantha avoided eye contact with Paul at the beginning of an intervention involving the choice of three instruments, and then progressively "closed up" her posture (head down, shoulders curled inward) when Paul leaned in to attempt to make eye contact.

5. Samantha guided Paul's hand back to playing the guitar after he paused for a moment.

6. Paul reflected a moment of stillness for Samantha by creating a pause in the music.

7. Samantha has an infrequent hand gesture that may be significant- her right hand opens in front of her torso, palm inward to the side, and she opens her fingers wide. This gesture co-occurs with Samantha leaning inward and making eye contact, so it may be that this gesture is an attempt for Samantha to make contact with Paul.

Frequency of gestures in this session ranges, but is generally quick and sudden. Moments of frenetic movement are followed by abrupt stillness. Paul's gestures are slow and predictable, not sudden, and they help to ground Samantha's gestures. The frequency of gestures significantly slows between songs.

Samantha's movements could be classified as automatic, reflex, or intentional, according to Cadoz and Wanderley's (2000) definition. They form repeated, complex patterns that appear to be related to rhythmic and melodic aspects of the music, but these patterns change rapidly and unpredictably, and it is not clear whether Samantha always has control over her movements. Paul's gestures, on the other hand, are made with intention to interact with Samantha. Samantha's movement primarily serve a semiotic function because they communicate to Paul what her intentions and reactions are, opening the channel of communication between her and Paul.

Samantha and Paul: Session 2.

Samantha and Paul's second meeting is very similar in structure to the first, with many improvisation and instrument playing interventions. In this session, Samantha's gestures follow a dynamic pattern with clear phrasing and changes in tempo with gradual accelerandi and

decelerandi. Her "excited dance", for example, takes on slight variations, becoming more complex, and getting larger and smaller. Each time, the pattern is followed by complete stillness. This dance-stillness pattern occurs six times in this session, at regular intervals. The consistent frequency of gestures is even higher in this second session that it was in the previous one. Although simultaneous occurrence of gestures was high in the first session, there is consistently at least one gesture every ten seconds in this session. The occurrence of prompted eye contact which Samantha meets is twice that of the first session- six times versus three times. The amount of hand over hand redirection in this session is also much higher- Paul redirects Samantha's hands twelve times versus four times in session one.

Though all of the aforementioned data may be different from the first session, it is not necessarily atypical. This can be observed by watching Paul's reaction to Samantha's behaviour, and for these behaviours, he does not appear to take special notice. Some significant moments do occur, though, and they are listed below:

1. Samantha systematically created variations on her "excited dance" that involved adding new gestures, taking away gestures, or changing the tempo of the dance.
2. Samantha did not respond to Paul's prompts, or in a way that was expected when:
    - she did not place her hand on Paul's chin for the hello song
    - she did not shake her head on certain tremolos
    - she did not make eye contact in certain instances when Paul leaned in and attempted to make eye contact
3. Samantha made unprompted eye contact with Paul several times.
4. Samantha's gaze drifted to the right side at about the same time in the session as session 1.

5. Paul subtly mimicked Samantha's head shake at the midpoint of the session.

6. Paul leaned back after Samantha does the same during a song (not as part of a swaying pattern).

7. Samantha "closed up" her posture toward the end of the session, and this was followed by a dramatic shift in tempo of gestures- the gestures promptly became slow and had a flowing quality (normally they have a more jerky quality), but then they suddenly sped up quickly toward the end of the session.

8. Samantha's open finger splay gesture reappears but takes a less prominent or significant position, appearing only in the midst of the "excited dance".

Samantha seems to be repeating long-standing patterns of gesture in this session, but is also playing with those patterns through variation, permutation, and lengthening/shortening. She indicates her need for interaction and space via gestures in this session. Her gaze is indicative of where her attention rests, and in this session, she looks downward and to the right- directions in which she does not normally even glance. Samantha's emotional state is evident in the size and frequency of her gestures. She accompanies unwanted songs or sounds with frenetic bouncing and squealing, and Paul's reaction indicates that he is eager to help regulate her actions as soon as possible. Her moments of stillness seem to be a kind of self-regulation, when we consider that they often follow almost frantic periods of activity, where gestures are larger, faster, and more repetitive.

Dyad 2

Jennifer and Korina: Session 1.

Jennifer was confined to her bed for these sessions, so both music therapy sessions with Korina took place with Jennifer lying back and Korina sitting by her side with her guitar.

Korina employed two interventions with Jennifer- song writing and receptive music listening. In general, Jennifer's gestures occurred in response to questions posed by the music therapist. She raised her right hand when she wanted to say "yes" and did not move when she wanted to say "no". I was able to make inferences about the meanings of these gestures based on how Korina responded to those gestures during their moments of verbal interaction. Small variations on these movements and her facial expressions gave Korina more information about how much Jennifer wanted to do something, or how much she didn't. Jennifer did not play any musical instruments during these sessions, so in this case, when I talk about her musical gestures, it refers to how she moves while listening to Korina play music.

Jennifer's music listening posture was as follows:

1. In LMA terms, her gestures could be described as bound, direct, light, and slow.
2. Her mouth would open and close, often mimicking the syllables sung by Korina
3. Her gaze was in the general direction of Korina but moved back and forth rapidly. At times, she would gaze off into the distance, and at times, her eyes would close.
4. Her eyebrows were angled upwards, which to some observers would indicate wistfulness or dreaminess.
5. Her left foot often rose up in conjunction with significant changes in the music such as a gradual crescendo, increase in tempo, or an ascending melody line.
6. Her left hand was posed in front of her chest, with her wrist bent and palm facing upward.
7. Her right hand was also held in front of her chest, and holding a handkerchief in her fist which was angled downward. She used her right hand to indicate "yes" during verbal interactions, but was still while listening to music.

Korina's music playing posture was:

1. In LMA terms, her gestures could be described as direct, free, strong, and slow.

2. She sat and strummed the guitar with large gestures (large downstroke with a quick upstroke).

3. Her head swayed in time with particularly rhythmic passages of the music.

4. Her body leaned in slightly over the guitar towards Jennifer.

5. Her gaze was directed at all times on Jennifer, and her chin was up and out while singing.

Jennifer's body often moved slowly and subtly, but the movements were significant. Her gestures were more frequent at the beginning and end of songs. At the end of a song, Jennifer would often become still unless she was prompted by one of Jennifer's questions. Jennifer's breathing patterns and the openness of her posture followed the phrasing of Korina's songs quite accurately. By "openness of posture" I mean that Jennifer sat up straighter, her shoulders back, and her hands, normally held closely together in front of her torso, were further apart and looser. Jennifer's gestures in this session consistently indicate that she is engaging with phrasing, dynamics, and tempo of the music.

Korina did not observably reflect Jennifer's gestures while she sang and played guitar, but instead would "check in" at the end of the song, asking Jennifer if she felt something, or if she wanted to continue or stop. Korina, while singing and playing, observed small changes in Jennifer's mood and would check in with her to confirm if what she saw was actually happening. For example, there were some moments where Jennifer suddenly became still and her left foot moved downward abruptly. In those moments, Korina stopped and asked Jennifer if she would like to continue.

The most atypical moment in this session occurred when, at the end of a song, Jennifer became completely still, her shoulders curled inward and her hands became close in front of her chest, creating a "closed" posture, her gaze drifted away from the music therapist, and her left foot moved rightward (where normally it moved up and down only). At this point, Korina checked in and the session soon after ended due to Jennifer's emotional state. This emotional state was communicated directly through her body and in her facial expression.

According to Cadoz and Wanderley's (2000) terminology, all of Jennifer's movements were intentional, simple, rhythmic (in the case of the mouth & eye movements) and slow. They serve both epistemic and semiotic functions- they relate to how Jennifer perceives her environment and how she wants to communicate with it. Korina's movements may be analysed as being intentional or automatic, depending on the level of rehearsal these songs have. Functionally speaking, they serve all three purposes of a musical gesture- they are semiotic, epistemic, and ergotic, also fulfilling the purpose of material action on an object.

For Jennifer, and Korina, the frequency of gestures, their size, the gestural repertoire itself, remains mainly static (changing, but predictably), except during the atypical moment outlined above. Seen in this context, expectations which have been created and maintained outside the taped sessions become visible. It becomes evident that Korina's observation of Jennifer's body language allows her to be aware of anomalies and to address them.

Jennifer and Korina: Session 2.

The second videotaped session with Jennifer and Korina took on much the same structure as the first. The session began with a song writing intervention, and led into a music listening intervention. The pace of the second session, however, tended to be much slower on the whole, with less gestures per song that the first. Jennifer and Korina's gestural repertoire

both remained similar, with some atypical moments. There was a less varied gestural repertoire in Jennifer's case. During this session, she did not open her mouth wide (she did this in session 1 during verbal interactions, presumably to express amusement), her right foot never moved downward as it had in session 1, but her posture did open more frequently than it had in the first session. There is also less physical contact between Jennifer and Korina than in the previous session.

During the first song writing intervention, Jennifer's gaze drifted away from Korina, and her movements were smaller and slower than they had been in the previous session. As the session progressed, however, Jennifer became more physically engaged. Her left foot moved up and down exactly in rhythm with the second song performed by Korina. During the third song, Jennifer's mouth opened and closed throughout the duration of the song, clearly articulating an inaudible "la la la la". Suddenly, after "singing" these syllables, Jennifer's posture closed- her shoulders curled inward, her hands met in front of her chest, and her gaze moved downward. Her right hand moved upwards (normally signifying "yes") and her left foot suddenly darted upwards. There are several moments during this session where Jennifer becomes very still, not moving, with her gaze directed straight ahead.

Characteristics of Dyad 1 and Dyad 2

Jennifer and Korina's sessions, from a gestural standpoint, have a slow frequent gesture rate. Jennifer and Samantha have characteristic gestural repertoires. Jennifer uses gestures as an answer to Korina. Their sessions do not involve Jennifer playing instruments, and so the gestures are accompanying, or listening, gestures. Jennifer's gestures do not follow intricate patterned sequences, like Samantha. Korina's interactions with Jennifer are mainly verbal, and

take the form of a check-in at the end of an intervention to confirm the presence or absence of a familiar reaction.

Samantha and Paul's sessions have a much more frequent gesture rate, with up to eight gestures occurring in sequence or simultaneously per ten-second section. Samantha's gestures tended to be sudden and unpredictable. Paul's were slower and predictable, appearing usually at the end of songs. Paul's interactions were mainly nonverbal, and were employed as redirection, prompting, and at times reflections of Samantha's gestures.

In summary, both dyads had developed characteristic gestural repertoires over time while working with each other. These gestural repertoires served as a nonverbal mode of communication that was easily understood by both client and therapist. Analysis of the communication occurring via musical gestures can elicit greater understanding of the nonverbal dynamics between a music therapist and their client. This is discussed in greater detail in the next chapter.

Chapter 5: Discussion

Originally, my methodological design for this project involved a separate type of analysis for each step of the hermeneutic inquiry so I could aim to answer the question, "What is communicated in the musical gestures of a music therapist and their client in a music therapy context?" As I dove into the project, however, I noticed that no one method was going to be completely subjective or objective, and that the only way to recognize the subjectivity was to be constantly conscious as I proceeded as to why I was attributing a particular meaning to any one gesture. For example, why does a raised eyebrow convey skepticism or disapproval to me? I noticed that this process of questioning my own subjectivity began early on. As I transcribed the gestures in each session, the salient moments were colour coded. These moments were highlighted for further analysis because they were the moments that would begin to answer my research question, above.

Early questions included, "How does the process of instrument embodiment affect the music therapy process?" "How can the process of intercultural communication in music therapy be facilitated using nonverbal elements?" and "What do the musico-gestural languages of different cultures in music therapy say about their inner experience?" As my focus narrowed, however, it became clear that I wanted to know more about the act of nonverbal communication itself. The idea of looking at instruments was abandoned, and the question of culture became secondary to the main focus of communication. It was very important for me at this stage to become aware of my own assumptions and bias. To me, this was the real beginning of the hermeneutic process, as I was beginning to investigate my own context as researcher.

After engaging with the transcription data, some themes emerged which began to answer the question of what was being communicated by these musical gestures in the context

of these sessions. Below are the prevalent themes which came out of the analysis: Context, Grounding and Stillness, and Flow.

Limitations

This study had several limitations which led to the results outlined below. Firstly, working with a small number of participants is often desirable for case studies and other qualitative designs. It does, however, mean that sweeping conclusions cannot be made. In the case of this study, that meant that the method of analysis proposed here may not be useful in all situations in which a music therapist wants to analyze musical gestures.

Due to my lack of LMA training and my lack of experience with Anvil gesture analysis software, this study was limited to a mode of analysis of my design. LMA was developed specifically for the purposes of analyzing movement in a qualitative manner and may be appropriate for future study in this domain.

Results of Research Journal (Self-Hermeneutic)

I began the analysis of my own journal thoughts by highlighting when I had made assumptions, questioning what those assumptions were based on, and investigating my own intuitions, to better understand how my own context was colouring my perceptions and what I gave importance to. These journals served as a key to acknowledging my own bias. This process also helped me to see the importance of the smallest of micro-gestures that most of us take for granted in everyday life, particularly in therapy settings, yet give us a wealth of information about the inner states of someone else.

I began to notice that my own practice began to be shaped by the process I was undergoing in the analysis of this data. I began to observe my clients' gestures closely. I experimented with reflecting micro-gestures and facial expressions with my own music therapy

clients and noticed how this produced new interactions and realizations in me. I found that these experiments often helped to create exciting moments of play.

The process of watching the videotaped sessions repeatedly and of separating my transcriptions into subjective and objective observations helped me to analyze what I was seeing through my own lens and what was perceived by the music therapists and their clients. As Holck (2000) points out, actual interactions, and not mere coincidences, are observable through the actions of those whom we observe. So, when I see Korina checking in with Jennifer, it is my cue to go back and note exactly what is occurring with Jennifer to make Korina react that way. In this way, repeated viewings of the videotapes allowed me to gain a more and more objective view on the gestures. The first reactions I had to the gestures of the clients were based on intuition, as they would be if I was their music therapist. Repeated viewings let me check in with the music therapist, observe the precedents to their reactions, and integrate all of that information into the context of that session and their second.

I noticed that when I was trying to engage with the data, I would visualize the gestural repertoire of each client and therapist. This had an interesting effect- I noticed that when thinking of a gesture in particular, I could immediately visualize the whole of the person in totality. To me, this indicated that each person's gestures are so unique to people that they actually have the ability to betray an entire personality. When I reflected on this point in conjunction with the reading I had done in preparation for this project, I realized that I may have been experiencing Behrends et al.'s (2012) phenomenon of reciprocal bodily interaction. Considering this made me wonder what the difference between an outside observer's and a music therapist's experience of reciprocal bodily interaction may be. Did the music therapists

see the clients the same way I did? If not, how could my own perceptions be shaping my observations?

Context

Each instance of subjectivity or assumption needed to be carefully analysed. What made me think that Samantha was agitated while she bounced up and down and squealed, for example? The systematic nature of the analysis allowed me to notice how the therapist interacted with these moments, which in turn indicated whether there was some expectation that was broken. It also allowed me to see the gesture in the context of the music, the verbal content, and larger overarching patterns of gesture that I would not have noticed otherwise. My own process of journaling and inquiry helped to elucidate the effects of my own context on my perceptions, and allowed me to reflect on how the contexts of the clients and music therapists could be shaping their behaviours.

Both dyads had been working together for different periods of time. After the analysis, I noticed that each dyad had a characteristic level of familiarity. With time, it seemed, the therapist and the client tended to predict each other's gestural languages. Paul's redirection of Samantha's gestures occurred almost in tandem with the gesture itself, whereas Korina's verbal check-ins were reserved for the end of an intervention. The rhythm of Paul's music-making and Samantha's gestures often harmonized, and was less consistent with Jennifer's movements to Korina's music.

Both dyads' gestural interactions were also shaped by the diagnoses of the clients themselves. Jennifer's paraplegia allowed her the use of hand movements, facial expressions, and small foot movements. This meant that her gestures were often subtle and could be easily missed, but also that they were deeply meaningful. Samantha has autism, which is often

characterized by repetitive hand movements like hand-flapping and rocking (Volkmar et al., 2005, p. 23). According to Volkmar et al. (2005), recent research on autistic individuals shows that gestural imitation is in many cases impaired (p. 385). In Samantha's case, her gestures were usually in time with the rhythm of the music. She did not imitate Paul's gestures, but she did make eye contact and provide hand over hand assistance to Paul, which may indicate that she had learned some gestures from Paul over their time together.

It is out of the scope of this project to comment further on the effects of the institutional, community, political, or aesthetic contexts (Stige, 2002, p. 209) on the musical gestures of these clients and music therapists.

Grounding and Stillness

In both cases, the music therapists were much less active than their clients, producing less gestures over the entire session, and in general remaining more still. This may be indicative of the music therapist's desire to ground or contain their clients. It could also simply be a by-product of taking an observational stance, being more receptive than expressive for the sake of their clients' experience of music therapy.

In Korina and Jennifer's first session, the effect that stillness can have on a music therapist's perception of client engagement became evident. When people engage with others, their bodies are constantly in some state of motion. Micro-gestures, such as small facial twitches, clasping of hands, scratching the face, and so on, gives others information about our inner state. When someone becomes still, some observers may see this as either an intense state of concentration and focus, or alternately a disconnection, perhaps a desire to disengage. In both Jennifer and Samantha's sessions, there were significant moments of stillness which communicated just as much to both therapists as the gestures did in and of themselves.

Flow

Both dyads presented significantly different gestural language outside of music-accompanied moments than within them. Jennifer and Korina's movements became more rhythmic, and Jennifer's foot movement often matched the phrasing of the music, shown in the analysis. Outside of the music her gestures only occurred in response to questions. Korina and Paul's gestures were also more rhythmic, whether or not they were the ones producing the music. Samantha's gestures were much more prolific while playing or listening to music than in the pauses between interventions. In general, the most influential musical element on gestural style was rhythm, followed by phrasing. Both clients moved in time with rhythm most of the time, independent of the gestures themselves. Samantha's gestural patterns often formed larger phrases, especially in the case of her dance-stillness pattern, but these phrases were not evidently related to musical phrasing. In Samantha and Paul's second session, Samantha's gestures began to show a subtle relationship to dynamics, getting bigger and smaller, more frequent and less frequent with changes in the music. Choice of instrumentation did not have a noticeable effect on the gestural production of either client, but this may have become more evident over a larger sample or over time.

The effect of music on the gestures of both clients and music therapists was to create an underlying organizational force, or "flow" for the gestures to follow. Outside of the music, gestures became predictable only in response to language. During the music, gestures became patterned, predictable, and sometimes more flexible (in the case of Samantha's malleable gestural patterns in their second session). Based on these observations, I can tentatively say that a speech-accompanying gestures in these music therapy contexts (with these nonverbal clients) is one which immediately follows a question from the music therapist and is always intended to

have a semiotic function. Musical gestures in these contexts are both expressive and pragmatic. They can be used to communicate but even in those cases they carry expressive content which is directly tied to musical elements like rhythm, dynamics, and phrasing.

Conclusion and Recommendations

Musical Gesture as Communication

Every music therapist-client dyad will have an inherently characteristic communication style native to the therapeutic relationship. Gestures, both speech-accompanying and musical, are only part of that communication style. If we are to look specifically at the dyads I have observed, there are several generalizations that can be made about the function of musical gestures as communication in these sessions.

Both clients employed musical gestures to communicate their level of engagement, their emotional state, where their attention was directed, and musical expression (or interactions with music independent of the music therapist). Jennifer became still when she was no longer engaged with the music therapy session, and Samantha diverted her gaze and closed her posture to indicate the same. When Jennifer's emotional state changed, it was evident in her facial expression but for Samantha, it was in the size and frequency of her movements. Both Jennifer and Samantha's gaze and how the direction of their body posture betrayed where their attention was fixated. The rest of the gestures were of an expressive nature, perhaps with no direct semiotic function, but still important as a gauge as to how much the client was experiencing the music on a purely aesthetic level.

Both music therapists employed musical gestures to prompt, redirect, empathize, and reflect. Korina established strumming patterns and rhythms with Jennifer beforehand. She performed them while constantly observing Jennifer's gestural reactions, and altered phrasing

and tempo depending on Jennifer's reactions. Paul used hand over hand to prompt and redirect Samantha if she was unresponsive or temporarily unfocussed. On several occasions he subtly mimicked Samantha's gestures. Both music therapists incorporated the perceived intention behind their clients' gestures into the therapeutic process, showing their empathy with the clients' nonverbal behaviours. For example, Korina stopped playing to check in if Jennifer's gestures showed disengagement of distress. Paul changed songs, redirected Samantha's posture or gaze, and verbally reflected her changes in mood in response to her gestural language.

An analysis of the musical gestures and interactions they provoke in these music therapy sessions has shown that Korina and Paul act as receivers of Jennifer and Samantha's musico-gestural signals. They process these signals and this helps them to shape their therapeutic response. This is similar to a typical therapeutic response to verbal language, and may show that a music therapist's attunement to gesture is just as developed as their attunement to verbal content. Attunement may be enhanced through more moments of reciprocal gestural imitation, but a study of the effects of imitation between clients and therapists was outside the scope of this study.

Implications

This study was limited to a small number of participants with specific characteristics. Both clients were mostly nonverbal, which allowed the research to easily focus on the role of gestures accompanying the music. Future studies in this vein should include clients and therapists from various populations. This can help to paint the picture of a more generalized client motivation for gesture, and at the same time can highlight how many different clients and therapists use musical gesture. Quantitative studies may be able to further elucidate changes in frequency of gestures across several sessions or in relation to changes in musical content.

Some interesting avenues of inquiry may include: what types of musical gesture are possible, how other elements of music (e.g. harmony, texture) influence gesture, the role of mastery (comfort level on an instrument) on musical gestures, and the role of socialization in the forming of musico-gestural repertoire. Future research into musical gestures in music therapy would benefit greatly from collaboration with experts from dance/movement therapy, musicology, and cognitive psychology. A more in-depth discussion of the effects of cultural factors on musical gestures would help to expand on a gestural approach to music therapy with various clienteles. Development of a body-centred approach in music therapy with its own method of analysis could be interesting in rehabilitative work with clients with motor deficits, physical disabilities, or autism.

As a music therapist, I have noticed that my own reactions to musical gesture in sessions are intuitive. It comes from my own experience of being human, observing others and making meaning from their gestures in my everyday life. It also comes from training and practice as a music therapist. All therapists are trained to be keen observers and listeners. Music therapists are specialists in observing the effects of music on their clients. In the process of analysis for this project, I have become aware of how a deepened understanding of what is actually motivating these intuitive gestural interactions in music therapy sessions can give perspective on client cognitions, emotional states, and levels of engagement. It is my feeling that the development of an analysis technique for musical gesture analysis intrinsic to music therapy would be invaluable in helping to better attune to clients.

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Appendix A: Letter of Information

Consent Information Letter

Hermeneutic Inquiry on Musical Gestures in Music Therapy Contexts

Music Therapy Student: Danielle Jakubiak

Concordia University, 1455 De Maisonneuve Blvd. West,

Montreal, Quebec, Canada H3G 1M8

(514) 937-0478

Research Supervisor(s): Guylaine Vaillancourt

PURPOSE:

Music therapy research has so far not looked at how gestures may act as communication between music therapists and their clients. Research in other fields shows that gestures can mean different things for different people. This research project will look at what gestures can mean when they are combined with making music (such as playing instruments or singing) with therapists and clients.

This project will allow participants to consider their relationship to gesture in relation to music-making, particularly in music therapy contexts. It will give participants the opportunity to think about their relationship with their bodies while making music, and give music therapists new information about how they might enhance their relationship with their clients.

PROCEDURES:

Participants who agree to be part of this study will allow the researcher to videotape up to 4 weekly one-hour music therapy sessions. The researcher will not be present for the

videotaping to ensure she is not intruding on the therapeutic process. A separate consent form is attached for both the video and audio recordings.

The video will be transcribed and analysed to see which gestures are significant for further analysis. The final research paper will include a hermeneutic analysis of the gestural content of the music therapy sessions. All material included in the paper will use pseudonyms, in keeping with the respect for confidentiality described below. Bound copies of the paper will be kept in the Program's Resource Room and in the Concordia University Library and it will be open to the public.

CONFIDENTIALITY:

Participants' confidentiality will be respected in every way possible. Their names and identifying information will be kept under lock and key, separately from all recorded material. Only the researcher will watch the tapes of the sessions. A transcript of selected portions of the videotaped sessions, with pseudonyms for participants, may be shared with the research advisor. Participants may withdraw their consent to participate in the study at any time, without giving a reason and without prejudice, by phoning the facilitator at the telephone number above. Participants may also stop recordings at any time if any discomfort is felt during this process.

RISKS:

To the researcher's knowledge, participation in this study holds no risks for participants. However, certain persons could find that they may have reactions or feelings that are uncomfortable because of the nature of the gestural analysis. If a participant finds that these feelings persist, the facilitator will be available to discuss these concerns and provide a referral, if needed, in consultation with the research advisor.

BENEFITS:

The aim of this project is to determine how meaning is communicated via gestures in music therapy. This may lead to new avenues of research for music therapy, and also to giving music therapists a new technique to enrich communication and empathy with their clients.

If you have any question regarding this research study, please call the student or supervisor listed above.

If at any time you have questions regarding your rights as a research participant, you may contact Yehudit Silverman, Department Chair of Research and Ethics Committee, Department of Creative Arts Therapies.

Building: VA-270, Concordia University, Montreal, Quebec H3G 1M8

Phone: 514-848-2424 ext. 4231

Email: yehudit@alcor.concordia.ca

Appendix B: Consent Form

Research Participation Consent Form

Hermeneutic Inquiry on Musical Gestures in Music Therapy Contexts

Music Therapy Student: Danielle Jakubiak

Concordia University, 1455 De Maisonneuve Blvd.W, Montreal, Quebec, Canada H3G 1M8

(514) 937-0478

Research Supervisor(s): Guylaine Vaillancourt

I agree to participate in the research project conducted by Danielle Jakubiak, entitled *Hermeneutic Inquiry on Musical Gestures in Music Therapy Contexts,* as part of her Master's studies in the Department of Creative Arts Therapies at Concordia University.

I have carefully read and understand the consent information about the study. Its purpose and nature have been explained to me, I have had the opportunity to ask questions about it, and I am satisfied with the answers I have received. I understand that I will participate in up to 4 weekly, 1 hour music therapy sessions, during which I will be videotaped.

I understand that my identity will be kept confidential. I understand that the sessions will be videotaped. No one except the student researcher will watch the videotapes or listen to the recordings, though the student's advisor may read transcripts of sessions with participants identified through pseudonyms. The tapes will be stored under lock and key without any participants' names attached to them. The final research report will include analyses of the gestures in the sessions, and excerpts of the transcriptions of the music therapy sessions, with identities kept confidential. My name will not be disclosed in the research paper, or in any future presentations or publication of the research.

I understand that I have the right to withdraw my consent at any time. I understand the purpose of this study and that there is no hidden motive of which I have not been informed. I understand that copies of the research paper will be bound and kept in the Program's Resource Room and in the Concordia University Library. I freely consent and voluntarily agree to participate in this study.

Signature: _____

Date: _____

Appendix C: Analysis Table

Time	Client Gesture	MT Gesture	Music	Speech	Effort (Space/ Weight/Flow/ Time)	Interaction (Expectation/ Change)
0:10:00						
0:20:00						
0:30:00						
0:40:00						
0:50:00						
1:00:00						
1:10:00						
1:20:00						
1:30:00						
1:40:00						
1:50:00						
2:00:00						