INTENTIONALITY OF AUTISTIC INDIVIDUALS EXPRESSED WHILE
ENGAGED IN THE CREATIVE MUSIC MAKING PROCESS

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CHAPTER I
FORMING THE RESEARCH

Background

This research investigated intentionality of autistic individuals expressed while they were engaged in the creative music-making process.

Autism is a developmental disorder characterized by impaired social and communicative development and restricted interests and activities. Recent experimental investigations have provided evidence suggesting neuro-cognitive anomalies in autistic individuals that correlate to the impairment of social cognition as well as an information processing style that is biased toward local rather than global processing (Baron-Cohen et al., 1993; Frith, 2003; Happé, 1997, 1999; Heaton et al., 2001; Mottron et al., 2001).

In contrast with the traditional view of regarding this anomaly of the mind as a cognitive deficit, one recently raised view is that autism should be accounted as a distinctive type of mind with a fundamentally distinctive “cognitive style” (Happé, 1999) – namely, “other mind” (Baron-Cohen et al., 1993; Bolton & Hill, 1996; Fletcher et al., 1995; Frith 2003). This alternative account is distinguished from the traditional deficit account in that it recognizes cognitive abilities in autistic individuals that are not deficient, but rather characteristic and sometimes extraordinarily superior (Happé, 1999; Mottron et al., 2001; Rieffe et al., 2000; Stacy, 2003; Treffer & Wallace, 2002).
Specifically with regard to auditory and musical tone processing, the literature reports clinical incidences and research findings supporting that autistic individuals tend to exhibit extraordinary perceptual skills more frequently than normal individuals (Bonnel, 2003; Heaton et al., 2001; Mottron et al., 2001; Peretz, 2002). These areas of superiority include heightened sensitivity to auditory stimuli, enhanced pitch recognition/discrimination, and superior trace memory for individual musical tones.

In the field of music therapy, the literature and clinical case studies have reported that the use of improvised music in a “client-centered” (Rogers, 1951) individual treatment setting has a wide set of therapeutic effects on autistic individuals. While engaged in making music with the therapist(s), autistic individuals respond to music often with increased attention, motivation and affective expression, and they engage themselves in structured interpersonal activity more readily through the musical forms (Alvin, 1978; Benenzon, 1982; Brownell, 2002; Nordoff & Robbins, 1971; 1977). One essential tenet underlying the use of improvised music in treating autistic individuals is that it is by their engaging in such a spontaneously emerging, interpersonal music-making process that their unique personalities are lived and realized. This points to the use of music in a psychotherapeutic realm of treatment, i.e., ‘music psychotherapy.’ (Aigen, 1999; Ansdell, 1995; Bruscia, 1998; Hesser, 1980).
Purpose of the Study

The purpose of the study was to explore intentionality of autistic individuals during music-making, with focus on the connection between meaning and the mechanisms of their behavior. Intentionality is a concept used in current philosophy of mind and psychological theories. Edmund Husserl, the leading phenomenologist of the early twentieth century, accounts that intentionality refers to the relationship between a person and objects or events of his/her experience; more simply, it refers to one’s directed awareness of his/her surroundings, i.e. “object-directedness.” (Husserl, 1931). Intentionality as referred to in this study adopts this central notion of object-directedness as it is identified in phenomenology. Another aspect of intentionality recognized in the study is related to the concept of meaning arising in action (Bolton & Hill, 1996; Jackendoff, 2002; de Jong, & Mele, 1991; Pettit, 1993; Searle, 1983, 1992; Vedeler, 1991; Wittgenstein, 1921). Yet further assumed is that intentionality emerges as the mind’s directedness through patterns or regularities of behavior (Bolton & Hill, 1996; Jackendoff, 2002; Jung, 1960a, 1960b; Searle, 1983, 1992).

Central to the problem of intentionality in autism is that it is concerned with mind phenomena that have been noted to be distinct from those found in ordinary or non-autistic persons. For a music therapist who works with people with autism, the task of understanding their clients’ experiences or meanings is a greater challenge because of the non-ordinariness of their behavior. Fundamental questions are constantly arising in her mind as she interacts with an autistic client: What might be his or her experiences? Is he/she aware of his/her experiences as
well as interactions with me? What motivates his/her actions and responses? What aspects of his or her surroundings, including musical conditions, is he or she inclined to? Is there any purposefulness in his or her seeming inclinations? Are there regularities or patterns of behavior that seem to arise in time while the clients have been engaged in their surroundings?

These questions are concerned with the meanings of autistic clients and the patterns of their behavior that emerge while engaged in creative music-making. In essence, they address to the problem of intentionality in the minds of the autistic individuals, i.e., what are their minds directed towards and how is such directedness actualized?

The research was conducted based upon the acknowledgement that autism, as a set of phenomena pertaining to the mind and behavior, is generated in the brain (Cohen-Barren, 1997, 2003; Frith, 1995, 2003; Happé, 1997, 1999). During the clinical investigation I remained focused on describing the patterns of object-directedness expressed through the clients’ actions and responses while avoiding reductive reasoning or interpretations of any known kind. The findings drawn from the clinical investigation were then cross-examined and synthesized with current insights on neurological and cognitive properties of autism as well as other clinical and philosophical reflections on the minds of autism. Through the synthesis, I tried to forge a link between the neuro-cognitive features of autism and meaningful behavior of each autistic client.
Personal Source of the Study

The study incorporates insights on neuro-cognitive mechanisms of autism with materials drawn from a qualitative investigation of intentionality of autistic clients' behavior. Tapping into the seemingly incompatible two aspects, i.e. mechanism and meaning, of the same phenomena in a project, I feel it necessary to examine the paths of my own knowledge seeking as a music therapist and a mental health clinician.

I have always regarded my work as a music therapist as falling within the realm of psychotherapy. For the past twelve years, I have worked with clients with various emotional, cognitive, or physical problems in varied clinical settings such as hospital wards, outpatient clinics or personal therapy studios. Across these varieties of clients and settings, my primary concern has always been the client’s unique experiences of him or her self and others through music and musical interactions and how this affected the person as a whole. While the immediate target areas for treatment are identified and intervened with through specific methods of music therapy - whether they are for emotional and interpersonal difficulties, learning and memory deficiencies, or physical impairments – the therapy takes place essentially through the person’s experience of mind and body that hold the experience. This has been the guiding principle of my work and remains true till today.

A therapist whose work is mainly concerned with the clients’ experience is constantly involved with the process of seeking to understand the needs, motivations, inclinations, and purposes carried through their manifested behaviors.
During music therapy sessions, I am immersed in engaging with my clients, with or without music making; yet at the same time my reflective thinking is constantly at work and attentive to what’s taking place in the moment and what meanings it has for the clients and whether or not they are conscious of it.

My reflective thinking processes, or the processes of understanding the clients’ behavior and meanings, became further guided as I began my training in Analytical Psychology, a school of psychology founded by Carl G. Jung. An important tenet of this theoretical school is that one’s mind as a whole is made up not only by his or her personal psychic contents formed after birth but goes beyond that level to an inherited set of collective psychic contents shared with living organisms of all times. This collective level of psyche is largely unknown and only emerges through patterns of behavior as one continues to go through life experiences. Ongoing training and personal analysis in Analytical Psychology led me to a perspective of the mind — or the “psychic processes” — as the counterpart of the body or physical/physiological processes (Jung, 1960) — as an unknown and constantly forming entity. It also allowed me to develop an eye for observing emerging patterns of behavior as the carriers of the person’s emerging mind.

Though without necessarily adopting all sub-concepts of Jungian theories, my work with autistic individuals is a direct and much needed application of these approaches to the mind and behavior, underlying which is the assumption of the mind as the unknown as it unfolds in various forms of life. The minds of autistic individuals are often cited as minds that are withdrawn or locked in their own inner world protected by layers of shells from the outer world. They are noted to
be unusual, baffling, and mysterious. The “mysteriousness” of autistic minds is well reflected in some of the book titles regarding autism. Included in these are “The Siege” (Park, 1982), “Nobody Nowhere” (Williams, 1992), “Anthropologist on Mars” (Sacks, 1995), “Martian in the Play Ground” (Sainsbury, 2000), “Existing Nirvana” (Park, 2001), and “Explaining the Enigma” (Frith, 2003). These metaphorical expressions all allude to the oddness of the minds of autistic persons perceived from a common-sense view.

Dealing with an extreme lack of ordinariness of a person’s behavior, a therapist is inevitably faced with the question of how to understand. During my first few years of working with autistic individuals, my main goal in making music with them was to bring them into a context where they would express themselves and interact with me in a more aware and sensible manner. For this, I would facilitate moments that were geared toward evoking their context-dependent attention and responses. These moments often involved my mirroring, reflecting, stimulating, or distracting their mood and actions. These were highly challenging processes, sometimes causing me much confusion and frustration primarily for the lack of sensible consistency in their responses. There were moments where I observed them intensely and continuously engaged with their surroundings while seemingly oblivious to my presence and what I was playing. Yet other times, there were inexplicably special moments of “clicking” and merging between us.

As puzzled and challenged as I was, I was deeply intrigued by my encounters with these persons. Despite the erratic-ness of their interests and
occurrences of their seeming “clicking”, I often observed in my autistic clients a strong sense of desire and seeking as they were immersed in a certain mode of exploration or expression. They persistently adhered to what were desired within them during the experiences, and strived and persevered to complete them.

Even now as I am writing the final report of the research, the behavior and motivations of autistic clients during the music therapy process remains somewhat mysterious to me. Whatever drives them, the realization of it seems quite compelling: their behaviors are erratic, non-sensible, often inappropriate for to the social context and sometimes even sacrificial of their own physical comfort, but so absolutely imperative that they must go on until they are complete. The moments of their captivity during music making frequently involve direct contacts/interactions with their immediate surroundings: purely tactile experience while touching the surface of a drum, engaging with certain qualities or patterns of sounds, making a certain sequence of motions, or interacting with the therapist within a pattern of activities. Other times it seems to be simply the intensity or direction of energy involved in musical activities that intrigue and engage them.

When they are immersed in these moments, they seemed focused, purposively maneuvering and highly intentional. When it flows along with the external context, they seem at ease. There are signs of gratification, pleasure and joy. When I as a therapist have been able to join them in this process, in their seeking of it, instantly there is a sense of interpersonal “clicking” between us without feeling so alien to each other. I experienced them becoming personal and even affectionate around me.
During these moments, I am able to experience and connect with their unique personalities, which appear to incline toward very specific qualities of experiences. I sense in each client a person of strong individuality, a person whose mind is perhaps not so fractured and disordered, but emerging within a certain form of directedness. This form seems integral to his or her personality as a whole – maybe uniquely and exquisitely directed in ways I don’t have an easy access to.

The ambiguity in my experiences with autistic clients is based upon the perceived interplay of fragmented-ness and integrated-ness, disorder and order, randomness and directedness. This leads me to some basic questions regarding *how to understand the unknown mind* rooted in these people.

With the acknowledgement that autism is characterized by unknown phenomena pertaining both to the brain and the mind, I found the following two conditions crucial as I pursued a deeper understanding of the autistic clients in this research: first, to establish a conceptual framework that guided an inquiry of a mind-brain system; second, to learn more about the neurological and cognitive features of autism and incorporate them into the ongoing examination of clients’ responses while engaged in music making. The former condition in particular required an extensive investigation of theories of consciousness, including those of mind-brain relation and intentionality. I began this investigation acknowledging that I did not have direct access to others’ experiencing minds, and this awareness remained with me throughout. This necessitated my taking an approach in which the act of determining or interpreting (e.g., analysis of
psychological dynamics) was minimized while describing or presenting the emerging patterns of behavior.

Theoretical Reflections: Consciousness, Mind-Brain Relation and Intentionality

This section of discussion serves to outline some of the important concepts and perspectives that lent themselves to the conceptual formulation of this research and its entirety of the process. Included in these are the problems of consciousness, mind-body relation and intentionality.

The term intentionality was originally introduced by the German philosopher Franz Brentano, who noted that mental states have specific contents (1874/1973). It became popularized by the phenomenologist Edmund Husserl in the early twentieth century. In his account, intentionality refers to the relationship between a person and objects or events of his/her experience; more simply, it refers to one’s directed awareness of his/her surroundings, i.e. “object-directedness” (Husserl, 1931). This theory holds that consciousness has no life apart from the objects it considers. To say that a phenomenon is experienced implies an active relationship between consciousness and its object. A person’s action is found intentional because it is directed at or directed towards something. This assumes that a mental phenomenon is always about something, i.e., it arises based on its “aboutness” (Bolton & Hill, 1996; Husserl, 1931; Pettit, 1993; Searle, 1983, 1992).

Central to the concept of intentionality found in phenomenology is the recognition of a person’s mental state that is directed at a certain aspect of his or her
surroundings, and that is *conscious of or about* objects (Husserl, 1962). John Searle, a philosopher of mind and language, took this notion of object-directedness further to propose that “any conscious state, in general, is directed at something or other, [...] and in that sense it has intentionality.” (1992, p.130). In *Intentionality* (1983) and *The Rediscovery of Mind* (1992), he argues that for an organism to have intentionality it needs to have a conscious state, and conversely, most (though not all) consciousness is intentional or has the potential to become intentional. Postulating a conscious state as a necessary condition for intentionality as such eliminates any intentional causality that is implicitly assumed – i.e., “as-if intentionality” (p.78) – within a non-mental process, or between non-mental (e.g., physiological) and mental processes. This claim is based on the notion that an intentional state is identified by an organism’s rule-following behavior and that it essentially assumes *normative values* such as “truth and falsity, success and failure, consistency and inconsistency, rationality, illusion, and conditions of satisfaction,” (Searle, 1992, p.238). Within Searle’s argument these normative properties are absent in non-mental phenomena including physiological processes.

Searle’s argument culminates in his criticism of the conventional intellectual paradigm so prevalent in most cognitive science and “common-sense psychology” (Morton, 1980; Bogdan, 1991), in which any behavior of an organism is attributed to the enactment of some fundamental cognitive rules, i.e., “deep unconscious rules”(p.241), presumed to be built in the mind-brain mechanism as an *a priori* condition. Examples used include such things as computational rules, functionalistic causality, and Chomsky’s famous theory of Universal Grammar postulated as a basic condition for human cognition.
One basic tenet in Searle’s criticism of the conventional cognitive paradigm is his disagreement with the attribution of an inferred meaning, i.e., as-if intentionality, to all human behaviors and their relationships with the corresponding physiological processes. His alternative account of the mind-body or mind-brain relation in approaching conscious phenomena and intentional states is that of causal reduction, but not ontological reduction: that is, mental phenomena are necessarily mediated by the physiological processes in the brain (mechanical causality); but the ontological properties of mental phenomena (e.g., vision, pain, or thoughts and feelings) as the functions resulting from the physiological process, cannot be found in the brain. This speaks to the connection principle that focuses on the emerging patterns of correlations between physiological (non-intentional causal) and mental (intentional causal) processes without reducing their teleological meanings to a pretentiously assumed set of fundamental laws.

The significance of Searle’s theory of mind-body relation, specifically with regard to intentionality, lies in bringing the consciousness phenomena that had been previously regarded mainly in an epistemic sense into a realm of scientific study. By doing so, it provides us with a conceptual paradigm by which phenomena of unknown minds including those of both the ordinary and the non-ordinary, can be approached without being reduced to events supervening on some inferred basic conditions. Most importantly, it leaves an open potential for new discoveries about the mind.

Bolton and Hill, in their essay *Mind, Meaning and Mental Disorder* (1996), discuss in depth the topics involved in intentionality, specifically those of mental disorders. The authors’ criteria for conditions of intentionality are similar to those
proposed by Searle in that they include properties related to object-directedness and
normative features such as rules and rule-following, goals and purposes, and adaptive
or regulatory behavior. With regard to normative features in particular, the authors
clearly express their post-empirical stance by emphasizing the notion that
intentionality emerges in one's active engagement with his or her surroundings. This
is antithetical to a traditional empirical view in that in the latter an organism's rule
following behavior is typically seen as the phenomena merely supervening based
upon an a priori set of mental laws mediated by the brain: thus adding to Searle's
criticism imposed upon the major trend of empiricism (Searle, 1992, pp.71-72). The
post-empirical perspective emphasized in Bolton and Hill's essay can be traced back
to Wittgenstein's theory of meaning as use in activity which had been first put
forward in his treaties Tractatus (1921). The connection between meaning and
behavior postulated as so is also related to the concept of cognition (representation)
grounded in action (Clark, 1999; Iacoboni; 2000; Klin et al., 2003; Varela et al.,
1991), which was recently recognized in a branch of cognitive neuroscience
proposing a view of the "enactive mind." (Klin et al., 2003).

Meanwhile, Bolton and Hill express a major disagreement with Searle's
distinction between intentional and non-intentional states in light of the mental and
the non-mental processes in general. The disagreement is centered on their
recognition of an "information" component in intentionality (1996, p.222). The
authors argue that a state of affairs, without an ability to encode what it comes in
contact with, cannot become intentional. This is because it is only via such an
encoding ability, i.e., information processing, that an organism or a state of affairs can
be directed at an object, formulate and follow a certain set of rules, and regulate its actions. A non-intentional state is distinguished from the intentional in that a state of affairs, without such an information processing feature, follows a universal law and can be predicted by physical equations. In this regard according to the authors, the processes occurring in a biological realm are necessarily intentional – They explain that biological processes as intentional events involve special apparatuses, which the authors call “specialist receptors”, that translate non-intentional physicochemical processes into a certain kind of “signals” that serve to regulate life processes (1996, pp.224). It is noteworthy that an acknowledgement of this kind calls for a view of the mind-body connection that should be different from the one proposed by Searle; that is, a connection between the mental and the physiological processes formerly viewed in terms of intentional and non-intentional interactions are now viewed in terms of intentional-intentional interactions.

A major contribution made possible by the latter view is a concept of intentionality in mental disorders (Bolton & Hill, 1996, pp.267-333). It states that there may be occasions when more than one intentional state exists in a mind and they are competing with each other, a situation in which one intentional state would inevitably have to be compromised in favor of another. This is a view distinct from naturalism in that in the latter mental disorders are conceived as non-intentional mental states in which the order is broken due to non-intentional causes (e.g., physiological deficits) and consequently intentionality is “disrupted” or “run[s] out” (Dennet, 1987, pp.287-322).
Bolton and Hill share with the naturalistic view recognizing that in the case of mental disorders, an intentional stance that applies to ordinary minds should be abandoned. However, their alternative solution is not merely to retreat to a deficit (non-intentional-physiological) account, but to attempt to discover a different intentionality in a mind mediated by a different brain. That is, instead of the kind of intentionality assumed in naturalism, i.e., the ordinary, adaptive-functionalistic intentionality, the possible existence of other intentionalities mediated by other minds and brains is proposed. In this way a potential conceptual framework is provided for furthering of insight into intentionality in mental disorders.

The idea that the mind is caused by the brain and that, nevertheless, the two have ontological properties of their own that are mutually incompatible can be perhaps most concisely expressed by the notion of “mind-body complementarity” (Smythies, 1999), a view that is deeply shared in both modern theoretical physics and depth psychology. Werner Heisenberg, a founder of quantum physics in the last century, elaborated on the mind-brain relationship in his philosophical essay Physics and Philosophy (1958). In essence his view can be described as a monistic conception of the mind-brain relationship supplemented by the concept of “complementarity” (Heisenberg, 1958, p.106). The concept of “complementarity” was originally put forward based on a suggestion by Niels Bohr for the need to describe certain dual functional properties of the same physical entity (i.e., an electron as a particle and a wave at the same time). Taking this further, Heisenberg suggested that this concept be applied to phenomena that are carried out in the forms of physicochemical processes, but that cannot be explained by the mere concepts of physics and chemistry alone. Typical examples would be events
pertaining to an organic realm of phenomena such as biological or psychological processes.

In reflecting on the phenomenal events, including those concerning the mind-body connection, as non-definitive (i.e., the principle of uncertainty or indeterminacy), Heisenberg unavoidably addresses the issue of matter and soul, which was elaborated by the concept “the unity of matter” (1958, pp.147-176), that “all the elementary particles are made of the same substances, which we may call energy or universal matter; they are just different forms in which matter can appear” (p.160). The concept of unity of matter proposes that a natural phenomenon appears in constantly emerging forms of its constituent events (e.g., emergence of elements and their interactions) rather than in discrete and definite referents.

Heisenberg’s perspective of soul-matter relation, and more specifically, mind-body relation can be traced far back to the Aristotelian concept of ‘potentia’, a potentiality, the originally formless matter that “passes over into actuality by means of the form” (Heisenberg, 1958, p.148). According to the Aristotelian account, the structure of matter as phenomenal appearance of the universal is regarded as that which the “soul relates as the form” (Eijk, 2000, p.59). Aristotle’s and Heisenberg’s accounts on soul-matter relation may have a fundamental difference in their logical approach: the former is based on the assumption of a fundamentally governing teleology underlying all realms of phenomena, that is, a belief that phenomena evolve in service of a certain set of purposes, whereas the latter is characterized by its effort to mediate between the causal reductionism of modern science and the habit of teleological reasoning deeply embedded in human knowledge-seeking. Nonetheless, the two theories converge on the
acknowledgement of non-definitiveness involved in the connection between the physical (matter) and the metaphysical (soul), thus support the conceptual formulation of this study, which is geared toward exploring a mind-body relationship that may be unique in the context of what has been assumed in common-sense psychology.

In the area of in-depth psychology, the mind-body view expressed in modern physics is substantially shared by Carl G. Jung (1960a, 1960b). In illuminating the nature of the psyche (1960a, pp.129-234), Jung elaborates on the "collective (universal) unconscious" (pp.133-134) that goes beyond the personal conscious and unconscious. According to Jung, the collective unconscious is a deeper layer of the psyche which is largely unknown, thus "autonomous" and "irrepresentable" (p.213). This addresses the unknown-ness of the psyche. Similar to Heisenberg's universal matter, the collective unconscious is shapeless or invisible and can only be revealed through the emerging forms that comprise the phenomena, i.e., the "formative principles" of the phenomena (p.203). Jung's concept of the formative principles culminates in the notion of a psyche-matter relation: He proposes that archetypes of the psychological realm ("the inborn forms of intuition") (p.133) and instincts of the biological realm ("the unconscious patterns of behavior") (pp.200-201) are correlated and together comprise the collective unconscious. He adds that "the archetypes [on the psychological level] are simply the forms which the instincts [on the biological and the behavioral levels] assume" (p.157).

The profound parallelism between depth psychology and modern theoretical physics is found most importantly in Carl Jung's extensive dialogues with one of the important contributors to quantum physics in its developing stages, Wolfgang Pauli. The two great thinkers' quests shared a concern with the relationship between mind and
matter. They eventually published a joint book, *The Interpretations of Nature and the Psyche* (1955), to elaborate on their ideas. The basic assumptions in their deeply shared thoughts on the mind-body relation can be summarized as follows: first, all mental and physical phenomena are complementary aspects of the same, transcendental (spaceless and timeless) unity; second, such a unitary entity is expressed through archetypal symbols which are basically forms or patterns of the emerging reality; third, archetypes in this sense are *ordering factors* for reality (both mental and physical phenomena); and fourth, the mental and the physical realms are interconnected, thereby giving rise to a dynamic, rather than static, relationship between archetypal and phenomenal dimensions.

In elaborating on the mind-brain problem inherent in the scientific studies of consciousness, Smythies (1999, 2003) expresses thoughts that are in line with the idea of mind-body complementarity. He argues that the ontology of mental phenomena is as important as their epistemology, and their physical or physiological phenomena. In criticizing the Cartesian distinction between the *res extensa* (physical domain) and *res cogitans* (mental domain), Smythies purports that mental entities are *extended* in physical space (e.g., visual or somatic sensations). (1999, 2003). In his article titled *Time, Space, and Consciousness* (2003), Smythies suggests that a conscious state may have its own system of spatiotemporally organized events (e.g., sensations and images) that is independent of – though related with – the spatiotemporal organization of physical reality. Furthermore, he points to the distinction between the ontology and the epistemology of a conscious state by describing clinical occasions where ontological and epistemological properties of a person's conscious state appear independently of each other: Included in the examples
are ‘phantom limb symptom’, in which a person is amputated of one or more of his or her limbs but has a vivid feeling of that (those) limb(s) as still part of his or her body; or ‘Anton’s syndrome’, in which one is blind but unaware of his or her blindness. In both cases, the person’s physical reality does not exist yet his or her mental reality. The opposite examples are shown in the case of ‘blindsight’, where one’s visual sensory processing is intact yet the person does not recognize his or her vision, or of ‘asomatognosia’, where a person denies the ownership of a part of his or her body. In these latter cases, contrary to the former, the person’s physical reality exists (in a certain manner), yet his mental reality does not exist (or does exist in a manner different than the manner the physical reality does). (p.48-51).

Having previously proposed a causal relation between a consciousness and its brain (1953), Smythies adds that “what we experience [however] are not the causal relations, but the end results of the causal relations, namely our own sensations, images, thoughts.”(2003, p.52) By this, he affirms that the ontology of a conscious state can be accessed through probing these “end results” directly, while their physiological counterparts, i.e., the processes in the brain, may provide causal explanations for it. This idea highlights the need for the proper study of consciousness, i.e., the need for an integration of phenomenology with neuro-cognitive investigations.

Substantiation of the Study: What is the Problem?

Embedded in the study are the problems related to a mind-brain connection, ways of understanding one’s mind and behavior, and the significance they have for
utilizing music making process as means of therapy in working with autistic individuals. These are all profoundly philosophical questions as well as practical concerns. A closer examination of the nature of the problem will help the readers have a better grasp of significance of the research and how it is substantiated.

Inherent in knowledge seeking of any kind concerned with mind phenomena is its relationship with its counterpart, i.e., the brain, whether one choose to take it into consideration or not. What is the nature of the mind-brain relationship? Is the mind an entity consequent from the brain? Or conversely, are the physiological processes in the brain mere reflections of the mind? Do the properties of the brain (e.g., neurons, transmitters, synapses, and neural potentiations/circuitries, etc.) reflect anything about those pertaining to mind’s experiences (e.g., sensations, perceptions, feelings, memories, thoughts, and images, etc.)? Can the two supposedly distinct kinds of properties be approximated?

Also lying in the studies of the mind in general is the issue of understanding someone’s subjective experiences and meanings, namely a philosopher’s concept of “qualia” (Feinberg, 2001; Smythies, 1999). A quale is described as “what it is like to have a certain experience” (Smythies, 1999, p.168). How one (the knower) can have an access to other (the known)’s qualia is a question intrinsic to all studies concerned with a conscious state.

The problems related to a mind-brain connection and qualia are of imperative concerns for music therapists seeking to further understand their autistic clients for the following two reasons: first, autism originates in the brain and results in a distinctive cognitive style and a distinctive form of mind along with a certain
set of behavior in the autistic persons (Baron-Cohen, 1989; Frith 2003; Happé, 1997; Tager-Flusberg & Joseph, 2002); second, the depth of ambiguity involved in the treatment process is profound for the lack of applicability of common psychological rules. Set aside the long-standing philosophical debates on the mind-brain relationship and qualia, the question of intentionality in the minds of autism awaits some practical solutions for finding an approach to the needs raised in the practice of music therapy with autistic individuals.

Music therapists working with autistic individuals are faced with concerns involving dual aspects of treatment, i.e., meanings (psychological aspects) and the mechanism (cognitive and neurological aspects), concerns that together address the uniqueness of the autistic clients’ mind-directedness. So far, however, efforts to achieve a fuller spectrum of knowledge of this phenomena has been scarce in the field. Consequently, the neuro-cognitive aspects of autism have not been rigorously incorporated into the scope of understanding and practice of music therapists.

While both music therapy clinical documents and current insights generated from neuro-cognitive investigations seem to acknowledge the uniqueness of autistic minds, the gap in knowledge between the two areas remains profound. Until recent years autism research in cognitive psychology and neuroscience has been primarily guided by the cognitive deficit account for autism and attempts to discover the physiological causes for the deficit (Siegel, 1996). This is fundamentally in line with the major trend of empirical science, which holds that the existence of mental facts rests entirely on behavioral evidence, and that, conversely, behavior (as the window to mental facts) arises only to meet the inbuilt cognitive rules carried out through
processes in the brain (Bolton and Hill, 1996; Searle, 1983, 1992). The assumption of a priori mental rules assumed as the basis of behavior corresponds to the belief in general laws and mechanism underlying all human behavior, thus leading to causal determinism.

A less deterministic view is given to a recent notion of autism, which refers to it as a cognitive style or other mind as opposed to a cognitive deficit. Underlying this view is an assumption for possible existences of different sets of mental rules. Nevertheless, the other mind notion maintains the mentalist’s stance at its root, in which a state of mind and behavior are deemed to be derivatives of a given set of mental rules that are ‘hardwired’ in the brain. The philosophical stance implicated in this empirical cognitive approach is in contrast with the one largely underlying music therapy practices in which acknowledgement of individual experience and its uniqueness is pivotal to the work.

Recently in cognitive neuroscience, the recognition of “from action to cognition”, i.e., “the enactive mind” (Klin et al., 2003) has arisen to offer new insight into the mind-body relationship embodied in experience. Notwithstanding, the language used for research and theory in the so called “embodied cognitive science” (Klin et al., 2003, p.345) remains exclusive to physiology and cognitive psychology, thus still appearing irrelevant to or irreconcilable with the interest of music psychotherapists.

In the client-centered music therapy practices, the treatment process evolves mainly around the client’s experience as conceived by the therapist through her intersubjective encounter with the client (Aigen, 1998). Accordingly, the
questions of what constitutes intentionality in an autistic client and how to approach it depend exclusively on the therapist's subjectively intuited knowledge. While this sort of knowledge can enhance the depth of personal understanding, it raises certain practical and conceptual issues calling for further reflections. Clinically, it leaves the cognitive and physiological issues in autism almost entirely out of the therapeutic scope, which potentially leads to limiting clinical insights and applications. Conceptually, a knowledge-seeking of this kind can be less rigorous in that it generates accounts that are only valid with regard to the knower's personal stance while completely divorced from considerations of the mechanism that may be inherent to the phenomena sought to be understood.

In summary, the gap in knowledge between client- and music-centered music therapy and neuro-cognitive studies in approaching the minds of autistic persons seems to be attributed to at least the two major differences between the approaches: first, the therapist's or the researcher's epistemological stance in relation to the mental phenomena, and second, the resulting, mutually non-translating languages or concepts used in the respective areas, i.e., between the client- and music-centered music therapy approach and an approach based on the neuro-cognitive findings. Currently in the field of music therapy there has not been an investigation addressing the dichotomy of approaches and the consequent gap in knowledge. Nor has there been an attempt to find a method to achieve a synthesis of knowledge in the respective fields that so far have not been reconciled.

By investigating the intentionality of autistic clients in light of the patterns of their object-directedness emerging through musical action, this study aims to establish
a connection between the meanings and the neuro-cognitive mechanisms involved in their minds and behavior. The research is significant in two major aspects: On the one hand, it is an attempt to explore a way to incorporate insights from neuro-cognitive autism research into the practice of music psychotherapy, and thereby enhance the field’s current understanding of meanings in autistic clients; on the other hand, it seeks to establish a space where the philosophical concept of intentionality will be applied to the clinical context in order to better meet clients’ needs.

Research Space

The research space defines the comprehensive context of the study, including the identification of the problem, the scope of investigation, assumptions made and approaches taken (Selinke, 2004, A Class Lecture). The research focuses on examining the intentionality of autistic individuals while they have been engaged in improvisational music-making in the client-centered individual music therapy settings. Before proceeding to the next steps of documentation, I will reiterate in summary the assumptions and scope of the study in order to help the readers have a clearer idea of the research space.

Intentionality

While the term intentionality may connote concepts including conscious intentions, meanings, purposefulness, or directed-awareness, intentionality as defined for this study is based on the fundamental notion of object-directedness identified in phenomenology. Intentionality as object-directedness encompasses one’s dispositions,
inclinations, attentions, motivations, tendencies, spontaneous actions and interactions whether they be conscious or unconscious, intended or not intended, aware or unaware. In this way, an observer is provided with an avenue through which he or she can more candidly observe intentionality or the directedness of another person's mind as it is realized through his behavior.

Another component of intentionality as it is understood in this study is the concept of *regularities arising in action*. This concept is rooted in the assumption that intentionality or meaning arises from the reality as perceived in mind during engagement with one's surroundings, and that this perceived reality is conveyed through "the ordering of particulars into classes" (Bolton & Hill, 1996, p.23). In other words, by observing the patterns of a person's directed behavior emerging over time while the person has been engaged within his or her environment, one can begin to have access to another person's mind's directedness without imposing subjectively drawn meanings of her own.

Also included in the concept of *regularities arising in action* is the idea that it is essentially one's *spontaneous participation* in his or environment, i.e. one's *action*, that enables the process of ordering. Intentionality in this regard is linked to the idea of *meaning in action* (Bolton & Hill, 1996; Jackendoff, 2002; de Jong, & Mele, 1991; Pettit, 1993; Searle, 1983, 1992; Vedeler, 1991; Wittgenstein, 1921). This is also related to a recent movement in cognitive neuroscience that acknowledges the properties of the mind that are enacted through interactions with one's environment, i.e., the "enactive mind" (Klin et al., 2003, p.345).
Autism as a Cognitive Style

One premise of this study is the recognition of autism as a “cognitive style” (Happé, 1999) or “other mind” (Baron-Cohen et al., 1993; Bolton & Hill, 1996; Fletcher et al., 1995; Frith 2003) found in the cognitive and neurological studies of autism. This recognition involves acknowledging that the mind of autism is a mind that is unknown, for which applications of basic psychological rules, concepts, and dynamics commonly pertaining to non-autistic individuals would not be suitable. The guiding principles for the motivations, drawn-ness, or directedness of such a mind are assumed to be not known and questioned at their most fundamental level. This requires withholding from all determining tasks involving labeling, interpretations, symbolizations, drawing causal relations between events, or classifications that are subservient to the most commonly assumed psychological mechanisms centered on the concept of self and interpersonal relationships. A more suitable approach to the mind that is regarded as unknown in its essence calls instead for an adherence to descriptive observations and noting of the recurring patterns of behavior. The latter helps one to distill a relationship between the observed person’s internal and external worlds in a more unbiased and authentic manner.

A Mind-Brain Connection

This study partly stems from recognizing the limitation of knowledge seeking in the field of music therapy that is often biased towards the emotional and interpersonal contents of interactions, tending towards relying on personally
intuited meaning-making processes in its approach to the minds of autism.
Extensive research has convinced me that this is a problem that is ultimately
attributed to the view of mind-brain relationship.

The mind-brain relationship as construed in the study is one that assumes
the identicalness of the two aspects that arise with their respectively disparate
properties, which is found in the areas of Analytical Psychology (Jung, 1960),
quantum theories of physics and consciousness (Heisenberg, 1958; Jung and Pauli;
1955), cognitive neuroscience and neurophilosophy (Bolton and Hill, 1996;
Damasio, 1994, 1999; LeDoux, 1996, 2002; Llinás, 2001), and studies of
Commonly assumed in their theories of the mind-brain relationship is that the mind
and the brain as identical phenomena with different properties emerge together
without one being derivative of the other, and that the two – both as the non-
determinable - can be approached together only through drawing the patterns of
their emergences.

Related to the view of the mind-brain relation is one of identity is the notion
of different minds arising in different brains (Boton & Hill, 1996; Frith, 2003; Searle,
1983, 1992). This allows one to bypass the assumption of a priori mental rules and
a presumptuous labeling of the normal or the abnormal while allowing deeper levels
of insight to emerge.

A mind-brain connection posited as such is of a kind that is suited for the
purpose of the research, which is to integrate the meanings and the mechanisms of
the distinctive minds of the autistic clients during their musical experiences. By
describing the emerging patterns of behavior of the autistic clients during music making, one is allowed to develop insight into properties that pertain both to their minds and to their brains, as well as to the connection between the two realms – i.e., how the clients’ minds’ processes are reflected in those of their brains and vice versa. While direct examination of the clients’ brain processes was not included in the scope of the study, it was hoped that the findings of the study would suggest implications for further research in the areas of client-centered music therapy and psychology and cognitive neuroscience respectively.

Client-Centered and Music-Centered Individual Music Therapy

The context of this study is limited to the individual music therapy setting, in which the core means of therapy is a client’s unique experience of engaging in spontaneous music making facilitated within his or her relationship with the music therapist. The basic tenet of the approach is that one’s musical experience encompasses a psychological realm that cannot be adequately grasped through verbal process or interpretation (Aigen, 1999). It is the context that originally gave rise to the study, where I experienced highly increased ambiguity and intuited a quality of unique directedness in my clients with autism as I observed and interacted with them. At the same time, client-centered free improvisational music making provides a context relevant for the study as it maximizes spontaneity, encourages expression of the client’s inherent tendencies and minimizes imposed structures/directions.

Though this may be true of both individual and group therapy settings, I deliberately chose to exclude the group therapy from the scope of the study in order to
take a more in-depth look at each individual client and their interactions with the therapist first. As such, the intentionality of the autistic clients during their music making is allowed to emerge in its most authentic sense.

Research Questions

The inception of this study stemmed from my clinical experiences with autistic clients and corresponding personal reflections on the mind in general. Music therapy literature that deals with autistic clients, neurological and cognitive studies of autism and philosophical reflections on consciousness and knowing all contributed to shaping my thoughts which led to the main research question:

What characterizes the intentionality of autistic individuals while they are engaged in improvisational music making?

Some of my sub-questions for the cross-field examinations were:

1. How, or in what terms, is the autistic mind explained among different approaches encompassing the experimental and the clinical aspects of various modalities? Additionally, what are the conceptual issues inherent to each account?

2. What is indicated consistently and inconsistently about object-directedness in the minds of autism in each account?

3. How can different terms of accounts from different approaches and fields be translated to generalized terms of accounts on the intentionality of the minds of autistic individuals?

Some of my sub-questions for the clinical investigation were:
1. What are the properties of musical and non-musical events or interactions that the autistic clients are directed towards, and how are they expressed?

2. Are there regularities or consistent patterns identified in the client's object-directedness, and, if so, how do they develop over time?

3. If there is any noticeable pattern of object-directedness in the clients' behavior, what does it signify in terms of their minds' directedness, that is, their intentionality or meaning?

As the research approached the final stage of synthesis, the investigation as a whole was guided by two substantial questions:

1. What is the role of the "self" as a coherent subjective entity in the mind of an autistic individual as he or she engages in music-making? In particular, how does this "self" function to reflect his or her experiences?

2. What is (are) the motivational basis (bases) upon which the intentionality of autistic individuals arises to direct them towards certain experiences in certain manners during the music making?

Underlying these questions was, of course, a search for implications in the research findings for client-centered and music-centered music therapy with autistic individuals. The question remained of how music therapists can better work towards helping these people realize their maximum potentials in the way unique to their personalities.
CHAPTER II
DISCUSSION OF RESEARCH METHOD

Overview of Methodology

The study was designed to illuminate the intentionality of autistic individuals during their musical engagements by integrating findings from a clinical investigation of music therapy sessions conducted with selected autistic clients with findings from cross-field literature on autistic minds. Critical to the methodology was that it would allow a synthesis of the findings from both of these areas. Given that the problem raised in the study is concerned with understanding conscious states from a perspective of mind-brain connection, development of the research methodology required sound establishments for both the ontological and epistemological assumptions (areas discussed more below) in approaching the mind-brain phenomena. Also, the chosen methodology had to be such that it allowed for the research findings to provide implications for music therapy with autistic individuals which are relevant both to the psychological meanings (i.e., the emotional, the motivational and the relational) and the functional mechanisms (i.e., neurological and cognitive properties) involved in the phenomena.

Direct neurological investigation (e.g., scanning the brains of the clients) was not a part of the research, nor has it been my interest to reach definitive conclusions as to the cognitive aspect of intentionality involved in autistic individuals’ musical experiences. Rather, the methodology chosen served as a
means to construe a link between each client's unique personality emerging through his or her musical experiences and the cognitive mechanisms characteristic to their autistic minds. This was achieved by integrating qualitative observations and descriptions of individual case materials with insights so far accumulated from the scientific investigations. Conceptually, this required me as the researcher to interplay between a non-interpretive and an interpretive mode of thinking until the research reached the final stage of synthesis.

Ontological and Epistemological Assumptions

Denzin and Lincoln emphasize that a paradigm for construction of knowledge encompasses three metaphysical aspects: ontology, epistemology, and methodology. (1998, p.185). According to these authors, ontology is concerned with questions dealing with the nature of reality and existence, such as “What is the form and nature of reality and therefore, what is there that can be known about it? For example, if a ‘real’ world is assumed, then what can be known about it is ‘how things really are’ and ‘how things really work.” (1998, p.201).

Epistemology is concerned with questions dealing with the nature of the knower’s knowing, such as “What is the nature of the relationship between the knower or would-be knower and what can be known? The answer that can be given to these questions is constrained to the answer already given to the ontological questions, that is, not just any relationship can now be postulated.” (p.201)

This study is formulated in agreement with the notion of intentionality as object-directedness and as the mind’s regularities arising in action, i.e., the
enactive mind. It also recognizes that both the mind and action are mediated by the processes in the brain. Included in this acknowledgement is that differences in the brain structures and processes mediate different behavior, giving rise to distinctive intentionality.

Ontologically, the mind-brain connection as postulated in the study is that of causal relation, which recognizes that the mind as the mental phenomena is mediated by the brain as the physiological phenomena. At the same time, it acknowledges that the affairs of the mind and the brain assume phenomenal properties that are disparate of each other – that is, the former arising in the mental experiences such as thoughts, feelings, beliefs, images in the mind, etc., and the latter in the physiological events in the brain such as neural activations, connections and mappings innervating sensory-motor processes and emotive-cognitive processes. The research was conducted based on the assumption that a person’s intentionality can be identified not only in the epistemic form of intersubjectivity between the knower and the known but also in its ontological state; and that the ontology of one’s intentional states can be accessed by examining the patterns of regularities and orderings arising through his or her actions – in the manner expressed by Searle (1983, 1992), Bolton and Hill (1996), and Klin and her colleagues (2003). Also assumed in this is that the patterns of behavior convey implications for the patterns of the cognitive processes of the person thus those of the neurological processes occurring in his or her brain.

These ontological assumptions about intentionality and the mind-brain relationship have direct relevance to the epistemological stance taken in the
clinical investigation during the study. Lincon and Guba (1985) state that “there is a belief that the very act of observation influences what is seen, and so the research interaction should take place with the entity-in-context for fullest understanding.” (p.39). Agreeing to this statement, I acknowledge that the phenomena under the clinical investigation were entities delivered through my observation. This, however, is different from saying that the regularities or patterns of their directed actions drawn from the observation were the results of an application of my own set of psychological rules to their behavior. During the entirety of the clinical investigation, I assumed an “empathetic” stance to “agree to” and “follow” what each client was doing during each moment (Bolton & Hill, 1996, p.162), while ensuring that no extrinsic law – including my personal one – was imposed to the observed phenomena.

**Cross-Field Examination on the Minds of Autism**

Since the inception of the study, I began gathering information on the minds of autism from various fields such as music therapy, cognitive psychology, neuroscience, and the philosophy of science, specifically with regard to the studies of consciousness. The primary method of the cross-field investigation was literature research. In order to develop a fuller range of insights into the implications and issues involved in intentionality in autistic individuals, I examined a wide spectrum of literature: included were behavioral experiments, studies using neuroimaging and neurophysiological measuring techniques, clinical case material using multiple approaches (including music psychotherapy,
philosophical reflections, and biographical and autobiographical documents on autistic individuals). Accordingly, the information gathered from different sources was composed of different forms of explanation encompassing subjective narratives of experiences, objective behavioral descriptions, psychological interpretations, cognitive-neurological accounts, and meta-views of consciousness. The main task for the cross-field examination was therefore to bring differing terms of accounts together into one relevant research focus: the intentionality of autistic individuals. More specifically, the aim was to discover consistencies and inconsistencies about the directedness of autistic individuals' minds across different fields and disciplines.

Clinical Investigation

Non-interpretive Descriptions

With the ontological and epistemological assumptions set in place, it was important for the research approach to be suited to describing the patterns or regularities of the clients' behavior arising in a naturalistic setting. The method of the clinical investigation was an eclectic application of the qualitative research processes described by Lincoln and Guba (1985), Strauss and Corbin (1990), and Denzin and Lincoln (1998). The shared conditions of a qualitative approach of inquiry proposed by these authors are 1) the use of naturalistic setting, 2) a human instrument as the means of gathering and analyzing the data, 3) tacit knowledge as valued information, 4) case reporting, and 5) a comprehensive gathering of

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information from many sources and a recursive handling of data (Aigen, 1995; Lincoln & Guba, 1985; Strauss & Corbin, 1990).

Utilizing a qualitative method in analyzing the clinical data implied an adherence to non-interpretive descriptions. This means that, during the clinical investigation, I tried to avoid interpretive reasoning of any kind – whether in-depth psychological or cognitive-mechanistic – that would be extrinsic to the observed behavior. Instead, my descriptions remained authentic to the intrinsic properties of the clients’ behavior, such as the patterns of regularities arising in their actions while engaging with music and the therapist. This specifically manifested in recurrent themes or idioms in words, music, movement, moods and qualities of energy.

The adherence to non-interpretive descriptions as the principle during the clinical investigation was not merely to conform to the tradition of a naturalistic inquiry. Rather, it was to allow for the research to tap into the fundamental issues identified at the onset of the study, that is, the issues of the other mind and the mind-brain relationship inherent in the problem of the intentionality of autistic individuals. In light of all of this, I feel it necessary to explore further what is meant by the non-interpretive method of description and its significance for the study.

Webster’s Dictionary (1989) defines ‘interpretation’ as follows: 1) to explain or tell the meaning of, present in understandable terms; 2) to conceive in light of individual belief, judgment, or circumstance – CONSTRUE; and 3) to represent by means of art, bring to realization by performance, to act as an interpreter between speakers of different languages (Webster’s Ninth New
Collegiate Dictionary, 1989). An essential component of interpretation found in all these definitions is to re-present meaning of an original state or property by means of another term of representation. Typically involved in psychological interpretations of behavior, for instance, is to read the behavior as a symbol of some other property pertaining to a deeper realm of the mind (e.g., a slip of the tongue as an unconscious wish).

In approaching the clients’ behavior in a non-interpretive manner, I endeavored to constrain my observational and descriptive activity to a direct transfer of the actual phenomena into a verbal form of presentation. This demanded that I minimize the conceptual activities related to interpretation such as reading and determining one form of manifestation in terms of another, reducing the observed phenomena to a representation or a symbol of something else, or conceiving meanings or assuming mechanisms in terms of my own belief system. Within the capacity of my conscious awareness, I constantly made sure that my conceptual process in observing and describing the clients’ behavior was one that was authentic to the properties intrinsic to the clients’ actions, and that was not guided by the value scale of normalcy or anomaly of a mind system. The main task was to purposefully abandon psychological or cognitive rules assumed in so called “common-sense psychology”, that is, “the lore about people that packages our common concepts of belief, memory, desire, intention, and so on.” (Morton, 1980, p.1).

Reflections on common-sense psychology – also referred to as the psychology of “common mind” (Pettit, 1993) or “ordinary mind” (Bolton and Hill,
1996) – from varied perspectives seem to imply that the normal development of the human psychological system emerges in part towards realizing one’s life within the context of collective living with others. Pivotal to this is the function of the self as the psychological subject of a person in socially relating with others. (Baier, 1997; Bolton and Hill, 1996; Bogdan, 1991; Churchiland, 1991; Mead, 1962; Morton, 1980; Pettit, 1993; Siegel, 1999, 2001).

This was important information to obtain before the research progressed further, as it pointed towards my own common-sense-based assumptions that might have biased my observational process without being otherwise detected. An awareness of this common-sense psychology allowed me to withhold the assumption that lack of self-awareness and social deficiency are what determine a person to be autistic. This led me to take an approach of questioning the nature of self and its relationship with the surroundings – i.e., the object-directedness of the clients’ minds’ from an undetermined stance.

The value of choosing a descriptive approach over an interpretative approach for the study is that it allowed for the unknown nature of the autistic behavior of the selected clients to be illuminated without being interpreted or explained in common-sense psychological terms. Secondly, the patterns of behavior identified in such a manner can have implications for the minds of the clients in both their meanings and cognitive mechanisms.
Source of Data

I chose to use archived videotapes of selected music therapy sessions with autistic clients as the main source of data. This was in an attempt to secure a research space where I could observe the clients engaging in the act of music-making with the therapist in natural settings without altering the phenomena for the purpose of the research.

The clients in the archived music therapy sessions were found at the Nordoff-Robbins Music Therapy Center at New York University. This particular facility was suited to providing the appropriate research context for a number of reasons. First, the Nordoff-Robbins music therapy practices are characterized by their emphasis on a client-centered and music-centered approach. Second, all therapists at this facility are highly trained and qualified to utilize client-centered musical improvisation processes as their main means of therapy in working with various client groups including those with autism. Third, by policy, they receive pre-consent from all their clients or their guardians prior to the onset of the therapy, including that all sessions be recorded and archived in the form of audio or video tapes to be reviewed for any research or educational purpose. Fourth, the spectrum of clientele groups is wide, for they have maintained the policy of pre-consent and archiving since their inception in 1984.
Finding Clients of Archived Sessions

Identifying Potential Research Clients

Initial contact was made through a Letter of Recruitment (Appendix A) sent out to the Nordoff-Robbins Music Therapy Center at New York University. The Letter contained information about the investigator, the proposed research, and the preliminary criteria for potential research clients and how to contact the researcher upon their consent to participate. Through this Letter, I requested that the therapists recommended a group of clients with autism whom they had formerly worked with, who would meet the criteria for potential research clients.

The preliminary criteria for the potential clients were as follows: 1) clients must have been evaluated as having autism through formal diagnostic examinations and/or clinical assessments by qualified professionals. Individuals with otherwise known developmental, neurological, and/or psychiatric problems will be ruled out in order to minimize obscurity involved in diagnostic classifications; 2) clients must have been 4 years old or older at the time of the onset of therapy so ambiguities involved in the early developmental processes will be minimized; 3) clients’ gender, ethnicity, and levels of their cognitive, verbal and motor-physical functions may vary in order for the investigation to include a group of clients that would reflect the wide spectrum of autism; 4) clients must have shown interest and motivation to participate in therapeutic musical improvisations as demonstrated by increases in their spontaneous engagements and positive emotional responses over the progress of therapy; and 5) the therapy process for the client had naturally
undergone without any external influences and been terminated prior to the onset of this research.

The initial potential clients recommended by the therapists at the Center were seven. They were composed of autistic individuals of varied ages, cognitive functioning, and ethnic and educational backgrounds.

Selecting the Clients for the Study

Upon obtaining the recommendations for these seven potential clients, I began a preliminary view of their archived video taped sessions randomly selected from different points of the therapy. For some of the clients, I randomly selected different tapes. For others, the video tapes of compound excerpts previously made for the purpose of case study were available for the preliminary review. I became quickly acquainted with the clients, their abilities, tendencies, and levels of participation in improvisational music making, and came to learn roughly about the degree and the nature of the therapy progress that had evolved over time between them and the therapists. This quasi-random preliminary view helped to further guide me in selecting the clients for the study and to develop some of the rule-out criteria. For example, I decided to exclude the clients of the following cases from the scope of the investigation: 1) clients who were diagnosed with one or more known condition(s) other than autism – including those with severe blindness, seizure disorder, or emotional problems caused by identifiable physical or social distress; and 2) clients whose behavior, despite being identified as autistic, did not appear to fall under the autistic spectrum (for the behavioral characteristics of

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autism recognized in the DSM-IV-TR) These included those who showed a pronounced tendency to seek attention and interpersonal communication based on their awareness of self and others as well as need to be acknowledged by others.

Another concern involved in identifying the clients with autism was related to the distinction between autism and Asperger’s syndrome. Diagnostically, Asperger’s syndrome is distinguished from autism for the individual’s relatively normal acquisition of language and verbal communication skills (DSM-IV-TR). Clinically, a person with an Asperger’s syndrome is marked by his or capability for self-awareness and ability to refer to or verbalize about his or her experiences accordingly (Sacks, 1985). I chose not to have this distinction reflected in the process of selecting the research clients, and this was based on the following reasons: first, the phenomena targeted in this research were ones that encompassed behavior that would fall into an overall realm of “autistic spectrum.” (DSM-IV-TR and the ICD-10); second, the information available for such distinction (i.e., formal diagnosis, test results, and other clinical documents) to be made for this research was limited.

Some of the additional criteria in selecting the research clients were concerned with more practical research concerns, such as the therapist’s availability for the member check, if required, the quality of the visual/audio materials preserved, or the extent of accessibility I would have for the video tapes. For instance, I had to exclude one potential case from the investigation because the therapist had passed away and the sessions were only available through a video format that was not widely used in the United States, limiting my access to the data.
In summary, the study construed as such focused on exploring the nature of intentionality in the minds of autistic individuals in general, and the scope of the research was not further delineated to reflect the concerns related to the subclassifications of autistic spectrum disorder. Of the seven potential clients initially recommended, three clients of the archived sessions were finally selected for the research.

**Collecting and Analyzing Data**

For each client, I selected a number of sessions from three to four different time periods, e.g., the beginning, middle, and final stage of therapy. This was an attempt to reflect the progress of the phenomena in time. The number of the sessions selected for each client varied, ranging from fourteen to twenty one in total, with four to six consecutive or temporally adjacent sessions from a period, depending on the length of the entirety of therapy. As the research continued, more sessions were added to those previously selected or some of those initially chosen were discarded. This process was based upon what kind of information and how much of it was needed until the data for each client began repeating.

I first reviewed the entirety of all selected sessions and transcribed them thoroughly. This process allowed me to develop further guidelines for choosing specific excerpts or sessions to be used for the research data. During this process, I looked for segments or an entirety of a session that demonstrated a range of dynamic qualities in the client's object-directedness while engaged in making music with the therapist. Included in the focused were properties of and changes in the
levels of attention or affection, signs of recognition or expectation, increase of interpersonal interactions or eye contact, and extended engagement without significant distractions in the act of music-making. This way, the approach taken for my sample finding was one that approximated "purposive sampling" as proposed by Lincoln and Guba (1985).

Analysis and collection of data were conducted simultaneously and recursively, the two being guided by each other. From the initial stage of the investigation when I started to view randomly selected sessions, I found myself immersed in the material, constantly reshaping and furthering my research questions and reflections on the topic. Once the excerpts and sessions to be used for the research were finally identified and fully transcribed, the deeper steps of analysis began. I viewed the video tapes and read my transcriptions repeatedly, updating observations, research questions and analysis. For instance, there were times during analysis where I needed to see the music written down so as to delineate the focused moments more clearly and examine them in a more detailed manner. On such occasions, the music wasnotated, along with narrative descriptions of the qualitative components attached to the music (e.g., vocal/instrumental tone qualities, affects and moods, physical movements, underlying contexts, etc). When necessary for a more accurate grasp of the moment, I referred to the therapist's session indexes to add them to the existing data. An inherent part of such a recursive process of handling and analyzing data was to maintain analytic memos registering constantly arising thoughts, feelings, intuitions, and questions. These materials generated at every step of the analysis kept updating the existing data to form the basis for a deeper stage of analysis.
Even deeper steps of analysis consisted of identifying recurrent patterns, idioms, or themes found in each client's actions and relationship with music and the therapist; examining the associative patterns between those constructs; and categorizing and coding them constantly into higher-order constructs until a set of non-repeating and cohesive findings were reached.

The processes of categorizing and coding the data occurred on two different levels: one level was concerned with the within-the-client analysis and the other was concerned with the across-the-clients analysis. For the within-the-client analysis, I created a separate set of documents hierarchically linked to the original transcripts and analytic memos by using the "hyperlink" function of the Microsoft Word program. These hierarchically hyperlinked documents served for me to organize the multiple layers of emerging constructs in a cohesively ordered manner.

The across-the-clients analysis was a process that integrated the themes and patterns found in each client. For this process, I created another set of separate documents, which functioned as charters for different themes or patterns commonly found across the clients. The within-the-client analysis and the across-the-clients analysis were two separate and at the same time interwoven processes, as I continually went back and forth between them.

The entirety of the data collection and analysis was consistently in agreement with the basic assumption of the study, i.e., the intentionality of autistic individuals as that of *other mind arising in action*. Accordingly, it was important for me to privilege the intrinsic properties of the phenomena over any other secondary
references or inferences imposed on them. As stated above, categorizing and coding the
data were achieved mainly in terms of the patterns arising in the client’s actions and
interactions, the qualities of mood and energy accompanying them, or the formal and
qualitative components of the music, rather than symbolic meaning units or cognitive
functional constructs. I tried to avoid causal or teleological reasoning or
interpretation of any sort in favor of describing the clients’ actions and
interactions observed within the music-making context.

One aspect derived from this non-interpretive approach was an emphasis
on the form (i.e., patterns of regularities) contents of behavior rather than its
meaning contents. Accordingly, more important questions were related to the
patterns of occurrence and re-occurrence of the client’s actions rather than what
was meant or represented by such actions. This emphasis was not to deny or
disregard the meaning of the clients’ actions in favor of their formal aspect.
Rather it was an approach purposefully chosen during this stage of clinical
investigation in order to avoid a prematurely reductive interpretation of
phenomena involving largely unknown mind-brain systems.

Adhering to a non-interpretive approach required that I explore and remain
aware of my personal values, assumptions and theoretical perspective previously
established, as well as my reactions and conceptual processes occurring during the
data collection and analysis. Examining my personal inclinations with regard to
the research topic had been started long before the onset of the study, developing
as I began my current doctoral study and went on with the research proposal
processes. This was carried through the examination of my responses during the
study. Maintaining a researcher’s log including analytic memos and a personal research journal served as the basis of my ongoing observation of my self as a researcher and my role in the study.

Throughout the data collection and analysis, I made a conscious effort to remain aware of my reactions and conceptual processes on all levels. I tried to make informed choices as to whether to leave my responses out or incorporate them into this stage of research. For decision-making, I constantly referred to the notion of intentionality as patterns and regularities of object-directedness emerging in action, as well as the “other mind” of autism. Only when my responses were relevant for this focus, did I allow them to be a part of the analysis. Other sorts of personal responses, such as inferences as to purposes or causes for the client’s behavior, were carefully noted and withheld until a later stage of the research when I would begin working towards the final synthesis.

Synthesis of Findings: Interpretation Based on Comparison and Inductive Reasoning

The findings gathered from the clinical investigation were finally integrated and synthesized with the information obtained from the cross-field examination.

The cross-field examination and the clinical investigation progressed simultaneously. However, as previously emphasized, I tried to remain focused on the observed phenomena during the clinical investigation and not bring the externally gathered information into it during the data collection and analysis.
Once the clinical investigation reached a set of findings that were not repeating each other, I then began comparing and synthesizing them with the information from the cross-fields examination. My own theoretical presuppositions and analytic memos previously bracketed out during the clinical research were brought back to be incorporated into this final analysis. I reviewed the findings from the clinical investigation with regard to the common notions found in the literature across the fields as well as my personal reflections developed during the research. This process was substantiated by interpretation of the collected information through comparison and inductive reasoning. The investigation during this process of synthesis was guided by two major concerns: one that addressed to the central principle involving the self and self-knowledge underlying the minds' directedness of autistic individuals, and the other that addressed to the realization of such mind during the musical engagements.

Presentation of the Data and Findings

Because this study focused on the various dimensions of the intentionality of the minds of the autism, I utilized multiple forms of presentation in order to convey its essence.

For the cross-field examination illustrated in Chapter III, the focal tenets of the various accounts availed for the study were first laid out in the manner authentic to the original terms of the accounts. These were then compared and cross-examined with one another to reach a more consistent term of account relevant to the research, which is represented at the end of the Chapter.
In introducing the clients to the readers in Chapter IV, I used short clinical vignettes without adding my own narrative voice in order to convey un-intervened portraits of each individual client as seen in the music therapy setting. With an emphasis on my observing eyes, these vignettes will be presented in double space block quotations in contrast with the single space block quotations of session excerpts used in the later chapters.

Chapters V, VI, and VII served to document the patterns of the clients’ musical behavior that arose in three distinct yet related states of mind, i.e., the states of attunement, emotion, and recognition found in the clients within the research context. The illustrations were organized based upon the properties and patterns that were common across the clients in each state of mind, while at the same time each client’s unique manifestations are pointed out upon the need for further examinations. In presenting the categorical constructs for each state of mind drawn from the cross-the-clients analysis, I used descriptive illustrations and musical vignettes to deliver the intrinsic qualities of the clients’ directed behavior. One aspect emphasized in presenting the clinical material was to describe the regularities or patterns of the clients’ behavior on multiple levels. Given this, I additionally employed formal representations, such as formulas and charts, in order to more clearly delineate the structural and formal properties of the phenomena and convey them to the reader.

Chapter VIII was used to recapitulate and integrate the findings from the Chapters V, VI, and VII and to lay out the essences of what substantiated the clients’ directed minds within the research context. For these processes,
theoretical and personal reflections were employed in service of synthesizing the so far generated findings in light of the research focus.

Chapter IX, the final synthesis and conclusions, serves for the meta-analysis of all information obtained throughout the research. In this chapter, I added back my "value-bound" (Lincoln and Guba, 1984) voice in order for the research results to be illuminated in a term consistent with the main interest of the study. This ultimately served to reflect on the implications of the research findings for the conceptual and clinical to be further addressed in the field of music therapy and other related fields.

Trustworthiness and Confidentiality

The trustworthiness of a qualitative study is essentially concerned with assuring that "the facts have not been misconstrued." (Mariano in Talbot, Ed., 1995, p.488). Given that the researcher conducting a qualitative inquiry uses her own self as the very means of generating, analyzing and conveying the data, ensuring the trustworthiness as grasped by Mariano obliges her to remain true to the conveyed phenomena during the entirety of her inquiry. Also required is that the researcher remain aware of her own values and interests in approaching the phenomenon of focus, as well as to openly communicate them to readers.

I sought to ensure the trustworthiness of this study through various channels. One way to do so was to allow a prolonged period of time for observing the video taped sessions and handling the data. I began collecting the data in July 2004. From then on till March 2005 when I started to prepare for this final
documentation, I let myself sit with the data reviewing them over and over through the multiple layers of analysis. I made sure not to miss any information about what I was viewing within the given research spectrum, while at the same time verifying that my previous observations were accurate. The sessions and excerpts for each client were multiple and selected from the whole time span of his or her therapy, thereby reflecting the multitude of his or her directedness while engaged in music making.

Once I completed the session transcriptions and before proceeding to the next steps of data gathering and analysis, I met with the therapists in order to assure the accuracy of my observations and descriptions for the sessions they had participated in respectively. Although the therapists were not the subjects of the research, this process amounted to the member-checking interview, a qualitative inquiry process of meeting with the subject during and after the research to ensure the credibility of research data and findings. I consulted them specifically for the segments that were not clear or obscure to me for reasons such as filming/recording flaws or the nature of the therapist’s intentions behind certain interventions.

I utilized multiple sources and forms of data so as to convey the multitude of aspects involved in the phenomena selected for the study. Included in them were the audiovisual materials stored in a copy set of DVDs, narrative descriptions, musical notations, graphic drawings and forms to draw the visual maps of the abstract data. All these clinical data were then triangulated with the literature and areas as described in the synthesis of this chapter.
Peer debriefing is another important channel of ensuring the trustworthiness of a qualitative research. During the entirety of the study, I met on a monthly basis with a group of doctoral peers qualified in the field of music therapy by virtue of the many years of their clinical work, teaching, supervising and publishing. The range of our discussions was wide within the scope of our respective research projects. This support group served as a space for me to openly share my personal and conceptual processes with regard to the study, hearing myself as I spoke about the project in an open manner, and receiving feedback and third-person opinions. In addition to this monthly support group, I often consulted other colleagues in the field when possible to discuss my projects and hear their approaches to the problems. I also had an informal conversation with a high functioning autistic person about my study on the occasion of a lecture she delivered while this study was in progress. All these occasions helped me step back from my research focuses and place them in a wider perspective of where I stood and was headed in the whole context.

Yet another source of ensuring my authenticity as researcher in delivering the studied phenomena was to constantly check on my personal stance and response to the entirety of the research process through analytic memos and a research journal, eventually imparting this to the readers in order for them to have an informed perspective of this final document.

The confidentiality of both the therapists and the clients have been ensured and maintained throughout the study. Pseudonyms or codes were given to the clients as they appeared in the study. No identifying information about the clients was included in
the final document nor in any of the research material shared with the support group or academic supervisors.

Researcher's Stance

I have already discussed some of the context from which I am approaching the study in Chapter I, *Personal Source of the Study* and *Research Space*, and in Chapter II, *Methodology*. I choose to utilize this section to make a comprehensive set of statements of where I stand as a researcher in relation to the study.

First, I as a researcher bring to the study my work philosophy as a clinician, in which the locus of therapy is believed to be centered in the client's most personal and subjective experience.

Second, in approaching the mind of autism, I acknowledge the notion of its being a distinctive cognitive style. I take into active consideration that autism is essentially a mind-brain problem thus calling for an approach that would address such a connection involved in the behavior of an autistic person.

Third, I agree to the notion of intentionality as object-directedness and its regularities emerging in behavior. I believe intentionality construed in this way can serve as a window through which both one's experiencing mind and its cognitive mechanism conveyed through the processes in the brain can be accessed in tandem.

Fourth, I believe that one can gain deeper insights into the unknown mind of autism by approaching it from the perspective of intentionality, because intentionality is concerned with patterns or regularities of behavior as arising
through one’s engaging within the surroundings rather than with its meanings as
they would be inferred by the common-sense psychology.

Lastly, I believe that individual music therapy utilizing an approach of
client-centered and music-centered improvisational music making will provide the
most suitable context for the research, as it is the occasions where the client’s
intentionality is allowed to emerge in the most uninterrupted manner.
CHAPTER III
THE MINDS OF AUTISM: A CROSS-FIELD EXAMINATION

This Chapter is utilized to examine what has been indicated about the minds of autism across different fields. While the materials availed for the study have been more vast and widely-scoped, presented below are selected literature that were determined to best represent the major accounts generated from the experimental, clinical, and anecdotal reports. They are categorized into neuro-cognitive aspects of autism, the enactive minds of autism, autism viewed in the perspective of music and creativity, and music therapy with autistic individuals. These will be presented and discussed in their original accounts, which will be followed by the cross-examination in summary at the end of the Chapter.

Neuro-Cognitive Perspective

Recent neuro-cognitive investigations on the minds of those with autism have converged with research related to three major cognitive issues: the “theory of mind”, “central coherence”, and the executive cognitive functions.

Theory of Mind

The ability of normal children and adults to attribute independent mental states to the self and others and to interpret, explain and predict behavior in terms of mental states, i.e., the “theory of mind”, has been one of the central focuses of autism research for over a decade. Both behavioral and neuroimaging studies have provided abundant
evidence indicating that individuals with autism are significantly lacking in their ability
to assume mental states that hold thoughts, beliefs and intentions in the self and others
(Baron-Cohen et al., 1993; Fletcher et al., 1995; Frith. & Happé, 1994; Grady &

Based on a series of experiments where both children with autism and normal
children of varying ages were tested for their ability to distinguish between the
appearance of an object (their perception of it) and its real identity (their knowledge
about it), Baron-Cohen concluded that autistic children are unable to distinguish mental
entities from physical entities (Baron-Cohen, 1989). In his article, Are Autistic Children
“Behaviorists”? Baron-Cohen suggests that autistic children who lack a theory of
mind and thus are incapable of adopting the intentional stance, will be forced to view
the world in terms of behavioral and physical events (Baron-Cohen, 1989, p.580). It is
noteworthy, however, that he denies that all internal (mental) states are beyond the
comprehension of autistic persons. In his view they do in fact have an intact
understanding of desires and of simple emotions like happiness, sadness or hunger.
Thus, rather than to say that autistic individuals are behaviorists, Baron-Cohen
concludes, it would be better to call them “desire-psychologists.” That is, autistic
individuals may be able to predict people’s action in terms of desires and physical
causes, rather than in terms of cognitive thoughts and beliefs. According to Baron-
Cohen, the latter is conveyed through conceptual and linguistic skills, therefore it is
these skills that are impaired and defective in people with autism.

Frith and Happé (1999) elaborate on the problem of self-awareness or self-
consciousness in autistic persons based on the concept of theory of mind. In their article
Theory of Mind and Self-Consciousness: What It Is Like To Be Autistic?, Frith and Happé explain that autistic individuals can only judge their own mental states by their actions. The authors theorize that the inability to attribute mental states to the self is the same as not having "introspective awareness" (p.1). Autistic persons simply lack the cognitive machinery to represent their thoughts and feelings as thoughts and feelings. That is, they might not be able to conceptualize their own intentions as intentions (pp.7-9). Frith and Happé stress that it is not that autistic individuals lack mental states; rather, the authors argue, they are unable to reflect upon their mental states. This is to emphasize that an autistic mind is characteristic in that it is motivated and drawn to objects primarily through immediate perceptual experiences rather than through reflective and inferential processes. The authors add that an autistic mind might only contain first-order representations of events and experiences, and lack self-consciousness.

It is noteworthy that the concept of a lack of self-consciousness in autistic minds put forward by Frith and Happé differs from Baron-Cohen’s view of the impaired self-consciousness and defective higher cognition in autism: the former alludes to a different cognitive style while the latter basically expresses a deficit view.

In summary, the “theory of mind” theorists propose that it is this lack (whether it is a deficiency or a type) of “mentalizing” or “mind-reading” ability, i.e., “mind-blindness,” (Fletcher, et al., 1995) that underlies the impaired social cognition and interpersonal skills in autism. Recent functional neuroimaging studies have identified a fairly consistent set of brain regions and neuronal networks that are involved in the conveyance of theory of mind and social cognition (Baron-Cohen et al., 2000; Bechara
et al., 2000; Happé, et al., 1996; Grady & Keightley, 2002). In addition, there has been rich data implicating an anomaly in those regions and their connectivity in the brains of autistic individuals—both at rest or in action (Adolphs et al., 2001; Doody et al., 1998; Frith 2003; Happé, et al., 1996; Klin et al., 1999).

Central Coherence

Another line of attempts to illuminate the minds of autistic individuals evolves around an information processing style typically associated with autism. It is related to a cognitive mechanism termed “central coherence.” Central coherence refers to an information processing style that enables global cognitive processing versus local processing of incoming stimuli. The central coherence theory holds that it is by means of this mechanism that one can perceive and attend to objects and events in terms of their global contexts: that is, pulling information together for a higher level of meaning (Hill and Frith, 2003). In the case of strong central coherence this tendency would work at the expense of attention to and memory for details (Frith, 1989; Happé, 1999). Conversely, in the case of weak central coherence, this tendency would work at the expense of contextual meaning (gestalt) and in favor of “piecemeal processing” (Hill and Frith, 2003, p.284).

With increasing behavioral data associated with the findings from the functional-structural brain studies, it has been hypothesized that weak central coherence may be a major cognitive factor underlying the often puzzling and troubling features of autistic behaviors (Happé, 1997; Joliffe and Baron-Cohen, 1997, 1999; Shah and Frith, 1983, 1993; Witkin et al., 1971). These include features such as repetitive and
obsessive behavior, restricted interests, or “insistence of sameness” as labeled by Kanner (1943). They also include a markedly uneven pattern of intelligence such that tests tapping factual knowledge, rote memory, and focused attention to detail can often lead to outstanding performances (Happé, 1997, 1999), while tests tapping ‘common sense’ comprehension and context-dependent short-term memory (working memory), or strategic task planning can be extremely poor (Frith, 2003).

The neurophysiological underpinning for weak central coherence is yet non-specific. One hypothesis explains it in terms of poor connectivity throughout the brain between more basic perceptual processes and top-down modulating processes, perhaps owing to a failure of pruning (Hill and Frith, 2003). Another explanation, and an important extension, of the weak central coherence account postulates not poor integration of information in gestalt, but rather enhanced discrimination of the individual elements (Happé, 1999; Mottron et al., 2000; Plaisted, 2001). The significance of the latter view is that as such, it alludes to a notion of a different, not defective, cognitive style; thus “different mind”.

**Executive Function**

A third account, distinct from but closely related to the above two is concerned with a higher level cognitive mechanism called executive function. Executive function is an umbrella term for a set of cognitive abilities involved in meaningful or purposeful activities: included are abilities such as working memory, reasoning, decision making, planning, impulse control, initiation and monitoring of actions (Frith, 2003). Neurologically these are all thought to correspond to the top-
down modulating processes largely dependent on systems that involve prefrontal activity in the brain in normal individuals (Feinberg, 2001; Robbins, 1997; Shallice, 1988). Poor functioning on many tasks of executive function have been documented in autism. It includes difficulties in context-dependent planning (Hughes et al., 1994; Ozonoff & McEvoy, 1994; Ozonoff & Jensen, 1999), inhibitions and procedural changes of actions over immediate ("prepotent") responses in order to get to a target object (Biro & Russell, 2001; Hugh & Russell, 1993), and perseverative-ness in rule-following or categorizing objects (Bennetto et al., 1996; Heaton et al., 1993; Prior & Hoffman, 1990).

A Unified Hypothesis: Different Brain – Different Mind

Uta Frith, one of today’s leading autism researchers, proposed a view in her latest book, *Autism* (2003), that construes a synthesis of the three theories reviewed above, namely, “A Different Brain – A Different Mind” (pp. 205-223). She suggests that there is an intersection between the critical cognitive components in all three accounts and that this intersection is centered on the concept of *self*.

In referring to the top-down modulating mechanisms in the brain, which inevitably require some central control agent or system, Frith revives the notion of the *homunculus*. The term homunculus literally means “manekin” or “little man.” It describes an imaginary man who is inside the brain and available to view the output of the brain. At one time the homunculus was invoked as an explanation for the unity of consciousness but reviled later as unworkable by many philosophers and psychologists. (Feinberg, 2001, p. 173). Frith’s counterargument
is that it is necessarily through this central control system, i.e., the homunculus, that one can become self-aware. She adds, “Only this [self-aware] self is aware that other people too have self-aware selves.” (p.209). The main idea is that, based on this kind of self-awareness in normal individuals, the cognitive properties such as the theory of mind, central coherence, and the executive functions arise to interact with each other. Because of the homunculus, one is enabled to assume and develop a theory of mind for the self and others (“mentalize”), process and integrate information based on the context (central coherence), and accordingly exercise and delegate control (executive function).

Frith suggests that, in autism, the homunculus or “the last visible self” may be not doing its ordinary self-reflective role. This does not imply that there is no awareness or experience of self in autistic persons. Rather, it addresses a different kind of self-concept, or “self-knowledge” as referred to by Frith (2003, p.210). In other words, when the self-reflective homunculus is not in action one is left with only the purely experiencing self or “pure egocentrism”: “there is an awareness that is all self.” (p.210). As Sainsbury notes (2000), high functioning autistic persons can possess detailed knowledge about themselves without the need to communicate it with others or have interest in knowing others thoughts.

It is further hypothesized that the absence of the self-reflective homunculus in autism may well be that the top-down mechanisms of different kinds (“executive selves”) are in conflict with one another rather than integrated, thereby causing a weakened or absent central control system (p.210). Another consequence of this is the enhanced bottom-up processes, which corresponds to the notion of the superior local
information processing often associated with the extraordinary perceptual and
cognitive talents shown in autistic persons.

Frith’s notion of “A Different Brain – A Different Mind” corresponds to the
notion of other intentionalities mediating other minds and brains put forward by
Bolton and Hill (1996) as was elaborated above. This line of thought is significant
in that it enables one to discover new potential meanings of unusual phenomena
rather than to merely describe them as anomalies of what is supposed to be the
normal.

Autism, the Enactive Minds: Phenomenological Perspective

In reviewing the neuro-cognitive theories of autism from the perspective of
phenomenology, Zahavi and Parnas (2003) critically address the conceptual flaws
found in them by pointing out that their accounts are based on cognitivism, in which
an a priori mental law of some sort is believed to be built in the human mind to
govern all realms of behavior. Zahavi and Parnas explain that the cognitive theorists
assume that understanding one’s own mind and understanding the minds of others
exploit the same cognitive system, i.e., the theory of mind, and that the theory of
mind is inherently a “hardwired module” embedded in the brain (Zahavi and
Parnas, 2003, p.55). Their argument is that the “theory-theorists” (the theorists of
theory of mind) are conceptually misled to conclude that one’s mental ability is
fundamentally dependent upon the theory of mind which is a cognitive inferential
system in nature. Their criticism is essentially based upon objecting to the
dichotomy between inner and outer, between experience and behavior, and
ultimately between mind and body. Their counterarguments in revisiting autism are centered on two major problems: self-awareness and inter-subjectivity.

From a phenomenological point of view, a person’s experience is always a first-person experience and evoked immediately by his or her own actions and bodily contacts with surroundings before any inferential or reflective process might occur. In this sense, a person in a state of experience already has access to her self, i.e., a pre-reflective and non-inferential self-knowledge. The assumption underlying these remarks is that mind, both in terms of understanding oneself and others, is not only mediated via some use of an embedded cognitive theory, but also and more fundamentally, arises directly through action.

Based on this view, Zahavi and Parnas claim that the cognitive account of the lack of theory of mind in autism can’t correspond to an explanation for absence of self-awareness. The authors add that, instead, the lack of theory of mind found in autistic individuals may rather indicate a “primitive” or “primordial” level of self-knowledge in them (p.66-67). In the same connection, the authors challenge the weak theory of mind account for the lack of social cognition and of interpersonal skills found in autistic individuals. Their debate is that in normal, non-exceptional circumstances, understanding of one another is already accomplished before any reasoning or cognitive simulation, through instantly shared norms and meanings within the encounter. Autistic individuals have poor social skills owing to a lack of ability to grasp this pre-reflective or implicit meaning of social interaction, and not because of impaired intellectual reasoning mechanisms. Moreover, Zahavi and Parnas point out that ironically in high functioning cases, autistic persons often
exhibit a rather overdriven theorizing tendency, as is exemplified by a self-reported

tale of Temple Grandin (Sacks, 1995).

Zahavi and Parnas’ argument seems to be logically flawed: first, by

mistaking the theory of mind (the ability to assume mental states for self and others)

for merely an intellectual reasoning ability; and second by making such a clear
distinction between pre-reflective consciousness and higher cognitive mechanisms

– thus ironically deepening the mind-body distinction. However, their theory is

unique in recognizing the emergent property of mind as being grounded in action or

bodily experience, thereby integrating the phenomenological perspective into

neuro-cognitive studies of autism.

The concept of enactive mind (Klin et al., 2003, p.345) is a basic

assumption rooted in post-empiricism and has prominence in the emerging work

of a recent neuroscience approach called “embodied cognitive science.” (See

sources such as Clark, 1999; Iacoboni, 2000; Klin et al., 2003; Varela et al., 1991).

Based on this view, Kiln and her colleagues offer a premise that social cognition

results from social adaptive actions. Accordingly, they propose an approach that

emphasizes the central role of motivational predisposition in autistic individuals

to respond to social stimuli. This alludes to a gradual shift in interest occurring in

the neuro-cognitive studies of autism: that is, from finding the mechanical causes

for the anomaly to understanding how individuals with autism search for meaning

in daily situations. The latter approach has been implemented in recent

investigations utilizing newer experimental techniques such as ‘eye tracking’(Klin

et al., 2000, 2002) or ‘face scanning’(van der Geest et al., 2002).
Autism, Music and Creativity

The recognition of autism as a unique form of intelligence is also found in literature on autistic characteristics in relation to music and creativity. In Beate Hermelin’s (2001) narrative essay Bright Splinters of the Mind, she elaborates on the islets of genius talents occasionally accompanying the profoundly pervasive disabilities caused by autism. In a chapter titled “Musical Memory and Improvisation”, Hermelin cites a series of comparative case analyses of musical memory and improvisation skills in autistic musical savants and professional musicians that had been carried out by herself and her collaborators (2001, pp.156-167). Based on detailed analyses of the clients’ musical performances, Hermelin states that the ability of musical savants is not confined to an outstanding (yet rather fragmented) musical memory, but extended to the creative invention of music. The comparative analyses revealed that in playing a newly heard piece of music by memory, not only were the savants superior to the professional musicians, but their superiority was based on perceiving musical structures and forms rather recognizing individual tones. Furthermore, in improvising on given musical themes, the savants tended to play for a longer duration and more frequently utilize structured improvisatory techniques (e.g. cadenza, transitions, and remote keys) while still gravitating around the original key and main theme, thereby creating a cohesive and dense texture.

Synthesizing these results, Hermelin emphasizes that the enhanced “rule-governed” cognitive processes related to savant musical gifts (2001, p.159) are typically accompanied by weakened semantic associations. In elaborating on autism
and creativity in the same book, Hermelin ascertains the co-appearance of “weak central coherence on a semantic level” and “constructional superiority” - an ability required for performing perceptual or factual tasks involving part-whole logical relationship such as jigsaw puzzle or block design – frequently manifested in high functioning autistic individuals (p.47). She speculates that such a tendency (i.e., autistic perception being particularly semantic-context independent and at the same time rule-governed or structure-driven) may play some part in accounting for the fact that most savants are autistic.

Hermelin’s argument leads more towards the question of referent versus non-referent feature than that of local versus global processing involved in the directedness of autistic minds. Specifically in relation to musical creativity, Hermelin writes, “…while language refers to something outside itself, music need refer to nothing but itself.” (2001, p.156). She adds that this autonomous self-reference of music may be what crucially underlies autistics’ fascination with musical sounds and the emergence of extraordinary musical talents in occasional cases.

The autonomous and rule-governed propensity parallel in the emergence of autistic minds and creative art forms is often recognized in clinical or anecdotal descriptions as well. Based on the insights earned from the clinical cases of autistic artists, Oliver Sacks illuminates how autistic mind and behavior tend to be driven by unlearned, rather intrinsic, and purely pattern seeking desires (1995). In his essay “Prodigies” (1995), Sacks re-illustrates the story of “Blind Tom” who was first introduced by the French physician Edouard Séguin in 1866. Born blind and severely autistic, Tom could not speak or walk and showed no signs of intelligence other than an
everlasting thirst for musical sounds at an early age, which later developed into brilliant piano playing and singing skills, although he remained extremely limited in other areas of intelligence. In another example Sacks describes the case of an autistic artist Nadia, who developed graphic gifts from an early age and could capture extraordinary visuospatial structures in her drawings without showing any interest in the clients of the drawing. Additionally, she expressed no interest in her finished art works or a need/ability to understand or interpret the meanings of them. In referring to “the hypertrophy of a single mental faculty” (Sacks, 1995, p.193) of this sort found in autism, Sacks points to the non-reasoning and non-propositional features characterizing this “other form of human intelligence” (pp.190-195).

Bryna Siegel of the Department of Psychiatry at University of California elaborates on the characteristic interests of autistic individuals manifested during their engagement in play with toys (1996, pp. 60-81). She describes how children with autism tend to relate to toys in a more sensory-tactile, concrete, and fragmented manner than in a functional, referential and imaginative manner. Furthermore, their play revolves mainly around pattern-seeking behaviors rather than referring to the symbolic meanings (or what others might think) of what they are engaging with (p.69). Though from a deficit perspective, Siegel’s descriptions add to the notion of the non-semantic features involved in autistic play and creative expressions.

Music Therapy with Autistic Individuals

The music therapy literature concerned with autism appears to be mostly dedicated to illustrating the awareness of relatedness to self and others emerging in the
minds of autistic individuals while engaged in musical experience. Paul Nordoff and Clive Robbins, the founders of Nordoff-Robbins Music Therapy, give a detailed description of their work with autistic children in the book *Therapy in Music for Handicapped Children* (1971, 1992). Their accounts of the music’s effect on a child with autism are centered on the “personality change” occurring during the music therapy process (pp.101-112). As the child is held and engaged in “musicking” (Elliott, 1995), he is gradually “awakened” (p.102) by becoming conscious of the musical forms created within the interaction between the therapist and himself, within which he is allowed to maximally express his self and communicate it to the therapist.

This “awakening” or “personality change” is also regarded as “ego-strength” or “ego-functioning” which develops gradually (p.105). During the early stages of therapy the child is mostly in a mode of searching for bodily patterns he can grasp and play with, in which state “no external direction or demand [is] possible.” (p.106). As the process evolves, he grows able to enjoy and respond to the dialoguing gestures offered by the therapist through music. In this sense there is a clear acknowledgement in their account of the child’s subjective “self” functioning as a central control agent – whether it is “repressed” or “expressive”, or whether it is “resistant” or “communicative”, as identified in their descriptions (pp.101-112).

It is not clear, however, what properties are precisely assumed in the term, “ego” or “self” used for the autistic child. Is his ego or self assumed to have an awareness of self and others in a way similar to a non-autistic person? Does his ego or self refer or relate to internal or external events in a way similar to the way a non-autistic person’s ego does? Does it value and feel in line with the values assumed in
common-sense psychology? In the same book, for instance, Nordoff and Robbins discuss the case of an autistic child, Rosita, who went back into a “regressive” mode after an initial phase of opening and relating to the external world through music (pp.102-103). The authors interpret this as the child’s withdrawal from “confusion” and “fear” that arose in encountering her new personality and new world it relates to. This interpretation apparently assumes a self in the child who has an internal self-monitoring function as well as the sense of distinction between the inner and the outer; who then seeks safety based upon a judgment of balance within his/her inner world or between the inner and outer worlds. There is no further account, however, as to what then makes the client autistic or how her self operates differently from that of a non autistic person.

The works of Di Franko (1999) offer an even more dynamic approach, although still within the psychotherapeutic framework focused on ego-functioning. In regarding autism as a “defense of exploded Self” (p.95), he writes that “…he [the client with autism] expresses an exploded Self that works out iterative patterns in motor and thinking structures within a fusional habitat in order to be more defended from the possibility of developing an awareness of his own self (HIM-SELF) than from establishing relationship with another self…or with ‘SELF-STATE’ or ‘SELFNESS’”(P.95). Based on this assumption, his work – specifically with the use of voice within a mother-child relational context – evolves around breaking through this state of defense and facilitating “individuation” and “relationship” with self and others (pp.98-103).

Similarly, Tony Wigram (1999) identifies autism in terms of a communication deficit. Accordingly, the client’s behavior in the musicking process is assessed and
understood in terms of his state or role in the communicative continuum with varying levels of autonomy, such as “resister”, “follower”, “leader”, or “partner” (pp.83-85). The aim of the therapy is then to help the client become able to express himself and communicate with others while assuming his maximal level of autonomy.

For both Wigram’s and Di Franko’s approaches, the therapy processes are fundamentally mediated through musical forms such as those of melodies, rhythms, chords, scales, idioms and the dialoguing patterns created between the client and the therapist. In other words, the referent roles described in Di Franko’s account (e.g., the defended or individuated SELF) and in Wigram’s account (e.g., the resister, follower, leader, or partner) are defined by the expressive and interactive events conveyed by the musical patterns. As was noted for the Nordoff and Robbins’ interpretation of “ego” or “self”, it is not clear whether those referred states of the SELF or relaters have first-person reference on the client’s part as well.

Still in line with the psychotherapeutic approach, yet with an additional component of teaching/reinforcement, is the work of Juliet Alvin (1978/1992). In the introduction of her book Music Therapy for the Autistic Child (1992), Alvin expresses in her personal voice how her work is dedicated to helping the autistic child “come out of his loneliness through a world of music.”(p.xi). Identifying autism as a set of cognitive defects within the domains of perception and language with the consequence of “emotional and personality disturbances” (p.2), Alvin emphasizes the benefit of a structured therapeutic education. She proposes that music as an integrating force can, when systematically employed within the therapy context, bring together the scattered
abilities of the child and thereby reinforce more positive behaviors such as more
organized self-expression and communication.

Alvin further comments on the reinforcing aspect of music for language. She
acknowledges the distinction between verbal language and music in that verbal
language requires "the understanding, coding and decoding of conceptualized
symbols... [whereas] music is considered as a universal means of communication."
(p.12). According to Alvin, hearing or making musical sounds can "trigger off a verbal
or vocal response" as the former facilitates in the child "a desire to communicate."
(p.12). Provided that an organism’s referent (propositional or semantic) and non-
referent (structural or procedural) relationships of a certain kind with the self and the
external world have been assumed to be mediated by distinct cognitive and
physiological systems, and that an autistic mind may be significantly biased toward a
non-referent relationship as suggested by varied accounts discussed earlier in this
Chapter (pp.29-32), it is yet to be discovered whether or not, and how such a claim of
‘music reinforcing words in the autistic child’ can be justified.

Summary of Cross-Field Examination

This section serves to summarize in integration that has been indicated
about the minds of autism, specifically with regard to their directedness, in the
above reviewed accounts. Conspicuous in cross-examining them was a general
discrepancy found between the perspectives concerning the mechanism of autistic
behavior and those concerning its meaning.
Most consistently indicated across different terms of accounts addressing the mechanism of autistic behavior (including the experimental and clinical reports on the cognitive and neurological properties of autism), autism was viewed as a distinctive cognitive style, the so called “other mind”. The self of the autistic person was often recognized as distinctive of for its “mind-blindness” (Fletcher, et al., 1995), lack of “introspective awareness” (Frith and Happé, 1999), or “pure ego-centrism” (Frith, 2003). The notion of the autistic self and its function does not seem to have reached congruence among different accounts. In other words, it has not been clearly explained or agreed whether the distinctiveness lies in an absence or lack of the concept of self and its reflective function or in a different kind of self whose intrapersonal and interpersonal relationships are guided by something other than socially driven motivation. For instance, it has yet to be further illuminated whether the mind-blindness of autism indicates that the autistic individuals are simply not able to read others and empathize with them, i.e., lack of social cognition, or whether they lack in the ability to relate to themselves and reflect on their experiences at all regardless of their cognitive function, i.e., weakness/absence of introspective self.

Underlying this ambiguity at base is the problem of the fundamental motivation – or the “motivational predisposition” (Klin et al., 2003) – of the directedness of autistic minds. Related to this are the two other components importantly recognized about the other mind notion of autism, that is, the direct contact driven behavior (e.g., the sensory-tactile or physical dominance in engaging with surroundings) and the rule-governed behavior (e.g., superior
constructional ability or heightened local processing). While both the direct contact driven-ness and the rule-governed-ness are part of fundamental motivations underlying both autistic and non-autistic behavior, the distinction for autism seems to be attributed to unusual dominancy, which operates at the expense of the social adaptation of the individuals.

In short, the other mind notion of autism can be substantiated by the problems the person has relating to self and its reflective role, as well as his or her behavioral tendencies characterized by direct contact driven-ness and rule-governed-ness, underlying which is a more fundamental question of motivational predisposition. This was also one of the focal questions guiding the clinical investigation and the research as a whole.

Meanwhile, the approaches that focused on the meanings of autistic individuals’ behavior – including those of music psychotherapy works – seem to be centered on the notion of the person’s “ego”, “self”, “personality” (Alvin, 1978/1992; Nordoff and Robbins, 1971/1992), or “SELF” (Di Franko, 1999) that is locked in his or her autistic shell, and the main concern accordingly is how to help them overcome their resistance and be able to relate with their selves and outside world in their maximal potentials. While these approaches assume a generally humanistic stance of acknowledging each autistic individual as a person of unique individuality, there seems to be a relatively less differentiated focus laid on his or her unique autistic individuality, which may be guided by a fundamentally different set of rules involving different intrapersonal and interpersonal motivations.
In conclusion, the findings from the cross-field examination suggested that there has been major discrepancy in approaching the mind of autism between accounts focusing on the cognitive-neurological mechanisms and the psychological meanings (the emotional, the intrapersonal and the interpersonal) involved in the phenomena. The former focuses on the other mind’s characteristics of autism (i.e., the role of self and its intrapersonal and interpersonal/environmental relatedness distinctive than that assumed in common-sense psychology); and the latter on the essential properties of the psychological operations in the minds of autistic individuals (i.e., the person’s unique psychological subject capable of relating to his or her self and others when helped to overcome the autistic resistance). To be further explored in terms of both approaches is the matter of what underlies the minds of autism, i.e., the fundamental motivation of the directedness of autistic individuals. For now I will leave this question in order to move on to the report of the clinical investigation (Chapter IV through Chapter VIII) until the final synthesis of the entire research is drawn (Chapter IX).
CHAPTER IV

MEETING THE CLIENTS

An Encounter

Many years ago on a cold winter day, I was in a room alone with a female
Gorilla at the Bronx Zoo in New York. Reading the biographical information and
learning that she was born in the same year I was born, I approached the cage
where she was quietly standing, holding the vertical cage bars. She and I were
directly facing each other. Standing behind the safety bar several feet away from
her, I suddenly found that she and I were alone in the dim, closed, slightly
unpleasant smelling indoor space. Fighting a cold feeling slowly crawling up my
spine, I convinced myself to stand there for another few minutes. It was an effort
for me to not give way to the impulse to flee, because I was oddly intrigued as she
looked directly into my eyes. Our gazes were fixed on each other. Thoughts were
swirling through my head. ‘What is she thinking while looking at me? How do I
appear in her eyes? Would she find me as smelly as I find her? Does she
understand that I am observing her? Is she feeling a bit scared of me, as I am of
her right now? Does she know I am different from her?’ It was a solemn
realization that, despite my supposed cognitive supremacy as a human being over
non-human primates, I still understood her no better than perhaps she did me.

In terms of the ambiguity deeply imbedded in the task of understanding
the experiences of others, the intriguing encounter I had at the zoo that day seems
to have had a powerful implication for this study. With this, I was assured early
in the research process that one of the necessary conditions for observing the subjects should be for me to assume a stance of a non-informed observer.

The remainder of this chapter serves to introduce Stephanie, Engel, and Cheryl, the three clients I selected to be the final research subjects and whose excerpts I chose to present in this document for analysis and discussion. Instead of delivering biographical and clinical background information about them, I chose to present a portrait of each client by displaying short scenes of him or her found in their archived videotaped sessions. The excerpts presented were selected from the session transcripts at an early stage of my research. Some of these excerpts will reappear later in the document for analysis and discussions. I chose this form of introduction in an attempt to share with readers my experience of meeting them as an uninformed observer.

The readers will find in Appendix B the same sets of excerpts, yet with the addition of my analytic notes including the thoughts, intuitions and questions (bolded, italicized and parenthesized) that occurred to me at the time, which will reveal how the research was progressing at that stage.

The scenes in which the clients were seen were typical one-on-one improvisational music therapy sessions at the Nordoff-Robbins Music Therapy Center. In this setting, two therapists (a primary therapist and a co-therapist) usually work together as a team to facilitate the best therapeutic-musical environment for the client. The primary therapist usually assumes the leading role of gearing the music itself, such as providing the rhythm, harmony, melody, mood, energy and/or textural context for the therapy process, while the co-
therapist engages with the client more directly through the music in order to help his or her psychological process fully realized within the context. For all three research clients introduced below, the main approach of therapy was this client-centered and music-centered improvisational music therapy (except for one client who worked only with one therapist through the entirety of her therapy). For the two clients who worked with two therapists, there were occasions when the original co-therapist was replaced by another therapist due to reasons either therapeutic or practical (e.g., therapist’s availability at the Center). This will be indicated throughout the document as it occurs.

An introduction to Stephanie

An early teenage girl gets down and rolls on the floor immediately after entering the room, gets up, sways her body side to side, covers her ears with her hands, and makes a vocal discharge of sharp, high-pitched, and scratchy sounds.

She paces around the room seemingly randomly, with eyes gazing blank, not looking directly at anything.

She slaps herself on the cheek at the end of the phrase David (therapist) plays on the piano. She gets down on the floor and slaps herself again in time with the music’s phrasing. She then gets up to shake her head in a
subtle, fast, and well coordinated head-neck motion, syncing with the piano’s fast repetitive triplet notes.

She comes around the piano to sit by David. She keeps making vocal expressions, alternating between soft moaning-like humming and harsh breathing. This (the vocal expression as a whole) is then interspersed with a head movement back and forth, along with occasional slaps to the face. Her eyes gaze blankly into space.

David plays an ostinato bass, outlining two chords (Dm-V6) in staccato followed by a pause on the last beat of the phrase. Stephanie does not readily engage in playing the wind chime as she is directed, but stomps her foot consistently at the pause.

As David and Rori (the co-therapist) take turns on the piano and the conga, Stephanie gradually slows down and stops her rocking. She sits still and smiles with her head turned to the instruments, though not directly looking at the therapists. Soon she begins to beat the conga spontaneously with her hand. David plays the simultaneous beats with Stephanie so their beats together make a call-and-response dialogue with Rori’s. Stephanie laughs joyfully, looking more present and connected in the moment. Her gazes alternate between the piano keyboard and the conga drum exactly in time with the beat.
The music is loud, with a tri-tone chord unfolding in arpeggio. Stephanie repeatedly takes the left sleeve of her shirt off then puts it back on. David plays ascending chord progressions in open arpeggio, leaving a pause at the end of each phrase. Stephanie responds to these pauses through bodily actions of some kind, tapping on the conga drum. She follows this by shaking her head, leaning over to the piano or throwing sticks in the air.

David sings hello in a mellow singing voice. Stephanie affectionately leans over to David. She appears to be calm and her bodily movements are relaxed. David repeatedly sings hello each time, followed by a short pause. Stephanie begins to respond to this with uttering “e-lllo~” several times. She seems happy as she does so, looking up into the air and smiling.

David plays a very dynamic and strongly steady rhythmic pattern in 4/4 while singing “la, la, la” excitedly. Rori plays along with it on the drum. Stephanie seems excited and happy. She remains smiling and focused as she continues to walk and jump around the piano in sync with the music. Rori attempts to assist Stephanie to play the conga ‘on the beat.’ Stephanie snatches herself away from Rori repeatedly.
An introduction to Engel

An adolescent boy in his late teens runs into the music room, his body tense with one hand covering his ear. He instantly grabs the drumsticks and begins to play single beats on the snare in a steady, even rigid motion. He makes a droning sound in a muffled voice.

He impulsively and loudly plays the drum and the cymbal in alternation, rocking his upper body back and forth. Joan (the therapist) asks “What do you want to play... do you want to play the drum?” He shouts “no!!” while he continues to play the drum. Joan plays slowly progressing chordal passages in f minor with basic beats in synch with those of Engel’s. She sings the melody in a soothing voice that hovers over the instrumental sounds. Engel hums along with Joan’s singing, and as he does so, his drumming becomes gradually less rigid both in motion and sounds.

He comes in looking very happy and excited. The therapists sing “Welcome back to music.” Engel excitedly sings while alternating between fast tremolo on the snare drum and a loud beat on the cymbal. Dan (co-therapist) tries to direct him to end the phrase with a beat on the conga. Engel does not follow this correctly, playing steady and loud beats on cymbal instead.

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He plays very heavy drum beats, like heavy slow marching. His other hand is covering his ear. His body is making a tense back-and-forth rocking motion. He frowns with a seemingly a disgruntled look on his face and utters out repeatedly “I don’t know, I don’t know.” The voice is dragging into deep low groaning, “Huh... huh...” Suddenly then arising is a Middle Eastern melody in his higher-pitched, uplifted voice singing “Ya-ha-ia-ya-ia...” He soon goes back to the low-dragging groaning.

This goes on for several minutes. His vocal, facial, and bodily expressions together convey a quality of frustration and dissatisfaction.

He sits by Joan with a microphone in his hand as he sings an improvisatory blues tune in a deep and fully affected voice, “How about some more [music, wine, etc.]” interjected with “Come on! No, no, no, no!” His vocal expressions are quite expressive conveying the blues mood. His body is swaying gently in synch with the singing. The music is getting groovier, the verses alternating back and forth between him and the therapists. His singing gets freer and more fully expressive and he seems to feel joyful and humorous within the groove. Finally he bursts into laughter. Everyone laughs together.
An introduction to Cheryl

A woman in her late thirties comes in and walks around to explore the room. She looks carefully at things in the room such as the camera, pictures and instruments while constantly shaking egg shakers. Marie plays trills sporadically on the piano reflecting Cheryl’s curious exploring. Cheryl becomes more engaged in playing the shakers in response to the music, which develops gradually into a Middle Eastern mode. Still walking around, Cheryl adds the tambourine to her playing.

Constantly looking and smiling at the camera, she stands up at a musical cadence to go have a closer look at it. She asks Marie, “What, what does this camera do? What’s the use of it?”

She sits at the drum. Marie asks if she wants to play it. Instead of answering, Cheryl clicks the sticks and walks to the piano where Marie is sitting. She touches the wind chime and says, “What is this? How do you use it?”

She moves over to the chime and taps lightly on it. Music between Cheryl and Marie is unfolding beautifully in a mysteriously flowing Middle Eastern mode. Cheryl’s chime playing alternates between single taps and glissando. The music between Cheryl and Marie becomes more and more blended and intensifying as a whole. Cheryl seems to be deeply immersed
in this merging with Marie in the music. Her face is tilted slightly upward to one side with a somewhat sensual looking expression on it. She is dancing and now shaking the whole chime as if she is dancing with it. She seems pleased and she continues to play, dance, smile, and occasionally throw in some fast fill-in taps with sticks.

A discussion of scheduling: Cheryl confirms skipping sessions: “So, so, nnnext [stutters] Monday we are out, and, and also next week the... th...Thanksgiving’s coming up.” [...dialogue between Cheryl and Marie about the holiday plan]. Marie asks, “Do you eat turkey?” Cheryl replies, “Yes, but I only eeeat, eat hum... white mean only. I NEVER eat dark meat!”

Marie responds to this in music by singing “NE-VER!!” accompanied in a resolutely played chords.

Cheryl continues to talk and plays the drum pacing along with Marie’s singing, “Yes, and I, I do not like turkey fat either!”

Marie sings “No dark meats please on Thanksgiving turkey for Cheryl”.

Cheryl smiles, dances, and plays the drum and fills in saying, “Yes, that’s right! And make it skinless turkey, please!”

Cheryl sits at the other piano in the room. Marie asks “Should we play two pianos together?” Cheryl determinedly says “No.” She then begins to play some single melodic notes filling in spaces in Marie’s playing. She slowly
and gently moves her body to the music. Cheryl’s piano playing is flowing slowly, leaving lots of space in between the notes. She uses both hands in free and relaxed motions, sometimes single light staccatos and other times sustaining chords, always followed by space filled in with slow head and upper body motions. She appears to be in a pensive and deeply immersed state.

Cheryl sits back with eyes closed looking relaxed. Marie stops playing to ask “Did that make you sleepy?” Cheryl does not respond to this and sits motionlessly covering her ears with hands. Marie abruptly throws some fast and loud notes on the piano singing “Wake up!” No response from Cheryl.

Marie approaches Cheryl singing, “What is it???”

No response from Cheryl.

Marie continues singing and throws in some lightly bouncing notes on the metalophone.

No response from Cheryl.

Marie walks back to the piano. Cheryl hits the windchime once, then pauses. Marie sings “What is it? What is it that you have to say? You can talk to me, Cheryl. Something that you need to say, you can talk to me. You can play with me.” Cheryl covers her ear and occasionally smiles mildly.
She drinks water out of a bottle and taps her fingers on it. Marie asks,

“Are you thirsty?” Cheryl says “When summer is hot, you have to hydrate your body. Water’s got no calories, no fat and no bad stuff.” Marie replies, “You care about that stuff.” Cheryl says in a somewhat elevated voice, “YES! I just drink my, my, my water. YES, Marie, I drink water every day!”

[In the second to last session] Marie asks, “So what special thing should we do for the goodbye next week?” After a short silence, Cheryl says, “Next week is the last week for our music.” Back to silence, then. As she leaves the room, she says, “Ah… ah… last week, week is the last, last session for… for… huh… our… our music.” She adds, “Thank you for another beautiful music hour and have a good week, Marie.

Forward to Chapters V, VI, and VII

While immersing myself in the research data over time, I noticed that the multitude of aspects involved in the clients’ musical engagements were converging into certain categories of behavior that were related to, yet distinct from each other. In-depth examinations of the data, both within-client and across-clients, revealed that these categories basically corresponded to the following realms of consciousness: the state of attunement, the state of emotion, and the state of recognition.
CHAPTER V

THE STATE OF ATTUNEMENT

Assuming the stance of an uninformed observer was both an exciting and challenging task, as it led me to a vastly open exposure to the clients in all realms of their being during their musical engagement. How do they first walk into the therapy room? What seems to capture their attention instantly? What tends to stimulate them and how do they react to the stimuli? When do they stop and when do they resume walking, playing, or singing? The questions were initially random and endless. A natural next step was observing any consistent responses to similar sets of stimuli. In doing so, I found myself becoming attuned to the clients’ own patterns of attunement.

By attunement, I mean all realms of attentive and reactive behavior and their emerging patterns in time, regardless of whether or not they accompanied signs of conscious awareness. These properties included the clients’ visual, auditory, and tactile preferences, motor and movement responses, and/or expressions of any other sort, which seemed to be frequently and readily prompted by their immediate contacts with the musical situations. Key to the state of attunement focused as such is that it involves the processes that occur on a pre-conscious/reflexive level prior to the engagement of cognitive processes – such as knowing, reflecting, purposive planning, or modulating/adjusting of behavior.

The focal points of this phase of the investigation were two pronged. First, the focus was on components of the musical and non-musical events to which the
clients tended to become attuned. Second, there was an emphasis on the patterns of clients’ expressions in response to those musical components (both in terms of the commonalities across the clients and the uniqueness within each client). The resulting findings converged on energy states, bodily states, rule-following, and relating to therapist(s), each of which was subcategorized into different components.

**Energy States**

Crucial to the clients’ attunement were the dynamic patterns and mood qualities of their actions, from seemingly meaningless droning to humming, singing, touching, banging the instruments and musically interacting with the therapist. Dynamics and mood qualities as such are the essential expressions of the “energy of psyche” as discussed in the writings of Carl Jung (1960a). In elaborating on the psyche as the phenomena counter-positioned to the physical, Jung points to the “energetic aspect of the psyche” that is in essence unspecified and non-measurable, only conveying “the potent” out of which a more differentiated or even to some extent measurable set of behavior would arise (Jung, 1960, p.233). Accordingly, it can be postulated that the behavioral properties expressing the “energetic” aspects of an attuned state in a person convey the dispositional root of his or her mind’s directedness.
Intrinsic-Centeredness

Primary to the energy aspect of the attuned state as found in the clients in this study was their intrinsic-centeredness. This is different from saying that the clients were only tuned into their inwardly evoked mood or dynamic state without paying attention or responding to the external events. Rather, it points to the clients’ demand that the intrinsic mood or dynamic state aroused by a particular activity be realized in that same context. It was when this condition was satisfied that the clients were finally able to enter into an attuned state, in which they could begin to pay attention and respond further to their experiences. The following excerpt shows an example of how Stephanie persisted with her intrinsic and undifferentiated state of excitement while the therapists tried to intervene with her on their own account:

Excerpt 1

David (primary therapist) repetitively plays a marching pattern of phrases with a strong basic 4/4 beat at a moderate tempo on the piano while Rori (co-therapist) works directly on assisting Stephanie to beat the conga on the down beat. Stephanie however wanders off to walk around the room, smiling or excitedly giggling. At one point, she takes her arm out of her left sleeve, then puts it back on. This goes on repeatedly for a few seconds.

Rather than paying attention and responding to the therapists’ directive intervention, Stephanie seemed to be more in a state reactive to the energetic state evoked within her by the music. The therapeutic intervention that was extrinsic to her energy state in the moment seemed to fail to connect with her.
Conversely, the following excerpts show occasions where the energy property of the clients’ responses were matched externally by the energy component of the music, serving as an immediate means for them to get in touch with their intrinsic states.

Excerpt 2

Cheryl comes back to the chair, sits still with her eyes closed while listening to Marie (therapist)’s open chorded Dorian-mode based music on the piano. Cheryl gently moves around her head and upper body to the music, appearing to be tuning into the mood of it. Marie continues to play long, sustained chords around D minor and A minor to further support Cheryl in this mood-attuned state. Cheryl remains calm and stretches out her arm to strike the windchime standing next to her. Marie pauses to briefly resume playing a very mellow, slowly unfolding melodic-harmonic passages, alternating between major and minor chords [Dm – Am – GM – DM: ] Cheryl stays quiet as she sits back listening to the music, looking very relaxed, closing her eyes and smiling in seeming contentment.

Excerpt 3

Stephanie walks around the room fast while making high-pitched squeaking vocal sound. David reflects this excited movement in singing and piano playing. Stephanie pulls her shirt off and continues to pace around giggling and clapping her hand to the music. Laura (new co-therapist) leads her to the piano and helps her sit by David with the conga. Stephanie gradually calms down as she pays closer attention to David’s music. She begins to beat the conga tentatively in an unformed manner and leans her body over the piano. David reflects her calmer mood state in the music. Stephanie looks much more relaxed with her body leaning slightly on David’s arm. Laura hums and whistles a mellow and soft melody along with David’s music on the piano. Stephanie remains quiet and calm with her face looking slightly upward and eye gaze fixed at one point in the space while listening to the music.

In the last excerpt, one can observe how Stephanie’s intrinsic mood and energy state within the moment was reflected and further facilitated through the
music, which in turn led her to a state in which she was better attuned to her surroundings (e.g., the instrument and the therapists).

**Frustration, Endurance and Striving**

Another energy related aspect found in the attuned states of the clients involved the moments when they manifested strong persistence while absorbed in certain experiences. These moments were characterized by the clients’ seeking and striving to realize what was evoked, felt or desired within them in the context – notwithstanding the sensory/physical discomfort or emotional frustration sometimes caused in facing novel or unsatisfactory experiences. These moments often involved prolonged attention and intense emotional energy, occasionally accompanied by abrupt physical discharges such as blurted out unintelligible words or vocal sounds, issuing involuntary jerky movements or making stereotypic motions. These inwardly desired and outwardly pursued experiences seemed to be centered on the clients’ pre-reflective, immediate contacts with the musical surroundings.

**Excerpt 4**

The therapist encourages Engel to sit at the piano and play with her. She begins playing and singing a pentatonic scaled melody. Engel screams immediately and makes a series of jerky involuntary motions, slapping himself on the forehead and wiggling his fingers. He walks over to the piano and sits by the therapist. Facing away from the therapist, he starts making vocal sounds, initially droning and gradually sketching a melodic pattern of more sustained vocal tones. His singing voice is extremely soft and has a tentative, searching quality. He looks intensely focused on the singing. Occasionally his singing voice falls back into droning in a pressed voice, his face frowning in seeming discontent, his hands covering
his ears and his upper body rocking roughly back and forth. He readily
returns to the more sustained vocal singing when Dan (co-therapist) sings
in a more exaggerated style, accentuating the pentatonic melodic pattern.
While Engel’s singing does not immediately sync with Dan’s in the
pentatonic tune, it regains its singing vocal quality when joined with such
a pronounced musical mood and pattern.

Apparently, facing the novel context (i.e., the therapist’s inviting him to
the piano and singing in a pentatonic mode) generated an abrupt interruption in
the ongoing state of attunement in Engel, and the struggle to cope with the change
evoked instantaneous physical and emotional reactions. Nonetheless, there was
little active indication that Engel was necessarily resistant to the new context or
that he negatively valued the novel stimuli. What can be safely noted instead is
that his encounter with the new context brought about a state in Engel that
involved a series of pre-conscious and undifferentiated energic reactions (e.g.,
screaming and involuntary motor discharges). Where this reactive energic state
was headed couldn’t have been seen until later when Engel began vocalizing. One
cannot conclude from this single observation that he was consciously aware of the
new context and his own reaction to it (e.g., liking or disliking), and whether or
not his vocal expression was a process of incorporating the new context into the
continuum of his intrinsic state. It is apparent, however, that something in conflict
with his psychological balance had been triggered in the new musical surrounding.

It is noteworthy that it seemed to be more the co-therapist’s freely
projected energy and mood than the melodic construct of the tune that affected
Engel’s vocal expression. This, as an example of many similar incidences,
suggests the significance of musical mood and energy in contributing to a more
attuned response state in the client. The energy of seeking and striving for a certain kind of experience was intense in all three clients, although their individual qualities and patterns were highly unique. Such seeking and striving seemed to arise through paths that bypassed explicit intentions and decisions. Instead, what characterized their intense pursuing was a faithfulness and commitment to what was being triggered within them, especially on a non-conceptual, immediate sensory-perceptual level. This is again related to an intrinsic-centeredness (i.e., a focus on their unique inner states) embedded in the states of attunement in the clients.

Aesthetics: From Undifferentiated to Differentiated

What comprised the clients’ desire for certain qualities of experiences was partly related to the question of their personal styles of aesthetics.

The next excerpt presents an incidence where the mood and energy of the music played a significant role in the client’s aesthetic pursuit, thus contributing to her state of attunement. For clarity of presentation, I have divided a relatively long selection into a number of segments, each with a heading describing its focal components.

Excerpt 5

[Two pianos between Cheryl and Marie]

*Initial establishment of mood through music*
After a few seconds of sitting at the piano, quietly listening to Marie’s music with her eyes closed, face looking slightly upward, upper body subtly moving in the music, Cheryl begins to play a few notes on the other
piano. These initial notes are thrown in randomly and have a tentative exploring quality.

*An escalation in dynamics*
She pauses to immediately resume with slightly faster and more fragmented melodic-rhythmic notes. Her tune becomes livelier in mood, faster in tempo and louder in volume. She squints her eyes repeatedly during this segment of play. As she continues to do so, the squinting becomes part of her musical and emotional expression.

*Further shaping in form and dynamic interaction*
Her random notes soon develop into a variety of musical ideas (e.g., trills, quick chords, up and down glissandi) in gradually increasing tempi and volume. The music in general becomes more dynamic between Cheryl and the therapist.

*Music and silence - Together*
Cheryl suddenly stops playing. Marie does too. The two remain in silence for a few seconds.

*A dynamic increase in Cheryl's music*
After a moment, Cheryl resumes playing the piano, louder and more intense this time. The notes are faster and denser, wider in pitch register, more varied in rhythmic patterns and louder in volume. The density of the overall structure of her music as a whole is rapidly increasing.

*Music and silence again*
She pauses again to be silent for a short time then resumes playing in still more intense dynamics. This sequence of musical intensity and silence repeats one more time, leaving a longer pause than the preceding ones.

*Even more dynamic increase in the music between Cheryl and Marie - climax*
Then there arises a completely new set of light staccato notes in her play, yet still at a fast tempo. Now the music progresses in a more dialoguing, call and response pattern between Cheryl and Marie. This interaction goes on for a prolonged time without Cheryl stopping in the middle. While still playing the piano with one hand, Cheryl grabs a stick to play the drum standing next to her. The music between Cheryl and the therapist escalates gradually in its dynamic intensity. Cheryl plays the drum more and more excitedly and eventually leaves the piano to play the drum alone. Her dynamic drumming is held by heavily resonating piano chords progressing in a middle-eastern mode. The dynamics of the music between the two seems to culminate in this piano-drum duo, and shortly starts to slow down in tempo and rhythmic fragmentation.
Ending
Cheryl looks gratified as she smiles in a long sigh with her eyes closed. She lightly claps the sticks in between her down beats on the drum. The drum beats become softer and less frequent and gradually come to an end. Marie’s playing comes to an end as well.

It is apparent that the musical progress in this segment unfolded primarily based on Cheryl’s energetic state and its flow during the music-making context. This gave rise to very unique properties of attunement and directionality in her ongoing musical engagement. The dynamic directionality emerging in Cheryl’s behavior in this segment can be roughly outlined in two consecutive stages. The dynamic process unfolded primarily within her own energy state and then extended to the interpersonal context with the therapist: 1) within her own energy state, the dynamic flow was first centered on her settling into a mellow and tentative mood, which then gradually led to a dynamic escalation through increased tempo, intensity, and compositional density; 2) the escalation within Cheryl’s own musical expression further transitioned into the dynamic musical dialogue between her and the therapist, eventually reaching a plateau between the two of them, gradually slowing down and finally coming to a cadence.

Individual differences were found among clients in terms of the initial source of dynamic directionality developing in their musical engagements. For instance, for Cheryl, the dynamic pattern evolved autonomously from her own musical expressions, which then led to a further attuned state in an interactive context. On the other hand, it was necessary that Engel and Stephanie were provided with more salient musical forms which allowed their intrinsic energy
states – otherwise remaining undifferentiated—were accessed and further directed.

(See Appendix C, for an example).

**Sensory-Perceptual Dependency**

It is generally the case that a person’s intrinsic energy state turns into a more specifically directed and attuned state as he or she engages in the environment. With this in mind, the emergence of attunement found in the clients studies was especially notable for its degree of dependency on the sensory-perceptual processes involved in the clients’ experiences. Included in this were the clients’ direct contacts with sound patterns/textures, visual motions, and/or tactile contacts, none of which were affected by other cognitive processes (e.g., symbolic interpretation or verbal-thematic associations) extrinsic to the immediate experience. This is distinct from the ordinary process of attunement regarded in common-sense psychology, which assumes that attunement is guided by not only one’s immediate experience but also one’s conscious attitudes toward the experience, that is, how the person understands and values the significance of the experience for him or herself. The primacy of sensory-perceptual immediacy over conceptual references was one of the most salient features of the behavior of the clients during their musical engagements. I will leave this subject for later discussion in order to remain focused on the energy properties found in the clients’ attuned states.
Bodily States: Vocal and Motional Expressions

Means of Conveying Immediate Experience

Related to sensory-perceptual primacy, immediate bodily actions such as vocal and motional expressions were found to be important means for realizing the clients’ energy and its attunement. Through voice and bodily movements, they seemed to have the most immediate access to their inwardly and/or outwardly evoked energy states. In the next presented excerpt, Cheryl’s bodily motions (in tandem with the music) served as an indispensable means for her to remain connected to herself and outer events.

Excerpt 6

Marie stops playing and asks Cheryl “Did that make you sleepy?” Cheryl is not responding to this as she sits motionlessly, covering her ears with her fingers. Marie plays fast abrupt notes interjected with singing “Wake up!!” No response from Cheryl. Marie stops playing the piano to ask Cheryl “What is it?” No response. Marie then walks to the metaphone. Cheryl continues to sit motionlessly while looking away from Marie. Marie returns to the piano. Cheryl plays a tremolo on the wind chime and pauses. Marie asks “What is it? What is it that you have to say?” She then sings “You can talk to me, Cheryl.” The song continues, “Something that you need to say, you can talk to me. You can play with me.” Cheryl covers her ear. Her affect seems blunted except for occasional mild smiles on her face. Marie quietly watches her. Complete silence lingers for a moment between the two. Marie then begins to play soft, slow, soothing music, reflecting the mood of the moment. Cheryl starts to respond bodily to the music, gently moving her head and upper body from side to side in synchrony with the music’s flow. At one point, she stands up and determinedly walks over to the other piano. Without any sign of hesitation, she sits on the piano stool and beings to play fast, lightly bouncing notes. She seems free and pleased to be doing so as she makes a subtle rhythmic dancing motion with her upper body to the music. Marie reflects this musically on the other piano.
The therapist's trying to "wake up" Cheryl from her "sleepiness" and bring her out of her inwardly-bound state did not seem to reach her or elicit a response from her. This was also true of the therapist's verbal inquisitiveness, which in an ordinary case might have elicited a self-reflective process. It did not seem to matter to Cheryl whether she expressed what was in her mind or whether another person was available to talk to. It is not even clear whether or not Cheryl had anything to say or was resistant to talking. What seems apparent instead is that she was more ready to engage through spontaneous music-making and bodily motions. This was demonstrated by the spontaneity and strengthened affect expressed through her bodily engagement, contrasting with her prior state. One aspect that obviously prompted the shift in Cheryl's expressive mode was the therapist asking for her to verbally reflect on her momentary thoughts and feelings, which, ironically, seemed to trigger an impulse in her to transition to a pre-reflective and bodily focused state.

Similarly, in the case of Engel, voice and bodily movements seemed to be a more crucial conveyer than any other expressive means, including instrumental playing. Shown next is an excerpt introduced earlier in Chapter IV.

Excerpt 7

Frowning, Engel plays the drum in heavy, slow marching beats with one hand and his other hand covering his ear, swaying from side to side, and making occasional utterances like "I don't know." He continuously makes groaning sounds of "huh...huh." Suddenly from such tense vocal groaning arises a beautifully hovering high pitched Middle Eastern melody "Ya-ha-ia-ya-ia..." Then he shortly goes back to the low, dragging groaning. His voice sounds compressed and frustrated and his drum beats are getting heavier, with occasional bursts of explosive, fast beats on the cymbal.
It is not clear whether or not Engel was seeking a specific quality of experience and was frustrated over not having it fulfilled. What is clearly manifested here, though, is that his tense energy is primarily expressed through immediate bodily actions such as unrefined vocal and gestural expressions. It was through such unformed, almost involuntarily discharged bodily motions and vocal groaning (interjected with a more relaxed, formed quality of singing) that Engel’s undifferentiated energy state found an outlet. The development of this state of undifferentiated energy to a more focused mode of expression shown in the above excerpt was rather brief and transient. The sudden emergence of Engel’s Middle Eastern singing seemed like an involuntary eruption of his inner aesthetic demand. Later in the same session, however, Engel’s vocal quality and style became more refined and established, as his energy and emerging musical patterns were reflected and further stimulated by the therapists.

For Stephanie, who was the most delayed among the research clients in the age-dependent developmental scale, the bodily instantiations were not only the primary, but almost the only expressive means through which she could access and respond to her intrinsic state as well as become attuned with the environment.

Excerpt 8

**Bodily and vocal response indicative of an internally stimulated energy state, still amorphous and unspecified in its directedness**

Stephanie enters the room to David’s “Good Morning, Stephanie.” Upon hearing this familiar song, Stephanie starts making stereotypic responses.
She sways her body side to side with her feet stomping in alternation, along with which she vocalizes and groans.

**A demonstration of awareness and responsiveness to the musical phrasing pattern; immediate sensory-motor synchronization to the music that elicits motional reaction**
She hits her own cheek at the end of each phrase David is playing.

**Immediate sensory-motor synchronization to the music, which releases a singing-like response**
David plays a melodic pattern of three notes in triplets [e’-b-e’/ e’-b-e’], to which Stephanie respond with the vocal sound “ooh~” in the high register. Stephanie begins pacing around the room and at one point walks over to the door. She is led back to the music area by Robyn, the co-therapist. David sings a long sustaining “ah~”. Stephanie produces another, yet this time more prolonged, high pitched “ah~”. The two sing in duet while David continues to play the melodic theme, thus providing an ongoing, familiar musical background.

**Immediate sensory-motor synchronization to the music expanding and deepening through exposure to an ongoing musical pattern; prolonged vocal response to match the pitch range of the three note melody in triplets**
As David continues to play the triplets of [e’-b-e’/ e’-b-e’], Stephanie now begins nodding her head to the rhythm of the triplets while continuously making the high pitched vocal responses.

The repetitive triplets played by the therapist seemed to provide Stephanie with an increasingly familiar structural context, to which her initially unformed, undirected, and involuntarily discharged vocal and motional responses gradually became attuned.

The above examples, among many similar instances observed during the research, may have a number of implications. First, it seems important for autistic clients in music therapy to be able to resort to immediate bodily means in order to access to their rather undifferentiated energy state. Second, energy-conveying
expressions are well mediated and further shaped by being matched by (or “clicked with”) externally provided musical and non-musical stimuli.

Sensory-Motor Synchronization

A functional mechanism known as sensory-motor synchronization or entrainment (Kurthen, 1999; McIntosh, et al, 1997; Thaut, et al, 1999) was important to the clients achieving body attunement. This refers to a sub-cortical process within the brain that involves a neural loop between sensory input and motor output. As a sub-cortical process, this mechanism does not necessarily involve secondary cognitive processing occurring on an implicit and pre-conscious level (without the person’s conscious awareness of his or her experience and response to the perceived stimuli). This is closely relevant for the current area of investigation as it provides further insights into the significance of the clients’ immediate and pre-reflective bodily responses to the music.

The next segment shows how Engel’s musical responses, highly sophisticated and rich in aesthetic structure, which seemed to bypass his conscious knowledge of the incoming stimuli as well as any awareness of his own response to them.

Excerpt 9

Engel improvises a vocal tune with Joan. His singing is mellow, very expressive, and interacts richly with all the musical components (i.e., the tonality, bass line, Joan’s vocal line and Dan’s vocal line), integrating them into his own singing. While still singing, Engel is led to sit at the other piano in parallel with Joan. Continuously singing in “la, la, la,” he begins tentatively exploring the piano keyboard, first pressing single notes,
then playing note clusters, and gradually feeding into the whole musical
groove created collaboratively with the therapists. His choice of notes and
chords and his finger movements on the piano seem to be random, but at
the same time guided by a search for experience that will satisfy inwardly
desired musical ideas and moods. He laughs hard, as if the laughter were
coming from the ultimate center of joy during his aesthetic and creative
experience.

I could not obtain any information on whether Engel had ever received
any musical training. Regardless, the above excerpt reveals he had an
extraordinary perceptual ability for music, including the ability to perceive parts
both separately and as a whole. He additionally demonstrated the capability to
appreciate and immerse himself in this part-whole musical context, weaving his
own creative ideas into the larger context.

It is hard to determine from looking at the scene whether or not Engel was
consciously aware of the musical notes and gestures he was making. In either
case, his vocalization and keyboard playing were sophisticated and coordinated
enough to weave through the musical context as a whole. This leads one to
assume that those expressions (the motor outputs in functional terms) were not
merely random motor outputs, but actually conveyed specific contents of
sensory-perceptual activation evoked within him.

Recent studies have found that the brain regions involved in sensory
processing can become activated by perceptual images invoked or replayed in the
mind without actual sensory stimuli, thereby eliciting motor responses as they
would in the actual presence of the stimuli (Washington, 1999). In Engel, the
perceptual activation – whether prompted internally or externally – and its
contribution to the subliminal process of sensory-motor synchronization seemed extraordinarily heightened.

Throughout the research, there was little indication that the clients' spontaneous bodily responses were necessarily mediated by their conscious awareness of their internal and external states. This, coupled with knowledge of the subliminal nature of sensory-motor synchronization, contributed to one other major area of my investigation concerned with the nature of recognition in the clients. This will be discussed in depth in chapter VII.

**Form and Rule-Following**

Another major aspect of the clients' state of attunement concerned the way it manifested, that is, the patterns, regularities and contextual conditions of its emergence. Given the emphasis of this study on the regularities of object-directedness emerging in action as a major aspect involved in one's intentionality, the issue here can be clarified by a consideration of the formal aspects of this emergence. This refers to the rule-following properties of the clients' behavior or behavior-generated processes (e.g., music, or more generally, the contextual moments per se). The remainder of this section is devoted to session segments with a focus on the rule-following properties of the clients' attunement, both unique to each client and common to all.
From Unshaped to Shaped

For all clients, an increase in certain types of regularity was inherent to the emergence of their states of attunement – both in structural patterns (the particular components of musical events) and processional patterns (the evolution of those components and events), which was carried through to their rule-following behavior. The specific conditions and patterns of this for each client were unique and varied. The central aspect of these regularities was that such formal aspect of the clients’ expressions provided, or became itself, a container or a conveyer, through which their primarily undifferentiated intrinsic energy state was allowed to assume context-dependent forms of expression and direction.

Excerpt 10

Cheryl settles into a certain mood while the therapist provides a musically open space.
Cheryl enters the room and walks immediately to the metalophone (her favorite recent instrument). She quietly sits at it, rocking her body with eyes closed. Marie plays some sporadically spaced notes in a Dorian mode. Cheryl, sitting parallel to Marie, continues to sit quietly and does not readily start playing. She momentarily grabs the penny whistle. Marie say, “Go ahead, Cheryl. Try it.” Cheryl immediately puts it back down.

Cheryl adheres to her momentary emotional need.
With her eyes still closed and rocking her body gently back and forth, Cheryl occasionally looks upward with a dim smile, adjusting her bodily movement to the music as if she were feeling her way into it. Marie’s music gradually shifts into a Middle Eastern mode, with slow-paced pedal tones. Cheryl puts her hands on her ears to cover them, and coils her body into an almost fetal position while rocking continuously. She appears contented for the most part, except when she squints her eye as if she were trying focus on an object. She lifts her face to look at the camera and smiles at it. Marie continues to play the slow-paced successions of pedal tones along with melodic figures of Middle Eastern associations, creating a mood reflective of the introverted space Cheryl seems to be in.
Gradual addition of new structural components and intensification of dynamics
Cheryl stands up to walk over to the other piano, facing the one Marie is playing. Without hesitation, she begins to play some notes on the piano, mostly on the white keys, that are lightly felt and wide-spaced in pitch and time. Cheryl uses all of the fingers of her right hand to play up and down the entire register of the keyboard then adds the left hand in the upper register. She plays freely ascending and descending notes using both of her hands and gradually adds chords and clusters in an expressive manner.

Bodily synchronization
Cheryl’s upper body is constantly in motion, yet this involves less stereotypic rocking and more relaxed swaying motions to the music created between her and Marie. The music goes on spontaneously without ceasing for a several minutes. Cheryl looks a bit tired as she rubs her eyes and face.

Cheryl actively participates in the open reflective musical context provided by the therapist and lets it develop into a space of interplay.
Marie musically reflects this slowed down mood by playing slower, softer and more intervallically spaced notes. The notes now shift gradually into a pentatonic scale. Cheryl plays along with Marie, her notes slower and more mellow. Marie occasionally interjects some abrupt repetitive notes and chords interspersed with the ongoing mellow melodic passages. Cheryl picks them up immediately to play back at Marie in the similar way. This interactive play lasts only a short time.

Cheryl is no longer inclined to go on in the same style of playing, yet waits to move on until therapist brings the music to an end.
Cheryl looks tired and leaves a long pause without playing, rubbing her eyes. Marie brings the music to an end. Cheryl immediately gets up to move back to the metalophone.

Spontaneous, immediate and determined actions
Cheryl then sets the temple blocks close to her and begins to tap them with sticks. Marie reflects these tapping notes in a Phrygian mode. A melodic theme [e—e-e-e-A—e—A—e—] is created. Cheryl suddenly stops as if she were interrupted by this newly introduced Phrygian theme. Her stopping seems abrupt, but very certain and assertive. Cheryl leaves a long pause.

New, nonverbal expressions associated with NOT playing music
Marie plays various melodic passages to reflect Cheryl’s actions. Cheryl sits still, facing away from Marie, giving little sign of responding to the
music. Cheryl closes her eyes and brings her hands to her ears to cover them.

*Cheryl in a state of neither-yes-nor-no.*

Approximately a minute passes in complete silence. Marie finally says to Cheryl, “Should we play some more? Or have some more silence?” Cheryl does not respond.

*The therapist continues to make musical gestures toward Cheryl. Cheryl still does not pick up on any external patterns, but instead responds to her inner state using bodily motions.*

Marie plays some dissonant, heavily pedaled notes and chords leaving extended space in between. Little response is shown from Cheryl. Marie pauses to leave a long silence. Cheryl opens her eyes and takes her hands off of her ears. Her body starts to move again, subtly at first then gradually with more active upper body dancing movements.

*An ending and a new beginning*

Marie finally stops playing. Cheryl then immediately begins to play the two-leveled, full-scaled metalophone (diatonic notes on the upper level keys, and the flat and sharp notes on the lower level keys).

*Gradual extension of musical structure and an intensification of dynamics in Cheryl’s playing: introduction of a new musical theme → stabilization/consolidation of the theme → addition of a new musical element → alternations and escalation*

Cheryl continues to play the metalophone in a light, free-floating mood. There is a short pause. Briefly she begins to play the sharp and flat notes on the upper level keyboard of the metalophone (she was previously playing the C major diatonic keys on the lower level). Then she goes back to the lower level keys and again returns to the upper level. A clearly alternating pattern of playing is developed, as Cheryl continues to play distinctly back and forth between the two key levels. Her playing is getting busier and faster. The music gets lighter and livelier.

*More dynamic escalation*

Marie leaves many pauses in between her notes for Cheryl to fill in and additionally throws in playful trills and disharmonic notes. Cheryl plays along with this, interjecting with similar patterns and qualities of notes on the metalophone. Cheryl then moves to the drum to throw in a series of fast beats. Her musical dynamics are escalating in general. Marie plays a prominent pattern of steady beats. The music is becoming groovier as turns into a Middle Eastern theme. Between Marie and Cheryl, the music speeds up and the dynamics increased. Notes are getting busier and busier to the point where they become almost excited trills. Cheryl plays a loud
cymbal beat occasionally at the end of each phrase, highlighting the cadences.

**Cheryl is deeply immersed in the experience and rocks her body.**
At one point, Cheryl suddenly stops her playing while still rocking her body to the rhythm.

**Cheryl verbally responds to therapist’s announcement.**
Marie stops playing and says it is time for them to stop. She adds that they will skip next week’s session. No response from Cheryl. She sits quietly facing away from Marie. Marie says, “What are you thinking?” S says in a rigid and slightly stuttering speech, “I will miss... next, next week then.”

**Cheryl leaves the room silently without saying goodbye.**
Marie sings in a soothing voice and melody, “We will miss next week then, but we’ll be back on the 16th.” Cheryl listens to this quietly looking calm, yet without looking at Marie or responding otherwise. Marie keeps on singing the good bye song, leaving pauses for Cheryl to fill. She sings to Cheryl “Say it.. Say it, Cheryl!” S smiles only instead and walks out of the door before the music is over.

It seemed crucial for Cheryl that she was first allowed to settle into her mood or energy state before she attended and engaged in any further activities or moods. This involved her sitting in a certain space in a certain position making a certain sort of sound or no sound, and/or movement for as long as it was required for her to feel complete in that state and ready to move on. More formed and directed actions and reactions ensued both on an intrapersonal and an interpersonal level once her intrinsic mood state was seemingly securely grasped through her initial search.

The table below delineates how this process evolved in form and direction.
<table>
<thead>
<tr>
<th>Intrapersonal level: initial settling into the mood and energy state and further attunement through music.</th>
<th>Cheryl settles into her intrinsic mood and energy state while the therapist musically supports and reflects it. Moving from physical distance to proximity with the therapist; shift of instrument to that of the same kind the therapist plays; Gradual extension of structural and dynamic components – e.g., from playing with left hand only to playing with both hands; from fewer and more widely spaced notes to more and busier notes; from single notes to the clusters; from less patterned playing to more patterned playing; and from more tentative and careful exploration to a freer and fuller-affected expression.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning to tune into external components of music.</td>
<td>Cheryl’s bodily motions synchronize with therapist’s music as it carefully tunes into and reflects her deeply personal musical expressions. Therapist introduces a new, yet still open structured mode of music and Cheryl readily engages with it in an interactive manner. This interactive play lasts only a short time. Loss of motivation for continuing as before and</td>
</tr>
</tbody>
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| Being detached from her surroundings and remaining responsive to her inner mood and bodily state alone. | Cheryl initiates a spontaneous musical action (i.e., the metalophone playing), yet stops immediately and determinedly as therapist plays a musical passage (i.e., the Phrygian theme) in response to her.  
Interpersonal play ceases as Cheryl enters into a non-playing mode.  
Cheryl does not respond to therapist asking her to determine “what it is” that she feels.  
She instead remains immersed in her bodily expressive state. |
|---|---|
| Cheryl is allowed to assume the lead and more formed patterns of musical expressions emerge: more regular patterns develop in musical dynamics – both on an intrapersonal and an interpersonal level. | Switch: Marie stops playing and Cheryl immediately takes on the dominant role in the music playing.  
Within Cheryl’s own playing, there is a gradual build up of musical structure and dynamics: a new repertoire of musical expression (i.e., the light staccato notes on the lower level keys on the |
metalophone) is introduced to be repeated and consolidated in its own pattern and mood, then to be added to and alternated repeatedly with another musical component (i.e., the upper level notes on the same instrument) till the alternating pattern becomes stabilized while the music overall becomes groovier and more dynamic.

The music continues to escalate in dynamic through the interaction between Cheryl and the therapist.

Bodily reaction to the deeply felt musical experience.

Session ends: Cheryl learns that the next session will be skipped, repeats it verbally and leaves the room quietly as the goodbye song is sung.

The extent to which Cheryl seems to cling to her intrinsic need was distinguished as shown above. In fact, her endeavoring to responding truthfully to her need – or, perhaps her natural inclination to do so – seems to be what guided her rule-following behavior of all realms as well as the process of this session as a whole. It is not clear what her need exactly was at the moment. At best one can only intuit into her mood state and her desire for certain expressive qualities, which did not seem to need to be explained and communicated explicitly.

Meanwhile, it was apparent that what was most important for Cheryl during her
musical engagement was that her mood and energy state was pursued and actualized more on an aesthetic realm than otherwise. This is partly shown by her stubbornness in not responding to any external demands that were extrinsic to her mood, energy and aesthetic needs at the moment. Included in those external demands were those asking for her to talk about her feelings or thoughts at a given moment, or to say the words “good bye,” a typically social-laden, ritualistic gesture, when she was already immersed in the moment of ending.

Another aspect of regularity found significant in the process of musical engagement of Cheryl was the circumstances that allowed her to access and tune further into her intrinsic states within the context, which seemed to follow consistent and unique patterns as well. This is well exemplified by the session presented above: first, it was imperative that the circumstance allowed Cheryl to enter and find her own space within it, for instance, to be able to choose a certain place and bodily posture to be in and instrument to play, and to feel her way into her mood and energy state through prompted actions (e.g., bodily motions or instrumental sounds of her own choice); second, the therapist needed to support Cheryl’s continuation in that state for she herself required (not for as long as the therapist would decide for her) and provide a musical space of a mood supportive of hers, while being structurally open; and, third, the interpersonal interactions, either musical or verbal, had to wait for and evolve based on Cheryl’s readiness – the spontaneous prompt in her for interpersonal gestures only after she had accessed and tuned into her own mood and consolidated intrinsically evoked patterns of expression. For the last condition in particular, it was important that
the therapist not impose on Cheryl any verbal or musical theme of her own choice, which might be extrinsic to Cheryl’s momentary state.

An overall form that arose with regard to the circumstantial conditions for the entire course of the session is delineated in Table 2.

Table 2. Realizing intrinsic desire within the external context

<table>
<thead>
<tr>
<th>Connecting with her intrapersonal state by way of her own music: accessing, tuning further into, and having a deeper grasp of an intrinsic mood or energy state</th>
<th>Settling into an intrinsic state through immediately-felt bodily experiences.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Further tuning into the intrinsic state – for instance repeating the initially introduced sounds, turning them into a more formed pattern and expanding the overall musical structure/intensity through repetition of the initial theme. Also the addition of new thematic components, and alternating between the new and old patterns.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Realizing her intrinsic state within the external context</th>
<th>Beginning to tune into external components of music through immediately-felt bodily experiences.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asserting and securing her intrinsic state against the external events.</td>
<td></td>
</tr>
</tbody>
</table>

| Initiation of a new patterned expression and its development/ differentiation within the newly facilitated context – again through repetition, addition of a new component, alternation between the old and new components, and consolidation of the alternating structure. |
Intensification of interactive playing involving attunement into the intrinsic state.

Being further attuned into the intrinsic state simultaneously with the external context.

Coming to an end.

Inevitably, the circumstantial conditions and Cheryl’s musical engagement were a mutual process, in which she and the therapist were influencing and influenced by each other, giving rise to the overall form of the session progress as a whole. This also implies that the form emerging through Cheryl’s musical engagement was conveyed through her rule-following on two levels. On one level, she was seeking and tuning into circumstantial conditions in order to realize her intrinsic state. The other level involved her following the regularities of experiences within the interactive music-making process, such as sameness, patterned variations, alternation between old and new patterns, expansion through hierarchical layering of pattern constructs and figure-ground structures.

Familiarity and Liking

Familiarity was an important component that seemed to contribute to an attuned state in all the clients as they engaged in music-making. This appeared to be because it provided a basis for patterns involving a relationship between the original and its variations (e.g., contrast or expansion) in the clients’ musical
engagement, thus contributing to forms and directionality in dynamics as well as resulting in their becoming attuned and further attuned as a whole.

Inherent in these moments was their feeling inclined to or “liking” what was familiar to them. This was manifested through the clients’ spontaneity and willingness as they engaged with familiar events. When a familiar musical component, mood or pattern evoked spontaneous attention and motivation in a client, he or she usually persisted to engage with it repeatedly in a deeply immersed manner for a prolonged length of time.

The properties of the familiar stimuli that contributed to such a spontaneously inclined state were specific to the clients and the moments they were engaging in. Meanwhile, for all the clients, there were salient rule-governed properties embedded in their spontaneously engagement with these favored familiar musical patterns. This is an important consideration for music therapists, as it provides an implication for how to tune into these types of clients, not only in terms of their momentary emotional state, but also the patterns of their perception and action. For Engel, for instance, it was primarily playing with a favored familiar musical pattern that allowed him to stay attentive and motivated, eventually evoking a state of attunement in him with a certain form and directionality.

Excerpt 11

*Engel moves through the routine structures of session activities.*
Engel gets up and says “One More Time” (a regular part of the overall sequence of session that had developed recently). He pulls the metalophone over to him and begins playing it. Along with this begins his
vocalizing, which soon develops into an expressive, fully projected singing. He seems familiar with the tune in general.

_He pauses and starts to explore unfamiliar musical components._
Engel’s singing pauses at a phrase that he doesn’t seem quite familiar with. He starts vocally exploring the notes. He seems to be searching for a certain melodic pattern. This tentative and uncertain vocal searching is followed by Joan playing the “correct” notes for the pertinent part of the song. Engel picks them up instantly.

_He returns to the familiar: freer and more expressive singing._
As the song returns to the beginning, Engel gets back into a freer and more expressive mode of singing. He seems intensely focused and animated as he continues with this vocal activity for a few more rounds. A clearly alternating pattern between the familiar expressive singing and the unfamiliar tentative vocal searching emerges. He seems excitedly expecting to go back to the full mode of expression when he is in the opposite mode of “searching.” He seems more and more excited each time he returns to the “fully expressive mode.”

_The therapist introduces novel musical components and dynamics, Engel plays along with it._
At one point Joan improvises some excited ascending passages to Engel’s expressive mode of singing. Engel immediately responds to this with excited ascending glissandi on the metalophone and a big happy smile. A very dynamic, loud and excited music evolves between Engel and Joan as they go on playing closely together. Then the music pauses shortly to create a silence. Engel resumes singing the tune “One More Time.” The song progresses similarly to the previous pattern, alternating between the fully expressive singing and the tentative vocal searching.

An important component in Engel’s playing around the favored and familiar musical pattern was the contrast created through the alternation between the familiar and the unfamiliar parts of the song. As shown above, the unfamiliar parts became an integral part of this singing activity as it went on, thereby giving rise to a clear pattern of contrast (in terms of both mood and affect), the energy qualities of vocal and bodily expression, and interactive musical dynamics between Engel and the therapist. This was demonstrated by a set of
manifestations: the extent of spontaneity and willingness, focused-ness and affective striving Engel showed in the unfamiliar searching, sense of joyful expectation in returning to the familiar, the prolonged time he persisted through this activity, and the increase of emotional energy and interactive dynamics that resulted as the song repeated.

The regularities in Engel’s musical engagement were unique and consistent in that they seemed to almost invariably evolve around aesthetically favored familiar sensory-perceptual patterns. For instance, in the above excerpt, one can see how his musical expression progressed by stages. First it began to establish contrast through alternating between the familiar/ fully expressive and the unfamiliar/tentative searching. Then it moved readily into engaging with an improvisational pattern prompted by the therapist. Finally it returned to the original construct of contrast. This can be outlined formally as shown in Table 3.

Table 3. Searching for the aesthetically desired

<table>
<thead>
<tr>
<th>A construct of alternating patterns between the familiar/ fully expressive (a) and the unfamiliar/tentative searching (b)</th>
<th>A (a-b-a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readily moving onto engaging with an improvisational pattern prompted by the therapist</td>
<td>B</td>
</tr>
<tr>
<td>Returning to the original construct of contrast</td>
<td>A (a-b-a)</td>
</tr>
</tbody>
</table>
As a result, the whole of the presented segment constituted a hierarchically organized structure as below:

\[\{A (a-b-a) \rightarrow B \rightarrow A (a-b-a)\}\]

While the above is only a segment of a session and of the entire therapy process, one can see how within this segment there emerged a hierarchical layering of formal structures:

A sensory-perceptual pattern of a certain kind associated with a particular mood/energy comes to serve as a figure through actions such as repetition and accentuation (e.g., dramatization) by contrasting with the rest of the context:

(a)

The figure pattern becomes stabilized while a new pattern is introduced to contrast with the original:

(a \rightarrow b)

The original figure pattern becomes further consolidated as a ground, serving as a returning center for the alternating pattern (a \rightarrow b):

(a \rightarrow b \rightarrow a)

The pattern (a \rightarrow b \rightarrow a) is consolidated through repetition and dynamic intensification and develops into yet another figure construct of a structurally higher order as a new component is introduced:

\[\{A (a \rightarrow b \rightarrow a) \rightarrow B\}\]
The higher order construct \( \{A (a - b - a)\} \) becomes a new, higher order ground as it serves as the returning basis of the alternating pattern \( \{A (a - b - a) - B\} \):

\[
\{A (a - b - a) - B - A (a - b - a)\}
\]

In essence, the regularities that arose in Engel’s musical engagement can be characterized by a dynamic development of hierarchical figure-ground constructs.

Circumstantially, it seemed to be a crucial component for the therapy process for Engel that he was allowed to continue with this song activity repeatedly as long as he needed to explore all the perceptual, aesthetic and expressive contents evoked in him through the song. The open-ended context provided a space for Engel to freely immerse with a familiar and favored musical pattern, whereby spontaneous regularities and directionality emerged in his musical engagement resulting in a heightened state of attunement. Throughout all the sessions observed, the conditions that contributed to the emergence of an attuned state in Engel seemed to converge into three major components: the external context that allowed openness in structure and time, perceptual familiarity combined with aesthetic inclination, and regularities emerging through his musical engagement.
Consistency

While contrast involving familiarity and intrinsic aestheticism was a most important property that guided the formal process of Engel’s musical engagement, for Stephanie it was rather consistency and steadiness of the familiar musical patterns that formed the basis of an attuned state emerging in her. The next excerpt describes a session with Stephanie, which can be seen as a milestone for her therapy in terms of its progress as a whole.

Excerpt 12

*Stephanie enters the music room in an undirected energy state: there is little sign of awareness and/or reference to her bodily relationship to the environment.*
She comes in pacing around the room somewhat aimlessly, constantly sucking her thumb and making a high-pitched squeaking vocal sound. Robyn (co-therapist) paces slowly with her and sings “Good Morning, Stephanie.” David begins to play music in an open, unfolding mood with fast, dynamically ascending diatonic chords that suddenly pause at the top end of the phrase. He sings hovering high pitched notes to reflect Stephanie’s slow undirected wandering. Robyn holds Stephanie’s hand and invites her into waltz-motioned dancing. Stephanie neither actively resists nor readily engages in this bodily moving.

*A general receptivity toward the music expressed in bodily motion and gesture*
Robyn leads Stephanie to the piano and lets her sit by David. David and Robyn play call and response between the piano and the drum in steady moderato beats. Stephanie stops making the squeaking voice. She seems to be receptive to the music as she sits quietly staring into space and leaning her body slightly over to David, still rocking in a mild motion with a thumb in her mouth.

*Primitive registration of phrasing and reaction*
At one point when the two therapists leave a short pause in their playing, Stephanie fills it in with a soft vocal sound “Hum—”
She reacts instantaneously to the previously introduced musical patterns: her reaction is generated more from previously registered perceptual experiences than from extrinsically imposed mood/dynamics or novel musical patterns.

David now plays a melodic theme \([e''-b-e'/ e''-b-e']\) in C major (this has been played in every session for the past few months and thus become a consistent part of session). Stephanie starts making a subtle head nodding motion upon hearing this theme. Robyn holds Stephanie’s hand to help her beat the drum in sync with David’s steady beats. Stephanie does not seem to click with David’s music. David keeps on playing in a Dorian mode. His whole musical and physical presentations are somewhat theatric mood-laden as he loudly and passionately sings “la, la, la” with a dramatic voice and bodily motions. He once tries to hold Stephanie’s hand to help her play a sequence of descending notes on the piano. Stephanie shows no sign of attention or response to David’s musical direction. Rather, she seems to be going back to her initial mode as she makes non-directed and uninformed vocal-motor discharges with little sign of object-directedness.

Patterned reaction to a repeatedly modeled musical pattern

Robyn holds Stephanie’s hand again to help her play the basic beats with David playing the melodic theme, \([e''-b-e'/ e''-b-e']\). There is no spontaneous response from Stephanie. Robyn then models the response for Stephanie by repeatedly showing her how to beat the drum at the end of the phrase of the music. After a few repeats, Stephanie begins to beat the drum filling in the pauses David leaves in between his phrases. Her response repeats for a couple of cycles, though she is not consistent. Robyn continues to play the response beat along with Stephanie.

Through repeated and prolonged exposure to a consistent musical pattern, Stephanie enters into an attuned state and her primitive energy state assumes a form.

Stephanie begins to smile while looking at the drum. Her eye gaze is not pointlessly wandering around the room any more. She is still not directly looking toward Robyn or the drum, but her face is turned to the drum. Stephanie stands still beside the drum without making any involuntarily discharged jerky movement or sound. Though not actively participating in music making yet, Stephanie seems to be paying prolonged attention to the therapists’ music. David continues to play the melodic pattern of \([e''-b-e'-e''-b-e']\) and Robyn consistently fills in with steady drum beats at the end of each phrase, whereby a call and response pattern is created between the two. Stephanie remains attentive and focused for several minutes without getting distracted or making any jerky movement or sound.
Awareness of and spontaneous attention/reaction to the conspicuous pattern of basic beats
The music now shifts into a diatonically descending chord passage in D major with the soprano melodic line of [d-c#-b-a-g-f#-c#-d:] in solid steady down beats in andante. (This was a musical passage introduced a couple of sessions ago, which Stephanie paid close attention to and reacted to). Robyn plays the drum in synchrony with David. There is a strong feel of groove in the music between the therapists. Along with this, Stephanie begins to play the drum spontaneously. Her beats are roughly in synchrony with the therapists’ steady beats, though not precisely on every beat. Her drumming continues for a relatively prolonged length of time (a couple of minutes).

Therapists continue to provide a consistent, prolonged and pronounced regular structure.
David continues to play the descending chords in D major. The music’s rhythmic, melodic and harmonic patterns are simple and groovy. Robyn continues to fill in the pause with steady beats, whether Stephanie plays her beats or not, thus maintaining the ongoing pattern.

Sense of amusement and pleasure to the unexpected shift of sound
Robyn’s drumming begins to speed up and gradually to turn into fast tremolos while remaining broadly in the same interactive rhythmic call and response structure. Stephanie seems to recognize this change in the dynamics and is amused by it as she giggles and claps excitedly to the tremolo.

Reactions are generated in a more spontaneous and specifically directed manner when fully immersed within a patterned musical context
Robyn holds Stephanie’s hand again to help her beat the conga. Stephanie attentively looks at her own hand held by Robyn and starts beating the conga. There is little sign of distraction or irritation while she immerses herself in this conga playing. David plays the theme of [e’’-b-e’’/ e’’-b-e’’], again leaving pauses between the phrases. Stephanie begins to spontaneously fill in the space with her beats without Robyn to assist her.

Sensory-perceptual recognition and immediate bodily rhythmic reaction
David now shifts back to the D major descending chord sequence. Stephanie plays more secure steady beats in sync with David. Her face is looking slightly upwards with a big smile. The music between David and Stephanie goes on for an even more prolonged period of time.
Once tuned into the musical patterns, she becomes immersed in her surroundings as a whole more fully and embodied.

“Now it’s time to say good bye” sings David in a very soothing voice. Stephanie seems relaxed both physically and emotionally. She hums in a relaxed voice that matches the energy and mood of the moment. Stephanie is led to the piano. Looking very calm and relaxed, she sits by David spontaneously. She slowly leans her body over to the piano and brings her face close to the keyboard. She is very calm and appears content. She then begins vocalizing in high pitched sound, slowly and gently rocking her body. Her vocal tones are of a more sustaining and lightly hovering quality than of an involuntarily discharging kind, and her bodily movement is less jerky and roughly in sync with the music’s basic beats.

An overall progress of the session is shown below in Table 4.

Table 4. An emergence of attunement

<table>
<thead>
<tr>
<th>Being exposed to the musical space</th>
<th>Undirected energy state</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General receptivity and physical proximity to the source of musical sound</td>
</tr>
<tr>
<td>Primitive level of perceptual registration and motional reaction</td>
<td>Perceptual registration and bodily reaction to steady familiar musical patterns evoked by directive and repeated contextual cues (e.g., filling in the pause between phrases with steady going beats)</td>
</tr>
<tr>
<td></td>
<td>Bodily reaction prompted by steady familiar perceptual patterns</td>
</tr>
<tr>
<td>An attuned state is achieved with directive and repeated representation of familiar steady musical patterns</td>
<td>Bodily reaction to the music becomes consistent</td>
</tr>
<tr>
<td></td>
<td>Affective reactions associated with the bodily reaction</td>
</tr>
</tbody>
</table>

121
<table>
<thead>
<tr>
<th>An attuned state emerges and further develops based on a consistent perceptual context (i.e., steady familiar musical patterns)</th>
<th>More spontaneous and consistent responses to familiar steady musical patterns: drumming reactions to different steady familiar musical passages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent perceptual context enhanced as the therapists continue to facilitate with steady and familiar musical patterns</td>
<td>A sense of perceptual expectation is created through prolonged exposure to consistent musical patterns: the broken expectation elicits perceptual recognition along with affective response, i.e., surprise and amusement</td>
</tr>
<tr>
<td>An attuned state is further consolidated: more spontaneous, consistent and prolonged reactions to varied familiar steady musical patterns</td>
<td>Immersed in the steady, familiar musical context for a prolonged length of time.</td>
</tr>
<tr>
<td>Being attuned on a holistic level</td>
<td>Deeply attuned on physical, vocal, emotional, and interactive levels.</td>
</tr>
</tbody>
</table>

The structural process of the session as delineated above demonstrates how Stephanie’s intrinsic state appeared initially to be largely unformed and undirected, and how it gradually emerged into an attuned state. This attunement
assumed certain forms and directionality in her responses as she was continually exposed to the steady, familiar musical patterns.

Stephanie’s general functioning level was low: her sensory-perceptual skill was incoherent and not centralized, her gross and fine motor skills were poorly coordinated, her language and other higher cognitive abilities were severely underdeveloped, and her emotive and affective features were shown to be only transient and reactive to the most immediate sensory-perceptual experiences. Consequently, she seemed less able to access to her intrinsic state spontaneously, either on her own or utilizing the sensory-perceptual and expressive resources created within the therapeutic context. For this reason, entering an attuned and directed state within the music seemed to follow a different path. It seemed that the therapists’ employing directive and repetitive interventions throughout the session was an effective therapeutic choice, which helped Stephanie perceptually register the musical regularities along with their dynamic grooves. This in turn seemed to prompt instantaneous motor responses and ultimately a further attuned state on a more integrated level involving emotional and interpersonal connectedness.

Phenomenal Space

The conditions that contributed to the emergence of an attuned state in the clients converged on two essential components: perceptual musical patterns and a form-facilitating context. Whether the perceptual musical patterns needed to be of a familiar kind and whether the form-facilitating context had to be self-
initiated or prompted by therapist varied between clients, depending in part on the level of their developmental functioning. Meanwhile, it seems worth reflecting on how regularities facilitated the emergence of their attuned states. First, the formative properties arising in the clients’ musical engagement became a shaped expressive channel for them to access their intrinsic, primarily unformed energy states. Conversely, through formed or patterned expressions, the clients’ intrinsic states were provided with a phenomenal space to emerge into, that is, a place to realize themselves. Second, the rule-following actions of the clients were the basis for their becoming emotionally and interpersonally enlivened, thus contributing to a more integrated state of attunement. Put together, the formative properties arising through the clients’ musical engagements, both in their behavior and music, served as a phenomenal space through which their originally unformed intrinsic states became realized.

Relating to the therapist(s)

One of the most significant aspects involved in an attuned state emerging in the clients was their ways of relating to the therapist. How did the clients become attuned to their therapist while engaging in music making? What were the properties that characterized the processes and qualities of their interpersonal attunement, if any, and were they distinct from the interpersonal attunement occurring in ordinary individuals? What contributed to this process and what was the therapist’s role in it? The emphasis while exploring these questions was on the patterns of interpersonal attunement (i.e., the regularities of the clients’
spontaneous attentions and reactions, in terms of interacting with the therapists),
without subordinating those patterns to a standard psychological category.

The interpersonal attunement observed in the clients was characterized by
the clients’ readily and consistently taking on the musical components and
patterns provided by the therapists while showing affective, physical and other
personally directed responses to them. Not surprisingly, the clients’ attunement to
the therapists was an integral part of their becoming attuned within the context in
general. The therapists’ role was most conducive to this when their therapeutic
interventions were geared toward helping the clients realize their intrinsic state.
Another important role of the therapist in the same regard was to support the rule-
following behavior that was unique to each client, thus allowing his or her
intrinsic desire to emerge within certain patterned expressions. Moreover, the
clients seemed to be interpersonally attuned to the therapists most effectively
when the therapists reinforced the clients’ immediate sensory-perceptual
experiences – such as focuses on particular sound qualities, tactile sensation of an
instrument, distinctive musical patterns or dynamics – by participating in them
with clients in a genuinely interested manner.

In summary, there were no aspects of the clients’ *interpersonal* attunement
that did not share their core properties with those found in the clients’ *general
state of* attunement (i.e., attunement to non-personal objects or events in the
surroundings). Ros Blackburn, an autistic woman with highly verbal and self-
reflective skills, states that autism is a “people-blindness” rather than a “mind-
blindness”, as has been suggested (mostly by the theorists in the fields of
cognitive psychology and neuroscience) because it is characterized by "the inability to single out people as special, separate, unique entities different from bits of the furniture, different from even the family per dog." (2005, Public Lecture).

I do not mean to conclude that the clients' relating to other persons or interpersonal matters is no different than their relating to non-personal objects or events. Rather, I am actively recognizing that it was the same principal motivations, whether or not persons are involved, that guided the process of the autistic clients' becoming attuned and further directed in their musical surroundings.
CHAPTER VI
THE STATE OF EMOTION

Accompanying the emergence of sensory-perceptual attunement in the clients was the inevitable presence of motivational or affective properties, which could be identified in essence as states of emotion. The choice of the term ‘emotion’ over ‘feeling’ is important, as it refers specifically to a state of mind focused on in this Chapter. The Chapter is geared towards exploring the patterns of the affect-laden reactions of the clients during the music making, for which a conscious and self-aware process of valuing experiences didn’t seem to be necessarily required. Damasio (1999), among others, provides a clearly articulated view of the role of consciousness and self-awareness in distinguishing a mind that feels an emotion from one that is in a state of emotion:

… emotion cannot be known to the subjects having them before there is a consciousness. … We know that we have an emotion when the sense of a feeling self is created in our minds. Until there is the sense of a feeling self, in both evolutionary terms as well as in a developing individual, there exist well-orchestrated responses, which constitute an emotion, and ensuing brain representations, which constitute a feeling. But we only know that we feel an emotion when we sense that emotion is sensed as happening in our organism. (p.279)
Our emotion in this sense can be substantiated by a pre-conscious or subliminal process of valuing experiences, that is, an intrinsic valuation, such as pleasure or displeasure, attractions or aversions, or basic desire or disgust (Damasio, 1994, 2001; LeDoux, 1996, 2001). An emotional state emerges through a very basic level of psychological and physiological processing with ensuing affective reactions such as those expressing happiness, joy, content, frustration, or anger.

Approaching the clients’ emotional state with a primary focus on its subliminal processes and their reactive patterns was both prompted by and resulted from my maintaining a non-informed observer’s stance throughout the research. This was in an attempt to remain faithful to the emerging patterns of spontaneously evoked emotional reactions in the clients during their musical engagement, which might or might not be mediated in part by their feeling of emotions. Underlying this was an assumption that one need not be aware of his or her self in relating to surroundings in order to have emotional evocations, as was recognized above by Damasio (1999). This was not to be opposed to the role of consciousness or self-awareness in mediating the emotional actions or reactions of the clients. Rather it was to ensure that I adhered to describing the clients’ behavioral manifestations without letting my inferences about their conscious intentions affect my observations. Accordingly, the emphasis of the observation was on following the patterns of the clients’ affect-laden expression during the sessions without reasoning about them. The questions that guided this part of inquiry were as follows: What were the qualitative components indicating or held
within the clients' state of emotion? How were they conveyed? What were the conditions for and consequences of this state? What were the patterns of emotional processes that were common across the clients and which were unique to each client?

There were countless moments in the examined sessions in which the clients showed emotional responses. These responses varied to a great degree in their affective qualities, scope and intensity of responses, and patterns of occurrence in relation to the contextual conditions. To achieve a certain depth of analysis and to best serve the interests of clarity and efficiency, I chose six excerpts (including the ones previously presented), which will be used repeatedly in this Chapter.

Striving

Episodes of frustration were common to all three clients. In general, this occurred when the clients were attuned enough to pay attention to and engage with the music, yet their experience was not gratifying enough to meet their expressive needs. Frustration frequently occurred when the clients encountered a certain sort of interruption in their continuum of experience, such as the change of a musical pattern or the introduction of new components. The introduction of new musical tunes, instruments or activities, or changes in routine session structures often seemed to surprise or upset them and elicit emotional responses that were typically carried on an undifferentiated, primitive energy level. The clients in these moments appeared to be actively resistant to or irritated by the
newly created context, or rather disconnected or withdrawn from their engagement with music and therapists in general.

Other occasions of conspicuous emotional responses in the clients involved moments when they were deeply immersed in their experience and seemed to have an internal demand for further, highly specific expressive components (e.g. textural properties in the music).

What was found to be central to such emotion-laden states when the clients were faced with either novelty or lack of gratification was a persistent striving and seeking to complete the expressive desires prompted within them, which seemed to be intensely persistent until they were met. I felt that the essence of these emotional states metaphorically approximated the energy qualities involved in a birthing process. The clients' presence in these states were quite pronounced in their pain (frustration), endurance, and striving in pursuit of a fully lived and shaped life of an internally invoked expressive idea. In this sense, the emotional states in the clients can be viewed as an integral part of their creative becoming in the context. This is supported by the positive emotional sentiment apparent in the clients once their expressive desires were met. Some of these positive emotional responses consequent from the “birthing” included feelings of contentment, joy, excitement, physical ease, and affectionate expressions toward the therapists. The next two excerpts show the process of birthing occurring in the clients’ musical engagements as they endured and strived for their intrinsic desires to be realized.
A set of novel musical components is introduced and Stephanie becomes upset and restless.

[Gradually transitioning from the previous musical activity] David now initiates a new song activity, ‘What’s That?’ This transition seems to upset Stephanie as she begins to groan in a high-pitched voice, walk off to the center of the room to sway her body anxiously side to side, suck her thumb and then to get down and roll on the floor. David continues to sing the song in a mellow, expressive voice at an andante tempo. Robyn tries to engage Stephanie in this activity by holding her arm and pointing at different objects named in the song. Stephanie jerks away from Robyn irritably. She restlessly paces around the room, making involuntary bodily and vocal discharges, e.g., groaning, jerking her head, and covering ears or slapping her own face with her hands.

David stops playing the song and Stephanie takes the lead to continue with the activity.

As the music goes on, the different roles of the three participants are established, i.e., David as the primary music provider, Robyn as the assistant, and Stephanie as the pacer with jerky vocal and bodily discharges. At one point David stops playing the music to ask Stephanie “Should we play something else?” After a few seconds of silence, Stephanie comes around to David at the piano, making relatively less high-pitched and more sustained vocal sounds of “Hum- hum-” or “Woo, woo-.” She then lays her hands on the keyboard to press them, yet her hands’ pressure is too weak to actually produce a sound. She lightly slaps David’s back a few times. David resumes playing the naming song. Stephanie resumes swaying her body side to side (more stably this time) and makes high-pitched vocal sounds. Her bodily motion and vocalization seem to be coupled with each other more solidly and consistently as David continues to play the song in a steady andante tempo and a loud volume.

Stephanie perceives the regularities in the music on a primitive level and responds to them through immediate bodily expressions.

The music goes on repeatedly while David plays in a consistently stylized way in order to bring out certain expressive properties of the song — e.g., a loud suspended chord on the syllable “WHA-” in an exaggerated singing voice, followed by the next words “–t’s that?” played in a resolute vocal tone and piano chords. As the song repeats this way several times, Stephanie begins to make a subtle head-nodding motion to the phrase, which is immediately followed by her slapping her own face. As David sings, “It’s Stephanie’s face,” she makes short-sustaining vocal sounds of “Hum- hum-” roughly to the steady beats of the music. At one point,
David sings in a falsetto voice a high-pitched sustaining note “Ah-.”
Stephanie sings back “Woo-” in the same pitch.

She expresses a sense of pleasure and increased relatedness to David.
Stephanie smiles as she vocalizes with David. She comes around to the
piano, making subtle head-nodding motions to the music. She continues to
stand next to him as the music goes on. She seems to be in a relaxed
bodily state as she stands still without being rigid or tense, or making
jerky movement. Occasionally Stephanie leans her upper body over the
piano, turns to David (without making direct eye-contact yet), then stares
intently into the air as he plays sustained tremolo chords. She turns to
David again with a smile.

Excerpt 14

Birthing pain: Engel endures his frustration and strives to get out the
inwardly invoked musical sounds.
Engel and Joan are playing the song “Anytime” on two pianos. Joan plays
chromatic chord progressions in F major interspersed with disharmonic
chord clusters. Engel seems to be tuned into the music as his upper body
rocksy back and forth with his hands gently sliding up and down the
keyboard to the basic beats of the music. He begins to hum and murmur
the lyrics of the song and tries to play the melody line on the piano. His
notes roughly follow the melodic line of the song, adding textural richness
through their subtle harmonic relationship to the original melody. He is
strongly immersed and focused on using this song to explore various
musical expressions. He seems to have very specific musical sounds in his
head and at times has difficulty realizing them in his performance.
Frustrated, he pauses, frowns, groans and covers his ears. Joan leaves
ample spaces in her music for Engel, especially when he pauses frustrated
and groaning, so he can explore his sounds freely.

The birthing process is held by Joan as she continuously provides an
open yet salient song structure, around which Engel’s creative
exploration evolves.
Joan plays seemingly random chords spaced out in time while the secure
bass line of the song continues. Overall, the pattern of the song is salient
enough as she continuously sings the melody lines. Engel intermittently
sings a part of the song lyrics, “Any... any...” (as in “anytime”), while
continuously exploring his musical ideas on the piano keyboard. Near the
ending of the session, Joan makes a musical transition to move on to the
tune “One More Time.” She sings “One more time to play the piano.”
Engel immediately recognizes this, sings and plays along with it happily
while continuing to play single notes and chords clusters on the keyboard.

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He rocks his upper body in synchrony with the music and gently presses down the keyboard with his hands making soft clusters. His chords and clusters seem to be played randomly, but comprise a very rich and complex harmonic texture as a whole with various chromatic, harmonic and disharmonic structures interwoven together.

**Engel expresses a feeling of joy as he is gratified by the aesthetic experience.**

Engel seems to be more and more immersed in his playing. As he continues, Joan and Dan sing “One more time” together in dramatically enhanced dynamics and vocal tones. Engel seems very excited. Smiling broadly at the therapists, he makes some passionate, theatrical body gestures himself (e.g., opening his arms and straightening his body), while singing “One more time” in a loud, fully projected voice as if he were an opera singer. The therapists bring the music to an end. Engel stops too, yet shortly to resume his playing. He softly hums to the song melody while accompanying himself by playing tonally harmonic chords on the piano. He seems deeply immersed and content in the moment as he goes on with the music calmly with eyes closed and smiles on his face.

The level of endurance, striving and seeking of the clients was significant not only for its degree, but also in that it revealed that their emotional and behavioral processes were essentially and persistently guided by aesthetic expressive desires. This contradicts the common notion of autism partially characterized by emotional withdrawal, restricted interests and repetitive behavior.

For Stephanie in the above shown excerpt, her initial disturbance and disconnectedness upon being exposed to a new musical context appeared to be a necessary and conducive phase for her emotional process in general. It was through her being so faithfully and persistently reactive to every aspect of her immediate sense experience and making them an integral part of the new context of experience that she was eventually able to reconnect to the new context and incorporate it into her ongoing experience. Taking into consideration that
Stephanie persisted through her seemingly disturbed and restless reactive state to hear and respond to the music, it seems that her mind as a whole revealed its individuality through its intrinsic preference for steady musical patterns.

Similarly, for Engel in Excerpt 14, it seemed that his persistent desire and striving for full realization of what he was sensing, hearing, and feeling inwardly – i.e., his aesthetic impulse – underlay his deep immersion in the music making while enduring the pain of ‘getting there.’

A slightly different incidence of emotional endurance for the sake of aesthetic pursuit is shown in Cheryl in Excerpt 10, as she withdrew almost completely from the interaction to remain faithfully responsive to her intrinsic bodily and mood state. It is noteworthy that this response was originally triggered when the therapist shifted to a new musical theme, which Cheryl readily picked up on, but failed to fully click with. Although the affect expressed in Cheryl’s behavior was not as pronounced, her sudden assertive withdrawal from an interactive mode to an inward attunement indicates how necessary it was for her to adhere to her intrinsic emotional and aesthetic needs at that moment. From this perspective, her apparent momentary disconnectedness could be seen as a proactive directedness at meeting her intrinsic mood state, which eventually lent itself to a forthcoming interpersonal connection.

Physical Instantiation: Aesthetic Desires over Adaptive Needs

The clients’ assertion of their aesthetic imperatives and the accompanying emotional responses were prompted by and continued to evolve primarily on the
basis of immediate bodily participation. The clients seemed to find their way into an emotional state most readily through their expressive channels such as vocalization and bodily movements. In this way, emergence of attunement and emotionality in the clients were simultaneous and interwoven processes, which seemed to feed on each other in a synergetic manner. For instance, the clients would sense and tune into certain immediate ‘feel’ aspects of their surroundings (e.g., textural qualities, energy and mood, or patterns of sounds and physical motions), which would then evoke instant responses in their own bodies such as vocal sounds and physical motions. An emotional state seemed to arise inherently through playing with their own bodily sounds and motions within the context, which in turn led to a further state of attunement and directedness.

It is noteworthy that, between such interwoven processes of attunement and emotion, there seemed to be little involvement of consistent conceptual understandings of self in relation to the context involving others (including the therapists), i.e., social self-regard. Tendencies such as seeking to belong to, understand and be understood by others, or be favored or acknowledged did not seem to be fundamental to what gave rise to the clients’ states of attunement and emotion. This points to a secondary role for adaptive needs in the emergence of their minds during the music-making.

While the subject of self and self-awareness in the clients is going to be the focal point of discussions in Chapter VIII and IX, it is important to be introduced here because it indicates something fundamental about the clients’ emotional state, that is, what was subjectively valued in their experiences. A close examination of
all the selected excerpts seemed to indicate that the clients’ emotional states were
directed partly towards fulfilling their intrinsic desires for aesthetic experience,
that is, the experience of pleasure through creative expression. The aesthetic
desires of the clients, as discussed previously, were instantiated and deepened
primarily through their immediate sensory-perceptual contact with the context.
The above excerpts make present incidences of this.

For Stephanie (Excerpt 13), participating primarily on a bodily level at the
start of the session was a crucial means through which she was able to ‘feel’
herself and her surroundings and have emotional responses to them. Conversely,
it seemed to be mainly the sensory-perceptual properties of the surroundings, e.g.,
textures, energy, and/or conspicuous patterns, that she consciously registered and
induced an emotional response. Her seemingly meaningless involuntary physical
discharges were apparently her intrinsically evoked responses to the momentary
musical context, more specifically for example, to the song “What’s That?” which
was newly introduced by the therapist. It was through the physical responses, and
perhaps through nothing but such immediate, cognitively unfiltered reactions, that
carried her through the challenge of dealing with the novelty of the musical
experiences and eventually led her to an attuned and emotionally connected state,
that is, a state of being connected with her self and her surroundings.

Bodily motions such as upper body rocking and certain hand and arm
movements were some of the primitive emotional responses most frequently
found in all the clients. For Engel, who seemed able to maneuver himself and
interact with the surroundings at a higher cognitive and consciously coordinated
behavioral level than Stephanie, the emotional responses to a given moment of experience were far more pronounced and differentiated in their manifested intensities and qualities. As was shown in Excerpt 14, for instance, his frustration at not being able to realize his inward imagining was expressed intensely through his painful bodily reactions such as vocal groaning and covering his ears. The inwardly desired sounds of certain qualities and patterns, which might have been evoked based upon interaction between his previous experience and intrinsic sensory-perception at the moment, and his striving to actualize them seemed to be the center of his emotional process. Tentative explorations using his own voice and the keyboard (e.g., certain notes, textural or harmonic qualities of the chords) directly fit his emotional state, one in which Engel pursued what he inherently valued and desired.

Some of the moments when he showed particularly strong affective responses included those when he was intensely frustrated, or, oppositely, when he finally reached an expressive mode that completed his highly specific need for certain sensory-perceptual properties. An example of the latter is shown in the last segment of Excerpt 14, when his singing and bodily motions conveyed intense joy and happiness.

In summary, physical instantiation was found essential to the clients’ experiencing as well as expressing an emotional state in a number of ways. First, the clients’ bodily experiences and expressions mediated their emotional processes during the music-making. In other words, their bodily states served to fulfill their intrinsic valuations of sensory-perceptual experiences, which is
primary to experience of a conceptual and, more specifically, self-reflective nature. Second, instantiation of a certain physical state was an essential means for the clients to cope with the frustration of not having their inner state matched by the momentary experiences. Encounters with novelty, unfulfilled aesthetic needs and conceptual tasks imposed by therapists (e.g., naming self, therapists, and objects, or verbalizing about thoughts and feelings) resulted in emotional responses such as anxiety, tension, discomfort, or frustration. Physical instantiation of a certain sort in reaction to those emotions seemed to help them stay connected with their intrinsic needs, while their reactions themselves became part of the evolving context within which they became more readily and further engaged eventually.

This area of exploration further guides the main question of the research, that is, what constitutes the directedness of the minds of autistic individuals? From the observations, it may be suggested that an emotional state of an autistic individual may be guided by his or her intrinsic aesthetic desire, delivered essentially and most truthfully through an immediate physical contact with his or her surroundings. Additionally, in this process his or her self-regard in relationship with others, i.e., the social self-regard, might play a rather insignificant role, which may also suggest a possibly secondary role of adaptive motivation in their emotional processes. This leads to the next segment of my report, which is concerned with the nature of contact involved in the clients’ musical engagements.
Emotional Mobilization in Rule-Following

What was the nature of the clients’ sensory-perceptual engagements with music that evoked emotional responses in them? That is, what were the specific components in the music that had most value for the clients? What were the consequences for the clients from such contact? In examining the emotional states of the clients with these questions in mind, I found myself confronting once more the matter of rule-following – or more specifically, perceptual pattern-seeking – tendencies embedded in their musical behavior. This was already explored in the previous Chapter, however with a main focus on the basic cognitive properties, i.e. the primary processes of sensation, perception and attention. Since the nature of the connection between cognition and emotion is pivotal to the problem of intentionality, it is important to re-examine these rule-following tendencies with specific regard to their emotional states.

Consistency, Balance, Continuation, Expansion and Integration

The conditions and the contents of rule-following behavior varied with each client. Reasons for this seemed to include their general cognitive functioning levels, the sense of aesthetics unique to each person’s personality, and/or musical and interpersonal dynamics created between the client and the therapists.

Most important to Stephanie were short musical patterns that were presented repetitively and consistently, embedded in elements such as steady basic beats and melodic-rhythmic patterns, salient mood or energy qualities, or a
certain instrumental sound. Also important to Stephanie was prolonged exposure to such musical surroundings. Having long enough contact with consistent and pronounced musical patterns seemed to activate her receptive and expressive processes and as such was an important component underlying her rule-following behavior, which was not only to be facilitated by the therapists but also pursued through her own engagements.

This prolonged contact often resulted in the emergence of a set of affective and emotional responses such as a sense of ease, pleasure, a fuller extent of connectedness and mobility in her physical and emotional states (as was shown in Excerpt 13).

The rule-following pattern for Engel seemed to have been more differentiated and directed toward achieving highly specific textural and formal experiences. On a short-term basis, his emotional responses tended to depend upon striving towards fulfilling his desires for very particular patterns, qualities of singing, specific melodic and harmonic structures and the sounds of certain instruments. On a long-term basis, his musical engagements seemed to be aimed towards achieving a certain structural direction for a session as a whole (e.g., a series of successive musical activities taking place in a specific order and integrating into higher constructs). Consequently, a continuation of experience seemed to be achieved through his musical engagement, which consisted of a hierarchy of experiential constructs.

Like Stephanie, familiarity and continuity seemed important in guiding Engel’s emotional state. Another important element in his emotional process was
the extent of structure and aesthetic quality. It was essentially his intrinsic valuation of specific regularities (i.e., those of familiarity, continuity, qualitative particularity, and structural expansion and integration) that gave a shape to his musical engagement. This same valuation seemed to guide him through the constant emotional flux of frustration, striving, gratification, enlivenment, and meeting new challenges. When desired forms of experience were achieved, Engel seemed more connected with his inherent state and surroundings, more fully expressive in affect and dynamic range, and more flexible and fluent in his musical and bodily expressions.

While the contextual motives of Engel’s rule-following behavior derived mostly from his previously learned experiences, the fundamental resources for Cheryl in her rule-following were mainly her unique sense of aesthetics. This was demonstrated by the frequent occasions in which she spontaneously immersed herself in seeking highly sophisticated musical patterns. Essential to such musical pattern-seeking was for her the intrinsic mood or energy state to be realized. Accordingly, her emotional state seemed to evolve based upon her seeking spontaneous experiences of particular forms and qualities that would meet her momentary mood state. Below is a re-presentation of a partial segment of Excerpt 10 that illustrates well what characterized her rule-following behavior.

Excerpt 10:1

*Gradual addition of new structural components and intensification of dynamics*

Cheryl stands up to walk over to the other piano, facing the one Marie is playing. Without hesitation, she begins to play some notes on the piano,
mostly on the white keys, that are lightly felt and wide-spaced in pitch and
time. Cheryl uses all of the fingers of her right hand to play up and down
the entire register of the keyboard then adds the left hand in the upper
register. She plays freely ascending and descending notes using both of
her hands and gradually adds chords and clusters in an expressive manner.

**Bodily synchronization**
Cheryl’s upper body is constantly in motion, yet this involves less
stereotypic rocking and more relaxed swaying motions to the music
created between her and Marie. The music goes on spontaneously without
ceasing for a several minutes. Cheryl looks a bit tired as she rubs her eyes
and face.

*Cheryl actively participates in the open reflective musical context
provided by the therapist and lets it develop into a space of interplay.*
Marie musically reflects this slowed down mood by playing slower, softer
and more intervally spaced notes. The notes now shift gradually into a
pentatonic scale. Cheryl plays along with Marie, her notes slower and
more mellow. Marie occasionally interjects some abrupt repetitive notes
and chords interspersed with the ongoing mellow melodic passages.
Cheryl picks them up immediately to play back at Marie in the similar
way. This interactive play lasts only a short time.

From above, one can see how Cheryl was constantly directed toward more
differentiated forms and structural extensions, which served to meet her intrinsic
mood in continuation and expansion (See Appendix D for analysis).

Looking at the progress of the session as a whole in particular (as
delineated in Table 2.), one can also observe how achieving the experience of
continuation and expansion was the basis for her musical pattern-seeking, not
only within her own playing but also in her interaction with the therapist.
Moreover, there was a consistent sense of balance and dialectical development
between the intrapersonal and interpersonal stages of playing, in which the two
processes developed in parallel. Ultimately, the intrinsic process of valuing
experiences and emotional states in Cheryl during her musical engagement was
directed toward achieving continuation and expansion of experience both on intrapersonal and interpersonal levels while maintaining the balance between the two.

***Liberated in Rule-Following***

In essence, the rule-following or pattern-seeking tendency was found to be an essential component in the emotional processes of all three clients engaging in music making. The rules or the patterns sought in this sense were important for the emotional process in the clients, because the regularities inherent in the former played a crucial role in mediating and realizing the directedness of their minds and behavior.

In all the clients, consistency, balance, continuation, expansion, and integration were the qualities of experience that seemed to be commonly strived for through their rule-following behavior. Within each client, there were unique experiential properties that seemed to be more important than others. For Stephanie, a sense of familiarity through repetitive and prolonged involvement in the activity was especially important. For Engel, particularity of textural and formal patterns and the hierarchical expansion of such constructs were important, and they were achieved through revisiting familiar (previously experienced) musical patterns and constantly incorporating them into the ongoing music-making. For Cheryl, it was crucial that balance be maintained between an intrapersonal and an interpersonal state, or between an old and a new expressive
construct, which was achieved through alternation between the contrasting modes of musical expressions.

Reaching the desired qualities of experience through rule-following behavior, the clients seemed to become more fully enlivened, flexible and fluent in their affective and bodily states and, most of all, more connected to themselves both in their intrinsic states as well as in relation to their surroundings. In essence, the regularities arising in the clients’ musical engagements were such that it contributed to an increase in the freedom and mobility of their emotional states and ultimately to a fuller connection to their intrinsic states of being. This suggests that the rule-following or pattern-seeking behaviors of the clients were ultimately directed at their intrinsic states becoming more differentiated in the course of the music-making. This is contrasted with occasions where a person’s rule-following behavior tends to serve towards their conforming to collective norms, while becoming less in touch with their intrinsic states.

The Therapeutic Relationship as an Integral Part of the Emotional Process

The relationship with therapist is generally an important aspect of a client’s emotional state during treatment. In light of the emotional processes of the clients while engaged in music-making, relating to the therapists was often an integral part of their making contact with the musical surroundings in general. This means that the emotional nature of the clients’ relationship with the therapists ran in parallel with their intrinsic process of valuing other experiences.
and relating to other aspects of surroundings. This was in essence guided by their sensory perceptual level of attunement and rule-following behavior.

For instance, in Excerpt 13 the therapists constantly provided Stephanie with musical surroundings to which she seemed naturally directed. By singing, playing and motioning at Stephanie through steady and salient musical patterns, the therapists were not only the providers of the musical context, but also became an embedded component of the context to which she related and responded emotionally as a whole. The affective responses shown by Stephanie in the last segment of Excerpt 13 (e.g., getting physically closer to the therapists, smiling at them) seemed to be a consequence of her relating to the therapists as part of her positive experience as a whole (i.e., consistency and continuation of experience achieved by a certain quality of sensory-perceptual contact with the music).

Similarly, at the basis of Engel’s emotional response was his creative searching for deeper aesthetic experiences, to which the therapists’ musical role was pivotal. In Excerpt 14, the therapists’ musical and interpersonal roles directly lent themselves to Engel’s aesthetic searching – striving for a particular kind of musical texture, mood/form and, in a longer-term perspective, hierarchical expansion and integration of experiential constructs whereby his emotional states were guided. In this sense, the therapists were both partners in and an embedded part of his emotional process.

The nature of the partnership between the clients and the therapists seemed to involve more differentiated and purposefully operated maneuvers on the client’s end in the case of higher functioning clients. In Excerpt 10, for
example, Cheryl seemed to be extremely perceptive and particular at all times about the way she chose to relate to the therapist. In all aspects of interactions, including timing, roles, qualities, and dynamics of musical and non-musical transactions, Cheryl was clearly communicating with the therapist about how and to what extent she would like for the therapist to be partnering with her (See Appendix E for analysis).

In general, the clients seemed to become freer and more fully enlivened in their personalities as they became more closely connected to the therapists. It is important to note that the nature of the interpersonal relationship pursued by the clients was one that was embedded in the general orientation towards the surroundings. This means that the therapeutic relationship for the clients was also guided primarily by their immediate sensory-perceptual rule-following.

Cheryl in Her Verbal Emotional State

Of all the research clients, Cheryl was the only client who had verbal skills adequate enough to express herself and relating to her surroundings in an intelligible manner. Since her verbal style was a part of her unique emotional process during the music-making context, I decided to explore what characterized it. With awareness that the findings in this area were limited to Cheryl only, I still chose to include them because I felt they conveyed aspects specific to her verbal expressive style as well as properties fundamental to her intrinsic cognitive and emotional workings. Moreover, as the research progressed, I realized that the findings in this specific area of exploration had implications for the findings from
other areas of the clinical investigation as well as those from the cross-field examination.

**Non-Social Self-Centeredness**

One distinctive feature of Cheryl’s verbal style was its degree of self-centeredness. By self-centeredness, however, I do not wish to refer to a self-conscious egotism operating in relation to a social context, at the root of which – according to the theories of common sense psychology as explored in Chapter I – is a mind consciously watching, reflecting and maneuvering her self towards a socially more favorable position. To the contrary, what characterized Cheryl’s self-centeredness was in fact almost an absence of such socially-driven, egotistic self-consciousness. Her use of words conveyed her sense of self and her experience in the most direct, concrete, and least socially-filtered way.

The following is an excerpt of a session where Cheryl was verbally expressing to Marie about her experience around birthdays, holidays, and having a period (menstruation).

Excerpt 15

S (Cheryl): “Hum, hum… this, this Thursday, May third, is my, my, umm birthday.”

M (Marie): “I am glad you told me, how old are you turning?”

S: *(seems to be hesitating to answer, slightly smiling)* “I, I usually huh, huh, don’t like to, to, tell, tell anybody my age.”

M: “That’s O.K. You don’t have to tell me, but, why not?”

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S: ... (she is not facing Marie while she continues to engage in the conversation)

M: “I know sometimes in our culture women don’t like to tell their ages. But we can also be proud.”

S: “Because many, many happy birthdays turn into nightmares... I don’t like it. I usually don’t like birthdays anymore... because of too much excitement. Because it can lead you to too much nervousness... and huh, huh, bad craps. Then you can easily, huh, huh, go out of control, and you can get yourself into bad troubles. So good day like birthday like huh... huh... kind of anniversary turn into nightmares.”

M: “I understand.”

S: “I just wish I don’t have birthdays anymore.”

M: “I guess some people feel that way.”

S: “When is your birthday?”

M: “It’s in September.”

S: “September when?”

M: “September 10th.”

S: “September 10th.”

M: “Does that happen to you sometimes... that you feel out of control or you loose control?”

S: “Yes. I didn’t like this weekend. I never got outside and I just got my my, huh, huh, like my vagina is bleeding. Just very late Saturday night, right after midnight.”

M: “Hum... you had your period?”

S: “Yes, I think I have it now.”

M: “Does that give you uncomfortable feelings or pain, like most of the women?”

S: “Yes, sometimes. I just, just don’t like periods. I don’t like’em!!”
M: *(laughing softly)* “What’s to like about them!”

S: “Yes, it always happens to my body. Like a week after my birthday, I am seeing my gui... gy...”

M: “Gynecologist?”

S: “Yes. It’s she. Her name is ... Dr. XX.”

M: “Is she nice? Have you seen her before?”

S: “Yes, she is very nice. I’ve known her from just two years ago. ”

M: “That’s very nice. It’s important that you can trust her. I wish you can find some calm and peace on your birthday so you don’t have to go out of control. Perhaps we can play some peaceful music together.”

S: “Yes. *(short silence)* I don’t like parties anymore. Just like, like... Thanksgivings. The crowds and noise, and overstuffing yourself and turning into like a big fat pig. ”

M: “Guess you don’t like it.”

S: “No! Never! I don’t like it, Marie.”

The concreteness and immediacy of the experiences conveyed in Cheryl’s verbal description (for instance about her period or Thanksgivings) is pronounced. Not only in terms of the content or the level of experience she chooses to focus on, but also in terms of the way she verbally conveyed those experiences, one can see how Cheryl’s relating to her self within the verbalized events was purely self-centered and based on her most instinctive and immediately-felt contact with her surroundings.

Meanwhile, it is interesting to notice how the therapist’s approach to Cheryl’s experiences was sometimes based on ego-based self-consciousness, automatically assumed in common-sense psychology. For example, when Cheryl
was hesitant to talk about age and birthdays, the therapist’s instant concern for her seemed to stem from the social convention regarding a woman’s age, while Cheryl’s distress about the occasion seemed to be rather associated with her bad experiences of “too much excitement” involved in celebration (crowds, noise, overstuffing, etc.). Apparently, she emotionally valued those experiences as dislikable, more because of the sensory-perceptual over-stimulation than because of her mindfulness about her age as a woman. This points to Cheryl’s emotional states emerging on a sensory-perceptual psychological level rather than a conceptual psychological level. This partly characterized the non-social self-centeredness involved in her emotional states.

**Apathy in social self-regard**

Conversely, it was notable how Cheryl seemed to be in a rather apathetic and disembodied state when she verbally related to those events that were largely of a personal and social nature. For instance, later in the same session, Cheryl talked about her job interview with a director at a local museum and her considering taking a part-time position if offered. In this conversation, she seemed hardly interested in focusing on her feelings and the personal significance of the employment which would be, in common-sense, an important new step in her life. Instead, she spent most of her words conveying in detail the physical setting of the office (e.g., directions, windows, furniture, etc.) and the working hours with different possible options. Her speaking voice was monotonous and inexpressive, lacking of context-dependent prosodic and mood qualities, unlike when she was
talking about her experiences relating to holidays or periods. In general, she
seemed to be less fully affected than she had been in the previous talk. This was
another example in support of her emotional states being fundamentally mediated
through immediate sensory-perceptual contacts with her surroundings as opposed
to her perception of herself in relation to the social contexts.

Embodyed Interpersonal Relatedness

The inactivity of social self-regard observed in Cheryl does not mean that
she did not have an orientation toward or feelings around interpersonal
relationships. The experience of relating to the therapist in the music room (e.g.,
working and making music together with her over time, building a trusting
relationship, and separating upon the termination of therapy) seemed to have been
very crucial for Cheryl in terms of her emotional process. The following is an
excerpt taken from her last music therapy session with the therapist after over
three years of working with her.

Excerpt 16

(Marie reminds her of the fact that it has been three and a half years and
asks if Cheryl wanted to say anything. Cheryl sits quietly.)

M: “I hope you keep that nice Ukarelli. There were days you were happy,
sad, upset, and I hope you keep up with that nice Ukarelli.”

S: “Yeah, thank you for those beautiful years. I enjoyed our days together.
And now you have your present (Cheryl brought a gift - a shower gel of
the same kind she uses - for Marie and handed it to her early in the
session) and you can take it to your Westchester County home.

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M: "Well, I might leave the card at my desk here so part of you will be always at the Center."

At first Cheryl looked a bit disappointed when Marie said this, but upon understanding Marie’s intention, she smiles big and says, “Oh, nice. NICE!!”

(Marie asks if there was any last music they could play. Marie suggests they sing the goodbye song together.)

M: “I know you know the words, right?”

(Cheryl looks very emotional and pensive listening to Marie playing the song. Cheryl’s body is rocking softly to the music. She rubs her eyebrows constantly. Marie sings “Now it’s time to say good bye. Come on, can you sing it?” Cheryl smiles without saying or singing any word.)

(The music ends and leaves a silence. Cheryl breaks the silence shortly.)

S: “How in the world am I going to say goodbye? I hate that. But I want to say I wish you have nice summer and wonderful time in the coming 2002 and 2003 at the Nordoff and Robbins Center.

It is apparent that Cheryl was having a strong emotional reaction to the separation. Reminiscing about past time together, giving the therapist a present that had intimate personal association for her and having difficulty saying goodbye were dominating emotional responses throughout the session, as it would be expected in common-sense psychology. Underlying her emotional state was their shared time of frustration, striving, fulfillment, and joy in making music together.

Meanwhile, Cheryl’s verbal responses seemed to convey something very unique about the way she related to those experiences. Instead of reflecting further on the ‘meanings’ of their shared time and separation, she seemed to be focused on the concrete physical images and immediate feelings aroused by the
exchanges with the therapist at the moment. This shows how crucial it was for Cheryl’s interpersonal and emotional relatedness that her experience entail a certain quality of embodiment.
CHAPTER VII
THE STATE OF RECOGNITION

Yet another important aspect of the clients’ musical engagement was a state of recognition. The process of recognition, as identified through this investigation, are the patterns of familiarity-based selective attention and reaction that emerged in the process of music-making.

The dictionary definition of the term recognize with regard to a state of consciousness is “to perceive something or someone to be previously known.” (Webster’s Ninth New Collegiate Dictionary, 1989). Essential to the act of perceiving something or someone to be previously known are, first, to register something or someone as a coherent object (i.e., a “thing” that is perceived to be “out there”), and, second, to match that perceptual registration with what has been previously stored in one’s memory system (Backhaus, 1998; Edelman, S., 1999; Jackendoft, 2002). In other words, when a person recognizes an object he or she grasps that object as a coherent whole with a sense of familiarity. The Linguist Ray Jackendoft explains that to grasp means “the mind holding, understanding, making contact with something in the world.” (2002, p.298). From a mechanistic perspective, holding, understanding and making contact with an object with a sense of familiarity requires an intricate orchestration of cognitive processes involving attention, emotion and memory, which, if not disturbed, work together in favor of meeting the person’s basic needs. More specifically, the person achieves a physiologically and psychologically desired state within the
environment. Ultimately, a state of recognition can be seen as both the process and the result of such intricately orchestrated works of mind, guided by basic directedness.

The process of someone recognizing something still does not necessarily require the person to have a conscious association to that thing or an awareness of his or her own recognition of it. In other words, one can feel something to be familiar and respond to it accordingly without having an explicit reference to it in mind. In this sense, it is a process that is guided by the mind’s directedness as a whole, which may or may not include one’s conscious mind.

While a person’s state of recognition would be a matter of interest to a cognitive psychologist or a neurologist in terms of its mechanistic and functional properties, it became a concern for this study when the research data repeatedly revealed behavioral qualities of recognition in the clients, addressing the nature of their intentionality. The signs of recognition in the clients’ responses were expressions of a consistently selective or directed attention accompanied by specific reactions associated with previous experiences. The emerging patterns of those expressions would inevitably point to the directedness of the clients’ minds.

The research at this stage was focused on the two following concerns: what the clients tended to recognize, the patterns or regularities involved in their expressions of recognition over time and how they contributed to the directedness of the clients’ emerging states in general. The former was largely concerned with the contents of recognition and the latter with its processes and functions. These will be explored in two separate chapter sections.
Contents of recognition

In examining the contents of recognition in the clients, I found that they were associated more with the properties of experiences rather than the objects or events themselves. To explore the state of recognition comprehensively, I first conducted a case by case analyses. The findings from the individual analyses were then compared and synthesized to reach a more collective level of findings.

Individual Reports

Stephanie

Revisiting Stephanie in Excerpt 13, one can see she was entering into a much different state as she finally began to perceive and respond to the regularities of the music (e.g., the rhythmic patterns, exaggerated prosodic qualities of David’s vocal singing, and the ensuing musical dynamics). As a consequence of her repeated and prolonged exposure to the music, a perception of patterns (i.e., selective attention to a certain shape of regularities) began to transpire, which in turn gave rise to a certain pattern of reactions. These reactions signaled a state of recognition in which a sense of familiarity developed. In regard to identifying what factors were involved in this, the findings converged into three major experiential components: 1) her energy and mood as expressed by her bodily expressions, 2) the regularities involved in her engaging with the music, and 3) interactions with the therapists.

Bodily Expressed Energy and Mood

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Evocation of a certain energy and mood state as expressed by bodily discharge (e.g., squeaking or humming voice, bodily swaying or rocking back and forth, slapping own face and head nodding) seemed to be a crucial component of the emergence of recognition in Stephanie. As random and involuntary as those responses seemed, they were inevitably evoked, facilitated and accompanied by the music, which was played to her repeatedly and consistently. In this way, her own responses became an important aspect of her experience of the music. Her initially random and involuntary reactions continued to be associated with the specific musical context and eventually lent themselves to a sense of familiarity in her ongoing experience, joining the other objects or the contents of her attention. In other words, Stephanie’s bodily mediated energy and mood responses, which were her most immediate and subjective experiential contents, became the very objects of her recognition.

Regularities

Important to Stephanie’s perception of the music seemed to be the formal properties emerging in both the presented music and her responses to it. The regularities of the music (e.g., repetitive patterns that conveyed consistent and conspicuous musical components such as steady basic beats, melodic-rhythmic patterns, salient expressive qualities in mood/energy/sentiment, and/or consistent instrumental patterns) and the regularities that developed in her reactions (e.g., a specific motion such as a head nod at the end of a patterned phrase, a certain kind of vocalization in synchrony with the steady beats of the music) were two parallel
and mutually enhancing processes. Here again, the regularities of the music as the objective components and the regularities of Stephanie’s reactions to the music as the subjective components of the experience seemed to merge together to give rise to a state of recognition in her.

Relatedness to the Therapists

The patterns emerging in Stephanie’s relating to the therapists were an important part of the component of recognition during the music-making. She seemed to learn through her ongoing engagement how to pay selective attention and react to the therapists as needed or desired. This was demonstrated, for instance, on those occasions when she walked over to David to have a certain musical experience repeated, or when she let herself sit next to the therapists to express her contented mood state (Excerpt 13). Again, it was through the specific roles assumed by the therapists in becoming the resource or the provider of the music, as well as an integral part of the moment as experienced by Stephanie, that she came to attend and react in selective patterns with a sense of familiarity.

Engel

An example of a state of recognition emerging in Engel during music making is given below:

Excerpt 17

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Joan sustains the birthing process by continuously providing open yet at the same time sufficiently defined song structure, within which Engel’s creative exploration evolves.

Joan plays seemingly random chords at long intervals interspersed with the secure bass line of the song. Overall, the pattern of the song is salient, as she continuously sings the melody lines. Engel intermittently sings a part of the song lyrics, “Any... any...” (as in “anytime”), while continuously exploring his musical ideas on the piano keyboard. Near the ending of the session, Joan makes a musical transition to move on to the tune “One More Time.” She sings “One more time to play the piano.” Engel immediately recognizes this, sings and plays along with it happily and continues to play single notes and chord clusters on the keyboard. He rocks his upper body in time with the music and gently presses down on the keyboard with his hands making soft clusters. His chords and clusters seem to be played randomly, but comprise a very rich and complex harmonic texture as a whole with various chromatic, harmonic and non-harmonic structures interwoven together.

Regardless of whether or not Engel had conscious knowledge of the song “One More Time” or of his knowing or remembering it from a previous time, his behavior during this episode was characterized by instant shifts in his affective and expressive modes in response to the song. Given that Engel had been exposed to this song several times over consecutive sessions, his behavior here can be seen as expressive of a state of recognition.

Bodily Expressed Mood and Energy

The expressions of recognition observed in Engel in response to the familiar music conveyed very specific mood and aesthetic properties, which were expressed through immediate and concrete physical responses. This is shown in his responses, including bodily rocking in sync with the song, vocal humming in a highly specific textural and mood quality, and maneuvering his fingers and

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hands on the piano keyboard (without knowing the chords and scales) to produce enriched harmonic and textural musical sounds.

Generally, the specific contents of an individual’s response to a certain object or event can indicate how that object or event is being perceived by the person. Taking this into consideration, the specific components of Engel’s responses to the momentary musical context involving the song suggests what transpired in his perceiving mind at the moment, that is, the contents of recognition. Some of the essential properties of the song as he related to it were its rhythmic and harmonic patterns, its textural qualities conveyed through specific timbres of voice and piano, and a certain “feel” created as a result. Again, these were the salient features of the song in Engel’s experience as they were expressed in his physical responses versus being objective properties of the song itself. His physical expressions as subjective responses to the song in turn became the primary objective contents of his recognition.

Aesthetics and Regularities Aimed at Realizing the Intrinsic State

Engel’s expressions in selective response to the familiar music were distinctive and had specific expressive properties. To reiterate, pivotal to Engel’s recognition of the song were the unique sentimental, textural, and structural patterns of the song. These were initiated by Joan at a peak point during Engel’s improvisational vocal and harmonic searching on the piano, conveyed in her mellow female voice in a gesture of calling to Engel, taken over by him and turned into a dramatic and highly stylized singing that assumed a very specific
theatrical personality and developed into richer and more complicated harmonic textures through the accompanying piano.

Another aspect of Engel’s state of recognition during the music-making on a more global level was related to the structural hierarchy and expansion of experiences over time. In looking at Excerpt 11 and its analysis (Table 3), it is apparent that a structural hierarchy was building up gradually as Engel alternated between the familiar and the unfamiliar, resulting in a musical form. The process of recognition operating in Engel during this episode seemed to allow him to selectively attend and react to familiar and unfamiliar musical events and to achieve a certain pattern of regularities, continuity and expansion of his experience, based on his intrinsic directedness. This reinforces the previous point that the subjective directedness of Engel’s mind lent itself to becoming the objective contents of his state of recognition.

Partnership

The therapeutic relationship was an important aspect of the process of recognition in Engel’s musical engagement. It was not only an integral part of the musical context as an object of his recognition, but, more specifically, played a crucial role in the deepening consistency of the musical context and, consequently, in the sense of continuity and familiarity in Engel’s musical engagement. The musical relationship between Engel and the therapist assumed the form of partnership in which the two worked closely together during the process. For instance, the therapist would consistently bring up a certain familiar or previously
significant song at a specific point in the session so Engel could respond to it in a
certain manner and take it over to develop it into a certain pattern of dynamics
and form. In this way, the musical partnership between the two lent itself to the
consistency, continuity, and familiarity of Engel’s music-making experience
overall, thus making the partnership an important part of what comprised the
object of his recognition.

Cheryl

For Cheryl, the process of recognition seemed to evolve primarily on a
global level rather than in fragmented areas. She seemed to attend and respond to
the interactive making-music context as a whole with a growing sense of
familiarity and ownership. This is best demonstrated by the long-term progress of
her musical engagement, which shows remarkable shifts in her presence during
the music-making – i.e., from more introverted and instrument-dependent playing
to the interactive and assertive seeking for a certain pattern or dynamic of musical
experience.

Introverted Recognition Mediated through Sensory-Perceptual Experience

Cheryl’s musical engagements were especially marked by her
assertiveness and her adherence to her intrinsic mood and energy state throughout
the therapy. Given this, the process of recognition in Cheryl during the music-
making was partly concerned with how her intrinsic state came to be realized
within the context. For instance, while her initial engagement in each session was
always of a similar nature (one in which she seemed to need first to settle into her mood state), the way she chose to actualize that need in each session became more spontaneous, prompt, and specific to the developing context at the moment (e.g., choice of instrument, energy and dynamic qualities of the music, and the interactive patterns between her and the therapist). Shown below is a partial segment of a previously examined session.

Excerpt 18

_Cheryl settles into a certain mood while the therapist provides a musically open space._
Cheryl enters the room and walks immediately to the metalophone (her favorite recent instrument). She quietly sits at it, rocking her body with eyes closed. Marie plays some sporadically spaced notes in a Dorian mode. Cheryl, sitting parallel to Marie, continues to sit quietly and does not readily start playing. She momentarily grabs the penny whistle. Marie says, “Go ahead, Cheryl. Try it.” Cheryl immediately puts it back down.

_Cheryl adheres to her momentary emotional need._
With her eyes still closed and rocking her body gently back and forth, Cheryl occasionally looks upward with a dim smile, adjusting her bodily movement to the music as if she were feeling her way into it. Marie’s music gradually shifts into a Middle Eastern mode, with slow-paced pedal tones. Cheryl puts her hands on her ears to cover them, and coils her body into an almost fetal position while rocking continuously. She appears contented for the most part, except when she squints her eye as if she were trying focus on an object. She lifts her face to look at the camera and smiles at it. Marie continues to play the slow-paced successions of pedal tones along with melodic figures of Middle Eastern associations, creating a mood reflective of the introverted space Cheryl seems to be in.

The resoluteness and promptness manifest in her choosing instruments or bodily positions and motions of a certain affective quality in order to be in touch with her intrinsic state were evidently based upon the familiarity that had been developing over a prolonged period of therapy. Given this, the contents of
recognition for Cheryl during this process corresponded to the elements of her experience, to which Cheryl had developed a pattern of selective attention and reaction consistently over time.

Cheryl’s state of recognition in relating to the moment seemed more pronounced, in that she was intuitively reacting to the music-making space as a whole, rather than attending and responding to certain sounds or other components as individual events. Recognition therefore extended to the music-making space uniquely created for the sake of her seeking and realizing her intrinsic state as a whole. Over time, she developed familiarity and affinity within this space. Again, it was mainly the immediate sensory-perceptual responses upon contact with the situation (e.g., bodily instantiations and indulging in a certain instrumental sound explorations) that were utilized as the sources or means for recognition. The significance of this lies in that Cheryl’s sensory-perceptual experiences served to convey the essence of her experience as a whole, rather than discrete meanings for fragmented aspects of the experiences.

Aesthetics Desires and Musical Relationship with the Therapist

The significance of both the aesthetic and the interpersonal properties involved in Cheryl’s musical engagements were closely examined and discussed in Chapters V and VI. With specific regard to a state of recognition, however, I do want to recapitulate that the essential properties of the aesthetics and the musical relationships recognized by Cheryl originated in and resulted from her mind’s intrinsic directedness emerging in the context. Her musical engagement as a
whole was a process of seeking and realizing her aesthetic desires within the interactive music making, through contrast and balance in formal and textural patterns, escalations and resolutions in dynamics, and the development of an interwoven-ness between the intrapersonal and interpersonal levels of music making. The process as a whole lent itself to an increased consistency and continuity of the context, and thus strengthened recognition emerging in her. From this perspective, Cheryl’s aesthetics needs and the musical relationship unique to her musical engagement with Marie both pertained to her recognizing mind and to what was being recognized. This again points to the correspondence between the subjective and the objective elements involved in the process of recognition.

Summary and Discussions

Non-Distinction between Recognizing and the Recognized

Overall, there were some dimensions of the music making experiences that consistently contributed to the process of recognition in all clients: 1) energy and mood states conveyed by immediate physical experiences, 2) aesthetic preferences by individually unique kind realized through distinctive patterns of dynamic, structural, mood and textural development during the music-making process, and 3) interpersonal relationship emerging between the client and the therapists as an integral part of the music-making.

Again, it is important to note that these three experiential realms served as the basic contents of recognition in the clients during their music making and

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were simultaneously the dimensions of their states of attunement and emotion. This ultimately addresses the essential properties of the minds’ directedness found in all clients across states of attunement, emotion, and recognition. In other words, the clients’ seeking to realize their intrinsic states became the very contents of their recognition.

One theme that emerged consistently throughout the individual findings was the lack of distinction between the properties of the recognizing mind of the clients and the properties of what was being recognized by them. This points to the problem of a relation between the subjective and the objective entities, as well as between action and perception, involved in a recognizing mind. The non-distinction between the subjective and the objective, and between action and perception, is a complex matter pertaining to the cognizing mind of any organism, and certainly not specific to that of an autistic person. Meanwhile, the correspondence between the clients’ recognizing mind and what was being recognized was ultimately a consequence of the correspondence between their experiencing minds and their experiences as the minds’ products. In other words, the states of recognition in the clients seemed to arise in the service of the experience itself, as something intrinsically desired in their minds, and speak to the introverted-ness of their minds’ directionality. This is distinct from a recognizing mind that emerges to deal with the needs relative to the outside world and its collective norms – i.e., understanding, knowing, communicating, or generally “minding” (Llinás, 2003, p.) about experience.
In Chapter VI, focusing on emotion, I discussed how the clients’ intrinsic valuations seemed mainly to consist of aesthetic or creative desires that were not primarily based upon their needs for social adaptation. Similarly, it was this non-socially directed, aesthetic or creative desire that guided the process of recognition in the clients during their musical engagement. The consequence was the pure correspondence between what the clients were pursuing within the music-making (action of the subject) and what was recognized by the clients in the same context (object of perception).

Signs as Signals, not as Symbols

Also significant was the use of signs involved in the clients’ relating to their surroundings. Generally, a state of recognition is a matter concerned with how a person relates to an object or an event based upon his or her previous experiences, and, in that sense, it partly addresses how the person relates to that object or event as a sign.

From a cognitive perspective, the use of sign is an important function through which a person relates to an object. In light of this, Susanne Langer (1957) points to two significantly distinguished levels of the functions of sign: the function substantiated by “signals” and the function substantiated by “symbols.” She explains that, while signals “announce” their objects to the organism (the subject) by simply transmitting the sense-data, symbols lead the organism to “conceive” of the ideas of the objects by transforming experience of objects into concepts. Langer claims that the use of sign as symbol is a function unique to
mankind, which is characterized by the addition of “conception” to “perception.” According to this account, the physical presence of objects is necessary in order for non-human animals to recognize and respond to them. Objects recognized primarily by sense-data function as signals to elicit conditioned responses out of the animals. Meanwhile, humans, owing to their higher cognitive capacity for the “symbolic transformation” of experience, are freed from their dependence on the sensory perceptual evocation instantiated by the immediate presence of the objects in their relating to them. Instead, humans develop an overall concept of an object and the category to which that object belongs.

At the risk of sounding reductive, my research findings suggest that the state of recognition in the clients during their music making was centrally guided by a psychological mechanism that rather approximated the use of sign as signals in Langer’s term. Underlying this reasoning were two features of the phenomenon of recognition as found in the clients. First, the clients seemed to require the active presence of the stimuli, that is, the tangible presence of a song, a musical activity, the therapist(s), or a certain dynamic and mood quality in the moment in order for them to recognize and act upon the experience involving the stimuli. Second, it was substantially through an experience mediated by the sense data of the object or event, rather than by a consistent idea or concept of it, that their responses of recognition were instantiated.

The question remains, however, whether being limited to recognizing object on the signal level directly results from some inferiority of cognitive ability on the part of the clients. On one hand, the cognitive properties characterizing the
clients' mind and behavior were apparently inadequate for them to adapt to their surroundings as normally expected. On the other hand, we need to reflect more deeply on whether the application of such an ordinary adaptive scale would be appropriate and beneficial for the clients. In order to determine how well a person can adapt to his or her surroundings and how effective the person's cognitive ability is for the adaptation, one needs to consider not only the general conditions required for his or her 'optimal fit' to the environment but also what would constitute an optimal fit to his or her psychological and physiological dispositions. This means that one must take into consideration the basic principle or motivation of behavior for that person, that is, the directedness of his or her mind as a whole.

Suppose that one's psychological and physical states in certain contexts are guided by needs so self-centered and introverted that the fulfillment of those needs does not primarily depend on the ability to relate to things in a symbolic manner and to establish generalized understandings of things. In this case, abilities and intentions to understand and communicate about the self, others, and world's events in terms of 'common sense' should not be crucial components for the person's realizing his or her intrinsic needs. Thus they become irrelevant as the primary (or only) factors for determining his or her cognitive efficiency. What would be essential instead is to identify the circumstances in which the person's cognitive abilities can serve for the basic principles or the needs of his or her mind.

In saying this, I do not intend to underestimate the importance of an ability to adapt socially, nor am I proposing that adaptation is not a significant
consolidation in the lives of autistic persons. Quite the contrary, I am pointing to
the significance of the intrinsic aspects of one’s mind in relation to the ways he or
she engages and pursues his or her self within the collective surroundings. Taking
into consideration that one’s intrinsic mind’s directedness can’t be always
assumed to operate by the same basic motivations of common-sense psychology,
one is allowed to have an open perspective for a possibly different process of
adaptations that may operate in persons of different minds.

The fact that use of sign found in the clients’ states of recognition during
their music making approximated the mechanism of signals rather than symbols
should not be a point of concluding for their cognitive deficiency; rather it is
precisely a point for asking a further question, i.e., what do such signals or
‘signalic’ use of sign then serve for? In other words, what ensues in the clients’
emerging states as a consequence of their relating to the surroundings via the
mechanism of signals? This leads to the next section of discussion, that is, the
function of recognition in the clients during their music making.

Functions of Recognition

Achieving a state of recognition led to the emergence of further patterns in
the clients’ behavior during their musical engagements. This is, however, not a
linear cause-effect relationship between events involved in the clients’ recognition.
The findings converging on this topic emerged rather from exploring the intrinsic
directedness of the clients’ minds as it arose through their ongoing musical
engagement. In this way, the emergence of recognition can be seen as a recursive
process taking place in the clients’ minds in connection with their environmental engagement, thus pointing to an interrelation between their meanings and actions, and ultimately, between their inner and outer worlds.

At the beginning of this Chapter, the process of recognition was identified as patterns of familiarity-based selective attention and reaction that emerge through one’s continually engaging in his or her surroundings. From this perspective, this process feeds on itself by nature. In other words, the more one engages oneself in one’s surroundings and the more familiar the process of engagement becomes, the more consistent patterns of selective attention and reaction emerge. Additionally, as recognition becomes more established, the more differentiated patterns arise as one engages with the surroundings.

The function of recognition states was observed as this process continued, whereby the clients’ attending and reacting to certain properties of experience in a consistent manner led to further selective attention and reaction, thus to a further differentiated state of recognition. Again, this was a process not so distinct from those involved in that of attunement and emotion. Mutually influencing and being influenced by the latter processes, a state of recognition in the clients seemed to serve for furthering their pattern of seeking and realizing their intrinsic states as whole beings. Following from this was more differentiated and more fully realized connectedness, both within the clients themselves and in relating to their musical surroundings. This emerged in a number of ways involving emotions and interpersonal/intrapersonal relationships, cognitive ability, and physical expression.
Emotional Relatedness

The most salient feature of deepening states of recognition was how the unique individualities of each client came through. Prominent among the markers of individuality were such emotional aspects as mood, affect, and physical expressive qualities projected out to a fuller extent within the ongoing music making. Some of the properties commonly found in the clients’ emotional manifestations included the following: expressive freedom and mobility achieved in their patterns of responses, increased tolerance for missteps along the way in the search for an aesthetic objective, a sense of contentment and joy fully expressed in realizing their expressive needs, a more focused and coherent mood throughout the session, and, finally, increased connectedness intrapersonally and interpersonally through the aesthetic experiences.

These emotional properties were conveyed in unique, individual ways. For instance, for Cheryl, increased tolerance and the development of a fine sense of humor emerged as her state of recognition during the music-making deepened, qualities that better enabled her to manipulate her forms of expression within the context. The excerpt below represented a turning point during a session, in which Cheryl and the therapist were just beginning to emerge from a moment of not actively connecting with each other in their music. The therapist had been proposing a couple of different musical patterns and idioms that failed to elicit responses from Cheryl, who was persistent in simply walking around the room with a blunted affect.
Excerpt 19

_Cheryl and Marie start to click in unison._
Marie leaves many prolonged pauses between her chords. Cheryl finally sits at the xylophone. She looks around and picks up the cabasa. She begins to play the xylophone and the cabasa at the same time. Cheryl is following a pattern of steady beats. Marie matches Cheryl’s basic rhythm to come together on pronounced unison beats. Cheryl smiles and continues to play along.

_A pattern of musical interaction is created and Cheryl is amused by the playing._
Marie adds a very mellow and slow vocal passage hovering over these steady beats. Marie’s playing becomes gradually differentiated into an alternation between long sustaining bass chords and high registered single notes. Cheryl abruptly inserts a short pause, then immediately fills it in with random, fast, lightly bouncing staccato notes on the xylophone. She seems amused by her own playing as she smiles and makes playful head and bodily motions matching the feel of her own musical expressions. She continues to play this way over Marie’s sustaining bass chords such that a consistent pattern of musical interactions between the two is created.

_Cheryl’s playing becomes more playful and humorously surprising._
Cheryl’s xylophone playing becomes more and more playful and creative. She interjects more unstructured and unexpected passages like sudden trills and leaps of wide intervals between notes while still remaining within the previously created interactive musical structure. Marie laughs as she continues to play along with Cheryl. Big smiles appear on Cheryl’s face, although she’s looking away from Marie. Cheryl’s presence as a whole seems to convey a sense of amusement and humor.

It was apparent that Cheryl was developing an increasingly playful and humorous mood during this process. Important to this development was a combination of factors related to changes and movement: shifting from non-playing to playing; transitioning from interpersonal disconnectedness to a connected-in-unison mode; moving to a differentiation within the connectedness; and the movement in Cheryl’s playing toward freer musical expressions.
Necessary to these changes and the new patterns of expression emerging in the musical interaction between Cheryl and the therapist was the previously ongoing context. The humor and playfulnes manifest in Cheryl seemed to be partly a consequence of her recognizing the familiar context, which served as an impetus for her to go beyond it (i.e., play something to be distinguished from, contrast with, or add to the ongoing music so that it resulted in differentiations in her experience).

If a desire for experiencing something pleasantly unlikely or unexpected is essential to exercising a sense of humor, and if a state of recognition is necessary for the person to achieve humor as well, Cheryl’s state in the above excerpt supplies a vivid illustration. Cheryl was a special case only in that her display of humor was based upon recognition which mostly evolved around her musical aesthetic experience, as opposed to those involving verbal meanings.

Engel in the excerpt below also seems to be reaching for humor, manipulating the music-making context to a pleasurable distortion of what was expected in it.

Excerpt 20

The goodbye song comes mutually to an end between Engel and Joan. The two stop singing. After a pause of a second or two, however, Engel plays a few soft beats on the cymbal and rocks back and forth. Joan smiles and jokingly says, “Do we need to do that? Oh, come on, we don’t need to do that...” (*it seem as if there was a similar incident previously*). Engel laughs in an appropriate affect and stops for another second, yet soon resumes the music and bodily rocking. Joan sings once again, “It’s time to say good bye” in sync with Engel’s beats on the symbol. Engel looks pleased and amused as he giggles.
Evidently, Engel’s humorous gesture in this moment was both a consequence of and an incentive to the recognition in his relating to the music, the therapists, and to himself. Another emotional component conspicuous in him during this episode was the magnitude of his expression, i.e., affective, bodily, vocal, and interpersonal interactions. This was most frequently shown through his vocalization. An example of this can be seen in Excerpt 14, as he achieved the kind of singing he was striving for. This in turn resulted in his assuming a more fully projected personality through his affective, vocal, bodily and interactive expressions.

**Differentiation in Cognitive Process**

Despite the varied levels of cognitive functioning of the clients, they had some cognitive achievements in common during their states of recognition, which were arrived at by a process of *differentiation* in their relating to internal and external events.

The cognitive processes arising in Stephanie as she was continually exposed to the consistent, repetitive, and salient musical patterns were most frequently shown in the increase of her context-dependent patterned responses. In looking again at Stephanie’s responses shown in Excerpt 13, the regularities emerging in her reaction to the music (e.g., a specific motion such as a subtle head nodding at the end of a patterned phrase, or a certain kind of vocalization in synchrony with the steady beats of the music) seem to indicate a process of
differentiation in her perceiving mind, which was contrasted with the previously fused state suggested by her undifferentiated and random reactions.

The excerpt below shows how a such growingly differentiated process of recognition in Stephanie led her to produce a possibly preverbal vocal sound. This took place at the close of a session, during which she had been showing particularly remarkable responses, such as heightened attention, calmness, patterned responses to the music, and context-appropriate affective expressions. The session took place a little over a year into her therapy at the Clinic, around which time she had been showing marked improvement in her attention span, motional and vocal (though never verbal) responses, and interpersonal relationships.

Excerpt 21

Sitting on the piano stool next to David, Stephanie continues to move her upper body back and forth in a steady rocking pattern in response to the therapists singing the song “Goodbye, Stephanie.” She begins to press the keyboard of the piano using her elbow in sync with the song. She then starts vocalizing in the syllables “Gue, Gui, Gui.” Her syllables fall precisely on the “Goo—d” of the goodbye song therapists are singing.

This seemingly preverbal response was evidently generated by the music, or more specifically, by her prolonged and consistent experience of the music. This suggests how a state of recognition emerging in Stephanie during her musical engagement possibly contributed to a further differentiated level of perceptual processes, whereby she was not only able to respond to the musical rhythmic patterns but also grasp the mechanical processes involved in producing a verbal sound. Naturally, this cognitive differentiation was a process embedded
within the process of her mind's intrinsic directedness, that is, the emergence of intentionality in her.

Patterned responses as a property of the rule-following tendency were manifested on far more sophisticated levels in Engel and Cheryl, who generally seemed to have higher levels of cognitive functions than Stephanie. As was discussed at several points previously, growing recognition for both Engel and Cheryl was best shown in their becoming able to pursue and fulfill their aesthetic goals on an increasingly differentiated level as they continued with therapy. Some examples of this included achieving vocalization of highly refined textural and mood qualities, maneuvering fine motor skills to create remarkably sophisticated patterns of musical sounds interweaving within the context, or furthering the formal process of music-making as a whole through dialectically expanding layers of musical constructs (or constructs of musical experiences). All of these were properties of actions subservient to the ongoing process of progressive differentiation taking place in their states of recognition.

**Physical Coordination**

One way differentiation emerged while the clients were in states of recognition was through their *actions* or physical performance. As the clients continued to progress into a deepened states of recognition, they showed an increase of patterned movements in response to certain musical forms or dynamics, a decrease of involuntary vocal or motional actions, more relaxed and less rigid bodily postures, prolonged physical stability, and/or more refined and
purposeful motor controls to achieve aesthetically desired sound or motional expressions (e.g., fine finger movements to play certain forms of sounds, control of vocal cords to produce a singing voice of a certain textural and affective quality, or control of tongue-mouth coordination to generate a pre-verbal sound approximating a certain syllable).

That the process of differentiation in the clients’ cognitive states during their music making necessarily involved their actions and, more specifically, their physical states, both as the means and the end products deserves further reflection. First, it indicates the intricacy of connection between the psychological (both the emotional and the cognitive) and the physical elements involved in the process – i.e., the more differentiated in perception, the more in action; and, vice versa. Second, considering that the clients’ bodily states and actions critically served their seeking and realizing intrinsic aesthetic desires, it reinforces the finding’s suggestion that the nature of the client’s intentionality during their musical engagements may be based primarily on intrinsic desires of a non-social nature, rather than on the needs required for adaptation as seen from common-sense perspective.

Ultimately, the process of differentiation in the clients emerged in favor of realizing their intrinsic directedness. Through this process, they became more willing and autonomous in their musical engagements, and the individuality of each client was realized to a fuller degree.
CHAPTER VIII
DIRECTED MINDS IN MUSIC-MAKING

What They Do That is Different

The last three chapters have been dedicated to describing what was observed in Stephanie, Engel and Cheryl during their music making. Assuming an uninformed observer’s stance and asking open-ended questions upon meeting them on the videotape was initially overwhelming and challenging, but gradually enabled me to follow the emerging patterns of their musical engagement without letting my pre-existing patterns of seeing and thinking dominate the process.

In general, an autistic mind is defined on a phenomenal level by its expressive distinctiveness from a non-autistic mind. Given this, the focus of examination in the last three chapters was on conveying the clients’ behavioral expressions as descriptively as possible, so as to distill some of the essential properties of autistic phenomena as they unfolded during the improvisational music-making. In all clients, I observed characteristic tendencies emerging in three related, yet distinct realms of consciousness: states of attunement, emotion and recognition.

The present chapter is designed to recapitulate the findings of the clinical investigation conveyed in the last three Chapters and to explore the essence of what characterized the clients’ directed minds across those states of consciousness. The findings seem to indicate the following: first, the basic motivation of the clients in engaging in music-making was ultimately to acknowledge and realize
their intrinsic states emerging in relation to the context; second, the needs and desires inherent in the clients’ minds were fundamentally of an aesthetic and creative nature rather than of a socially adaptive and ego-serving nature; and, third, the patterns of the clients’ behavioral directedness during their musical engagement showed a trend toward increasing differentiation of their aesthetic-centered intrinsic pursuits.

If the primarily aesthetic-centered and non-social directedness of the clients’ behavior found in this study was to have an implication for the minds of autism in general, it would necessitate a set of cognitive and neurological studies in order to determine the mechanism underlying such distinctive behavioral orientation. This is well beyond the scope of the present study. Meanwhile, I feel it is necessary and relevant to explore the significance of the findings in relation to cognitive aspects as they relates to the intentionality of the clients’ minds both in terms of their meanings and mechanisms.

The differentiation processes in the states of attunement, emotion, and recognition correspond ultimately to the differentiation occurring in the clients’ relating to themselves and to the environment emotionally and cognitively. In light of this, this Chapter explores the way in which the research converged on three fundamental properties underlying the directedness of the clients’ minds: sensory-perceptual primacy, perceptual pattern-seeking and presentational expressions, and continuum.
Sensory-Perceptual Primacy: Embodiment

A further indicator of the aesthetic-centered and non-social directedness of the clients’ behavior was their engaging in the surroundings primarily based upon their sensory-perceptual contacts with them. In his book, *Bright Air, Brilliant Fire*, Gerald Edelman (1992) explains that a sensory-perceptual process in an organism involves a “primary cognitive process”, through which it relates to the surroundings on an immediate contact basis and develops *patterns of behavior* (i.e., directedness) in response to its ongoing experiences within the surroundings. From a neuro-cognitive perspective (Edelman, 1992; Edelman & Tononi, 2000), the patterns of behavior emerging in immediate response to the outside world correspond to the perceptual mapping or the mapping of the surroundings in the brain. This process occurs on a preconscious level and thus is not necessarily known to the person’s conscious mind. Perceptual mapping, in this way, is distinct from a higher or a “secondary cognitive process” where one’s relating to the surroundings becomes further guided by one’s knowledge of one’s own responsive patterns. The secondary cognitive process corresponds to the conceptual mapping or the mapping of one’s own responses in the brain. A classic behavioral example of distinguishing the primary process from the secondary would be an occasion of conditioning occurring in an organism, in which it increasingly develops a tendency to choose or avoid environmental contact of a certain consistent nature without being aware that it is doing so.

In terms of the sensory-perceptual primacy found in this study, however, there was no notion of a ‘lower’ or ‘inferior’ cognitive ability as it would be
inferred from a general cognitive perspective, as for instance in Edelman’s theorizing. The latter perspective is governed by an assumption underlying common-sense psychology that the human mind operates based on the basic needs for social adaptation as well as survival in the environment. On the contrary, the stance of this study is to acknowledge the unknown features and their underlying principle intrinsic to the clients’ minds without imposing a standard scale on them. In this perspective, the sensory-perceptual primacy of the clients’ musical engagement was regarded as a fundamental aspect of their minds’ intentionality rather than being reduced to being inferior or deficient.

By sensory-perceptual primacy, however, I do not intend to propose that there was no self-aware conceptual process in the clients during their musical engagement. For instance, Cheryl’s understandings or concepts about herself within the surroundings were in fact remarkably clear and well-established. For Stephanie and Engel, there was simply not sufficient evidence to suggest whether or not there was any self-aware conceptual process going on in them, or, if there ever was, what the nature of it was. What was apparent for all three clients was that the sensory-perceptual primacy shown in their musical engagement was a basic motivation that was directed towards a full realization of their intrinsic states evoked in the context.

As essential aspect of the sensory-perceptual level of the clients’ musical engagement was the centering of their reactions on immediate contact with the musical surroundings. Whether it was mainly the acoustic qualities of sounds or more structured patterns of musical forms, whether the individual components of
music or the improvisational process as a whole, the music-making seemed to appeal powerfully to the clients as an immediately unfolding phenomenal context within which the clients’ intrinsic, pre-phenomenal desires were allowed to be realized.

While sensory-perceptual responses to immediate contact with one’s surroundings are basic to anyone, music making in these clients was different because it seemed to serve the purpose of immediate experience alone. In other words, there seemed to be no purpose or motivation in the clients’ musical behavior that was secondary or extrinsic to their immediately felt experiences. This way, the directedness of the clients’ behavior was characterized by the self-sufficiency of the sensory-perceptual experiences, thereby speaking to the intrinsic-centeredness of their sensory-perceptual desires.

Also embedded within such immediate contact based and intrinsic-centered sensory-perceptual desires was the clients’ inclination for specificity or uniqueness of experience. On the one hand, each client had been exposed to musical surroundings of a certain nature repeatedly and consistently, whereby they developed regular patterns of responses over time, thus producing a growing sense of familiarity. On the other hand, there was little behavioral manifestation in the clients suggesting that they were reacting to familiar experiences with signs of explicit recognition. Instead, their responses to the familiar events seemed refreshingly enlivened as if their experience of each occurrence was novel and specific to that moment. Moreover, often accompanying the clients’ growingly consistent patterns of responses to similar musical contexts were subtle variations.

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of certain kinds, such as insertions of fragmentary passages, new instrumental sounds, changes in dynamic levels/textural qualities, or transformations of an old musical construct into a new construct. This connects with one feature of the sensory-perceptual primacy discussed earlier, i.e., its partial centeredness on their directedness for experiences specific to each given moment, regardless of whether or not they had been previously exposed to largely similar contexts.

The directedness towards specificity found in the clients’ behavior is in a way at odds with Edelman’s theory introduced earlier in this section. According to his theory, the specificity involved in one’s sensory-perceptual-dependent response would be merely a consequence of the absence of a more generalized, conceptual understanding of the context. On the contrary, the clients’ sensory-perceptual-based response specific to a given moment seemed directed at making the experience itself unique to their physical and psychological state at the moment, and thus seemed to have little to do with their needs for social adaptation.

In summary, the sensory-perceptual primacy in the clients’ musical engagement served for full embodiment of their intrinsic states at a given moment. Both contributing to and resulting from this was that the generalizing of experiences, either in their own terms or in a socially collective sense, was not a centrally guiding motivation for their behavior. This addresses the nature of intentionality, or meaning emerging in the clients’ minds, that was intrinsic and not extrinsic to their embodied experiences at the moment.
Perceptual Pattern-Seeking: Presentational Expressions of Mind

Inherent in the directedness of the clients’ behavior was the rule-following or pattern-seeking tendency. In all three clients, seeking or inclining towards consistent patterns of a certain perceptual aesthetic nature was imperative for the furthering of their musical engagement. Physical or emotional responses in the clients to certain components of the sensory-perceptual musical surroundings (e.g., tone qualities, melody, rhythm, harmonic textures of the sounds, or mood or structural idioms) tended to become more and more interrelated with one another through the clients’ continuously engaging with them.

One salient aspect of the clients’ sensory-perceptual realm of pattern-seeking was the near absence of explicit references to the meaning of such behavior. This indicates that meanings in their minds during the music-making arose more on an implicit and aesthetic realm than on an explicit referential realm. According to conceptual semanticist Jackendoff (2002), reference is “a relation between linguistic expressions and the world as conceptualized by the language user.” (p.xvi). In other words, one’s referencing or making reference to something is a matter of the person’s setting it in relation to a general concept based upon his or her understanding of the generalized significance of it in his or her experiential world. Underlying this process is naturally the person’s generalized understanding of his or her experiential world and of his or her self within it. Referential meanings (i.e., semantic meanings) are based on a generalized and consistent understanding of the person’s self, the world, and his or her experience of the thing/event referred to in the world. As discussed at several points earlier in this
document, for a person of an ordinary or common mind, the process of conceptual reference-making and meanings generated from it are necessarily guided by his or her needs for social adaptation.

The nature of conceptualization or reference-making in the research clients was beyond the scope of this study, for the phenomena under investigation were irrelevant to and insufficient for dealing with so broad a topic. However, the non-primacy of conceptual references combined with the implicitly driven pattern-seeking observed in the clients apparently pointed to the nature of their directedness. First, the clients’ musical engagement was guided centrally by form-driven desires inherent in their intrinsic states. Second, the patterns of their musical engagement emerged in the service of acknowledging and realizing such form-driven intrinsic states within their immediate experiences, yet not so much of communicating about them with others. Third, the clients’ musical engagement evolved based on their implicit feelings or images aroused on a sensory-perceptual level, whose elements could not be told apart – as opposed to conceptual thoughts or ideas that had discrete basic units of meanings and could be collectively communicated. Lastly, related to the form-driven nature of the clients’ intrinsic states was their focus on the uniqueness of experience at a given moment, which contrasts with a focus on a consistent and generalized understanding of experiences.

In light of the nature of a mind and its emergence in expression, Langer draws an important distinction between a presentational form and a discursive form of expressions (1957). She explains that these two forms of expressions are
distinguished from each other in terms of two essential aspects: that is, basic units and the functions of the expressions. Since it is a distinction addressing a critical point about intentionality of a mind in general, and, more specifically, the minds studied in this investigation, I decided to further explore the implications of her account.

First, in a discursive form of expressions, there are distinct basic units for meanings (e.g., mathematic signs or words), which can be consistently understood and communicated among people of a same language community. Ideas conveyed through a discursive form of expressions are mediated by the conceptual process of abstraction or by understanding the meanings of these basic units and the syntactical laws for connecting them. In contrast, a presentational form of expressions does not involve vocabularies of any kind, and thus no basic unit of an independent concept. Presentational expressions are conveyed through “abstractions mediated by the sense organs” (Langer, 1957, p 92.). Artistic expressions derived from as well as conveying implicit feelings or abstract images that are not subordinate to explicit and concrete concepts — such as music, drawing, picture, or poetry of such nature — seem closest to the presentational form of expressions as proposed by Langer. These expressions, as Langer argues, can only connote meaning in whole as appreciated by the person who is engaged with it.

Second, a discursive form of expression draws on meanings shared among people in a language community. In contrast, presentational expressions do not have such consistent denotations, therefore ideas of presentational expressions are
not translatable; they can be expressed and perhaps “shared” or “communed” on an “implicit” level but they cannot be “communicated” in an “explicit” way (1957, pp. 92-102).

A discursive form of expression such as verbal language or mathematics is fundamental for reasoning or communicating concrete and explicit ideas and motivated by practical and purposeful reasons. Meanwhile, presentational expressions are significant in that they actualize “other” ideas that are inherent yet implicit in human minds and cannot be properly conveyed through discursive expressions. These “other” ideas include feelings, intuitions, or artistic images and sensations.

Drawing on this theory, the dominant properties found in the clients’ behavior can be seen as responsive to a presentational form of expressive desires based on their following features: 1) sensory-perceptual pattern-seeking over referential meaning seeking — i.e., implicit ideas over explicit ideas; 2) expressions consisting of no identifiably discernable meaning unit rather than of discernable, independent semantic meaning units; and, 3) focus on the uniqueness of here-and-now experience rather than on consistent and generalized understandings of experiences.

Langer argues that the presentational form of expression, in addition to the discursive form, is another inherent feature of the human mind. According to her account, when a person is immersed in an experience of a creative, aesthetic, or artistic nature, his or her mind can be generally identified as being realized through this presentational form of expression. Meanwhile, the uniqueness of the
“other” minds emerging in the clients’ musical engagement lay in its exclusive involvement with sensory-perceptual immediacy together with its indifference to the discursive form of expressions characteristic of common minds.

It is noteworthy that this unique feature of the seeming behavioral propensities of the clients had a direct relevance to what also made their behavior appear eccentric, or more specifically, ‘autistic’, included in which were non-communicativeness, interpersonal apathy, perseveration of erratic interests, and absence or delay of language development.

**Continuum**

Some of the major properties involved in the primacy of the sensory-perceptual and rule-following tendencies of the clients’ musical behavior ultimately contributed to their achieving a continuum of experience. By continuum, I mean a level that goes beyond a linear continuation of events in time, that integrates all components and domains of the phenomenon into its indivisible unity. A continuum of experience in this sense refers to an experience in which its constituent parts can’t be distinctively identified either subjectively or objectively.

Intrapersonally, this is substantiated by a continuum of intrinsic conscious states that the clients realized through the non-discrete nature of their musical engagement. This can be attributed to two main factors, i.e., content and structure. Content-wise, the absence of discernible concepts of semantic meanings involved in sensory-perceptual and presentational form-seeking served to actualize their inherent expressive ideas. These ideas were implicit and continuous, thus
meaningful only as a whole and pursuable only through a non-discrete continuum of expression. Structure-wise, the patterns of the clients’ musical engagement comprising certain idioms, events, and episodes of expression were defined not by linear, distinctively identifiable cause-and-effect-based reactions to their surroundings, but by a recursive process, in which the clients’ initially tuned into the context, added new expressive components, and continually balanced, expanded, and integrated their ongoing experiences in the part-whole relationship.

Interpersonally, and more generally, in their relating to surroundings, the continuum achieved in the clients’ musical engagement was characterized by the non-differentiality of the subjective and the objective elements of their behavioral directedness. This can be attributed to the intrinsic-centeredness involved in the sensory-perceptual and the presentational form-seeking of the clients’ behavior. The clients’ musical engagement geared towards fulfilling their own intrinsic desires, that is, following intrinsic and not extrinsic rules, and pointed to meanings that are true to actions themselves. Imbedded in this was the inactivity of others-centered actions such as monitoring, modifying and communicating their expressions as expected or directed externally.

In essence, what was ultimately achieved by the non-discreteness and the intrinsic-centeredness essential to the sensory-perceptual, presentational form-seeking of the clients’ behavior was an undivided stream of consciousness emerging on a continuum within the context.

Achieving an integrated stream of consciousness may be found in a normal individual as he or she engages in an activity or psychological space
involving spiritual, creative, or artistic pursuits. In these areas, ego-consciousness is often subsumed into a more fully integrated conscious state. Meditation, physical exercise and artistic or religious ecstasy are some of the forms of experience through which one may reach such a state of consciousness (Csikszentmihalyi, 1990). However, the undivided stream of consciousness arising in Cheryl, Stephanie, and Engel through their engaging in music-making seemed different from those phenomena as they are found in normal individuals. For these clients, the continuum of their intrinsic states was not merely a state achieved transiently, by chance or by choice, as can be frequently the cases for normal individuals. Rather, the continuum of musical engagement observed in the clients seemed to be a property of the ordinary, entire, and ‘nothing-but’ direction of their minds. This was demonstrated by the fact that the continuity and indivisibility of their musical engagement was found consistently within each client as well as across the clients, regardless of their cognitive functions, mood qualities or interpersonal dynamics at varying times. Given this, the continuum of the clients’ expressions seemed to be a key element of their minds’ intentionality during the music-making.

Having established the difference between the continuum of the minds’ expressions observed in the clients and a transcendent state of consciousness achieved in a normal individual, the latter seems to have an important implication for the former in that it is commonly and most essentially characterized by the absence of ego-centrism in which one’s self-conscious mind is rather inactive. (Csikszentmihalyi, 1988, 1990, 1997; Storr, 1992; Ruud, 1998; Copper, 2001;
If it can be safely said that conscious divisions of human minds and their expressions in accordance with such divisions – e.g., the subjective versus the objective; distinct concepts of things and events in the world and their cause-and-effect relationships; truth versus falsity; temporal and spatial divisions created by an ordinary state of consciousness; or reasoning and decision making within a social circumstance – are mediated fundamentally by one’s ego-consciousness, then in the same connection it can be also supposed that the indivisibility of the minds’ expressions of the clients as found in their musical engagement necessarily involved inactivity or absence of ego-consciousness.

This leads to the next chapter, in which a final synthesis will be drawn as to what is indicated by the findings about the intentionality of the autistic minds of the clients both on an emotional-psychological realm and a cognitive-neurological realm, i.e., meaning and mechanism.
CHAPTER IX

SYNTHESIS OF THE RESEARCH: INTENTIONALITY IN THE “OTHER MINDS” OF THE CLIENTS IN MUSIC MAKING

This study was based on the acknowledgement of autism as “other mind”, which is a notion mainly generated by studies and reflections in the fields of cognitive psychology and neuroscience. The “other mind” notion of autism, with focus on its distinctive cognitive style is well summarized in the theory of “A Different Brain – A Different Mind” put forth by Uta Frith (2003). Emphasized in this theory is the significance of cognitive and neurological mechanisms in mediating the mind processes, including the emotional and the interpersonal. In a parallel way, the problem of the intentionality of autistic individuals is concerned with the uniqueness of their minds’ mechanisms as they mediate certain patterns of behavior within their surroundings.

The approach taken in this study was one that agrees to the view of intentionality as regularities of object-directedness emerging in an individual’s behavior as he or she engages with his or her surroundings. Underlying this is the notion of the “enactive mind,” the principle of embodied cognitive neuroscience introduced in Chapter III, which emphasizes the fact that mind arises in behavior, i.e., meaning in action. This approach, with its effort to avoid premature reductive interpretation in favor of the inductive distilling of insights, was suited for the purpose of the study because it allowed for the unknown properties of the minds of the clients to be tapped into and illuminated from an open perspective.

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The research questions were postulated in such a way that they opened up the essential properties involved in the “otherness” of the clients’ minds unfolding in the process of music-making, which ultimately addressed the basic motivations and mechanisms of their minds’ realizations during their engagements. In Chapter VIII, the findings generated from the clinical investigation of the study were synthesized in overview. The comprehensive examinations of the three different conscious states observed in the clients led to an indication of an important aspect of the otherness inherent in the intentionality of their minds. This can be seen in the pure self-centeredness accompanied by an inactivity or absence of ego-consciousness, that is, the ego-less self-centrism.

The present Chapter presents a synthesis of the information gathered during the entirety of the research, included in which are insights gained from the cross-field literature investigation concerning the neurological and psychological features of the other minds of the autism (Chapter III) and the findings from the clinical investigation (Chapter V through VIII). The main purpose of the synthesis is to illuminate the intentionality of the minds of the clients arising in their engaging in creative music-making in light of the connection between the emotional and the cognitive processes involved. The ultimate object was to gain a deeper understanding of the autistic clients’ musical behavior in terms of its meaning and mechanisms together by carefully following the regularities of their behavior.
Intentionality of the Other Minds: Ego-less Self-Centrism

The ego-less self-centrism found in the clients seems to be in part related to the notion of the inactivity or the absence of a self-reflective homunculus proposed by Frith (2003) in her integrative neuro-cognitive account of autism, already discussed in Chapter III. In contrast to the idea of ego-less self-centrism generated by this study, however, Frith, relates to the other mind of autism as "pure egocentrism." (p. 210) Although it is not the main interest of the study to argue for any specific psychological definition of ego, I feel it necessary for the consistency and clarity of the discussion that I re-establish what is meant by the term ego and ego-consciousness as used in this document.

The ego as used in this study refers to a function or a mechanism of human consciousness found in common-sense psychology, which gives rise to self-consciousness in a person and mediates the person’s relationship with the outside world. Encompassed by a multitude of references including general dictionary and thesaurus definitions (Webster’s Ninth New Collegiate Dictionary, 1989; Merriam-Webster Thesaurus, 2005) and scientific/medical accounts (Anderson, 1994; Kaplan and Sadock, 1998) as well as various in-depth psychodynamic theories, the ego within the realm of the ordinary mind can be most essentially grasped through the following three aspects: 1) as a property pertaining to the conscious realm of the psyche only, 2) as a psychological function distinguishing one’s self from the world and other selves, and, 3) as a psychological entity that experiences the outside world, reacts to it, and mediates between one’s primitive drives (classically represented by the id in the Freudian
psychoanalytic term) and the demands of the social environment (represented by the *superego*).

The ego, as a psychological entity that extends only as far as the conscious mind, is the most basic and consistent notion recognized throughout all of the references. This is also self-evident in our everyday experiences because it is always through ego-consciousness that we identify experiences as being ours. Among many others, Carl G. Jung explains this well in his theory of *The Development of Personality*.

“So far as we know, consciousness is always ego-consciousness. In order to be conscious of myself, I must be able to distinguish myself from others. Relationship can only take place where this distinction exists.” (CW 17, 1925, P.326).

Also captured in this statement is a crucial function of ego-consciousness: that which distinguishes one’s self from all others. Cognitively, this distinction is dependent upon the person’s ability to make an explicit reference to his or her self as *I* or *Me* as a consistent and independent psychological entity. Embedded within this process is the person’s ego as a *subject* having a relationship with as well as an ownership of his or her self as an *object*. In terms of the development of personality in a common mind, ego-consciousness is critical because it allows one to *relate to his or her self always in connection with the outside world*, in which case behavior arises in negotiation between the person’s intrinsic basic needs and
the needs required for collective living with others. This process addresses ultimately to that of social adaptation.

Inherent in the role of the ego-consciousness negotiating for social adaptation is monitoring one’s actions and their consequences and modifying his or her behavior accordingly in order to achieve a more desirable state of assimilation, both physically and psychologically. Fundamental to assimilation as an important objective for a common mind, however, is not so much the fact that one can or does monitor and modify his or her behavior in relation to the context, as it is that the person is naturally driven to do so in order to assimilate into the surroundings. This means that his or her experiences and responses within a given context are guided in part by basic needs that are socially oriented.

Essential to socially inclined basic needs are desires for the person’s ego-conscious self, i.e., the person’s self as consciously known to him or her as part of the world, to be loved, wanted, or acknowledged by others. In other words, for a person with an ordinary ego-consciousness, it is these socially oriented basic needs that give rise to his or her patterns and directedness of behavior – including perceiving, understanding, feeling and valuing, decision making, planning, and/or adjusting in relation to internal or external affairs. Finally, it is these socially directed actions of a person participating in his or her surroundings, through which his or her meaning or intentionality arises, both intrapersonally and interpersonally.

With the contents and functions of the ego situated in this way, it seems reasonable to propose that the self-centeredness observed in the research clients
while engaged in music-making was based on a non-ego-centered or ego-less psychology rather than a “pure egocentrism” as proposed by Frith (2003). Again, this is due to the fact that the directedness of the clients’ behavior on all levels within the context and throughout the process of music-making moved them in the direction of realizing a continuum of mind, in which there was no clear distinction between subject (the experiencing or the knowing) and object (the experienced or the known), and which furthered their realization of their non-socially inclined intrinsic needs. Inherent in all of this was a search for the fulfillment of their desires primarily through a sensory-perceptual and presentational level of expressions and contacts. This contrasts with the desire-seeking typical of an ego-conscious mind that is characterized by feelings, thoughts, and behaviors mediated not only through sensory-perceptual but necessarily through conceptual processes directed towards the person’s achieving a better fit to the social context.

The Distinctive Cognitive Style

The non-sociability and extreme self-centeredness of autistic individuals have already been recognized abundantly in clinical and anecdotal (either biographical or autobiographical) reports. The purpose of the investigations undertaken during this study was to delve further into the basic motivation and mechanisms underlying the self-centrism found in autistic individuals in a music therapy context. The current section explores in synthesis the ego-less self-centrism observed in the clients in light of their distinctive cognitive properties.
The focus of the exploration was on the fundamental motivation—or, the “motivational pre-disposition” as it was referred to by Klin (2003)—underlying their ego-less self-centrism. This resolves down to the problem of whether or not there was a central principle underlying the cognitive properties involved in ego-less self-centrism, which may replace in autistic persons the social principle underlying the ego-consciousness of a common mind.

The information gathered from the cross-field literature investigation seems to converge on the following recognitions contributing to the other mind notion of autism: First, underlying the ego-consciousness of a common mind is the socially-driven self-aware homunculus operating as a central principle for the emergence of ordinary human behavior in all domains; second, the theory of mind, central coherence, and the executive functions are the major cognitive mechanisms centered on the self-aware homunculus, thereby guiding the ego-consciousness of a person of a common mind; and, third, as the studies have discovered so far, it is the abnormal or weakened functions of these three major cognitive mechanisms that are underlying the other mind of autism.

Given this, the ensuing questions are then concerned with what other cognitive properties might comprise, instead, the minds of autism to give rise to its unique “other-ness” with respect to common mind. Is an autistic mind a mere consequence of subtracting from a common mind those psychological mechanisms (i.e., theory of mind, central coherence, and the executive function) mediating the ego-consciousness? This is an important question because it addresses whether autism is mediated by a distinct set of psychological principles.
and their mechanisms independent of those comprising the common minds; or whether the former is merely an anomalous form of the latter.

Taking into consideration the background of all this information and the remaining conceptual issues, more immediate questions for the current discussion are related to the cognitive aspects involved in the ego-less self-centrism found in the clients’ musical engagements. This research was not formulated to undertake a direct investigation of either the neurological or the cognitive mechanisms of the clients’ behavior (involving brain scans or psychological/behavioral measurements, for instance). Rather, the main strategy of the exploration was to take a mindful look into the cognitive aspects manifested through the patterns of the observed behavior and to draw implications from the behavior that will be of direct relevance to the research clients as well as music therapists working with autistic individuals.

The discussion is organized around three cognitive aspects of the clients’ musical engagements: emotional rewards, other principle of other mind, and self-awareness.

Emotional Rewards

The cognitive aspects involved in the phenomena are generally related to how the clients’ experiences were processed in their minds. This was manifested through the patterns and the directedness of their ongoing reactions to the experiences. Through the in-depth discussions in Chapter V through VII, it has been shown that the states of attunement, emotion, and recognition in the clients
in music making were working intricately together to enhance one another, to deepen the process of differentiation in each state, and to ultimately achieve a continuum of consciousness as they became fully immersed in the context. Underlying this was the close interconnection between the cognitive processes involved in the clients’ musical engagements their emotional states, whereby pursuing their inherent desires and furthering of experiences were fundamentally guided by their intrinsic valuation of experiences, i.e., their emotional rewards.

The interconnectedness between cognition and emotion is a notion widely acknowledged both in everyday experience and in theory. In everyday experience, it should not be difficult for one to relate to incidents in which the more pleasing the experience is, the more easily one is likely to engage, learn, remember, and further apply skills obtained from it; and, in the same connection, he or she is likely to develop skills defending against displeasing experiences.

The role of emotional rewards in learning and other cognitive processes has been long recognized and continues to be updated. It goes as far back as the early conditioning and reinforcement-based learning theories of behaviorism (Skinner, 1971; Watson, 1930) and the classic psychodynamic theories of Freud and Jung, and more recently, the unearthing of the interconnectedness of the brain circuitries and processes mediating the connection between emotion and cognition in cognitive neuroscience (Damasio, 1994; LeDoux, 1996; Rolls, 2001).

Though these theories focus on the common mind’s aspects of reinforcement – such as basic needs for biological and social adaptation and assimilations – they all address the significance of emotional rewards mediating a
cognitive state in one’s mind and behavior. Underlying all of them is the 
acknowledgement that all reinforcements and rewards are by nature emotional. 
The question arising then with regard to the emotion-driven cognitive 
processes found in the clients in this study is that: what is unique about their 
processes? What is the interconnectedness between the emotional states and the 
cognizing states arising in their actions? Ros Blackburn referred to her own 
experiences of emotions, understanding, and communication during a lecture 
given at a private school in New York City (March, 2005).

“All the things, the normal people businesses, that you just land 
yourselves at instinctively don’t come so easily to me. I have to work 
them out theoretically, piece the bits slowly together, because they don’t 
come through my gut.”

She adds,

“I get excited when I hear silly sounds of words and birds crying. I go 
completely nuts when I jump the trampoline [her favorite activity]. I do 
feel emotions. But the emotion doesn’t go through translator process. It 
goes straight through behavior …whereas others are driven by social 
impulses coming upon feelings. I don’t need to communicate my feelings 
with others.”

These personal statements pungently capture the essence of the 
relationship between her emotional and cognizing states, a relationship unique to
the mind of autism. Blackburn refers to it as the “people-blindness” or “social-blindness,” which she asserts is distinct from the general notion of autism as “mind-blindness.” Though not directly relevant to the research clients of this study, the people- or social-blindness acknowledged in Blackburn’s reflection on her own mind of autism does seem to have significance for the directedness of the clients’ behavior in terms of the emotional rewards underlying it.

The excitability about direct sensory and physical experiences combined with the no-gut reaction in relating to “people businesses” recounted by Blackburn has many similarities to the behavioral states found in the research clients: essentially, it was the intrinsic-centered and non-socially directed emotional experiences that excited them and encouraged (reinforced) them to further engage with their experiences. Behavior reinforced by intrinsic-centered and non-socially driven experiences evidently contrasts in its basic principle with behavior reinforced by socially driven, “gut-feeling” experiences.

In the branch of cognitive neuroscience directly concerned with the emergence of a conscious state and the function of the self, this gut reaction in fact has been recognized as a crucial component for normal development of the human mind and behavior (Damasio, 1994, 2001; LeDoux, 1996, 2001; Rolls, 2000, 2001). One of the most illuminating explanations is conveyed by Damasio’s theory of the “somatic marker.” (1994). Based upon his fundamental conception of the “body-minded brain” and the interconnectedness between emotion and cognition, Damasio elaborates on the importance of the instant bodily evocation (e.g., “gut feeling” or “hunch”) occurring in a person as he or she interacts with
the surroundings. The “somatic marker”, as the image of stimulus (e.g. object, person, or event) represented in the body, functions as a “biasing device,” through which one is enabled to assess/evaluate momentary experiences instinctively based on previous experiences and thus perform more efficient reasoning and decision making. According to Damasio, pure reasoning (i.e. logical linking of factual information based on explicit cost-benefit analysis) is often not enough for us to understand, evaluate, and react to situations accurately and efficiently. Especially when one is faced with more social or personal matters (as opposed to those that are non-human factual/logical), one requires a reasoning mechanism that is more practical and personally-relevant than general and purely theoretical. Somatic marker theory proposes that our bodily responses associated with previous experiences are fundamental for the rapid categorization and handling of ongoing daily encounters. Functionally, this mechanism is mediated by the interaction between the internal preference system serving for the innate regulatory disposition towards survival of the organism (involving primary emotion) and sets of acquired, culture-dependent experiences that generate a “repertoire of stimuli” to become physiologically “marked” (involving secondary emotion).

The somatic marker hypothesis seems to be a compelling representation of how the human mind and behavior arise based on not only primitive survival needs but also the needs that are more people-oriented and socially derived. This corresponds to the emotional rewards of the common mind mechanisms that are not only internal-preference based but also socially based. Essential to the latter
in particular are the emotional and physical evaluations of experience that serve eventually for the function of the ego-consciousness of the person, i.e., *the preservation and actualization of the person’s self within a social world*.

I must confess that there were some temptations to compare the emotional and physiological evaluations of experience in an autistic mind in general with those explained in Damasio’s theory of the ordinary mind and behavior as I reminisced about former autistic clients of mine who often did not seem to care much about physical comfort or social adequacy as they persistently pursued their erratic-seeming actions in search of immediate pleasure. My other impulse for a general reflection was focused on the stories that came up frequently in my reading, in which high functioning autistic persons reportedly showed striking abilities for logical thinking and memory skills as long as their sources were concrete, factual and not person-based (e.g., block design, obsessive memories of or reasoning about factual events, etc.).

Such a general speculative comparison between an autistic mind and a common mind is, however, not of a direct concern for this study. Rather, the somatic marker theory provides a direction for exploration by leading to a central question, i.e., what was, then, the fundamental principle, or “motivational predisposition” (Klin, 2003) underlying such intrinsic-centered and non-social reinforcements of behavior? If an instant bodily reaction to an experience is instinctive based on both internal preference and acquired information stored into the physiological system, we have seen many such incidents in the clients through the previously shown excerpts. In fact, the clients’ musical actions and pursuits

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often seemed to be driven by almost nothing but instant bodily enactments based on their intrinsic-centered desires during their musical engagements. Accordingly, the uniqueness of each client’s behavior in music-making was more dependent upon the fundamental motivation or the “motivational predisposition” underlying the behavior than on the behavior itself. This is supported by another statement of Ros Blackburn (2005) from the lecture introduced above: “There is no such thing as autistic behavior. It is only human behavior. As far as autism is concerned, behavior is not the main issue. It is just the byproduct of who we are.”

From a functional perspective, the fundamental motivation or the “who we [they] are” points to the properties involved in the internal preference and the inclination for selective sets of experiences among all contacts with the outside world, i.e., the principles of primary and secondary emotions. As far as the research findings were concerned, the principles of primary and secondary emotions for the clients within the creative music-making were those that reinforced their behavior in a realm that was 1) immediate sensory-perceptual contact based, 2) implicit and presentational rule-following, and, 3) continuum-seeking. Underlying these was again the non-social and intrinsic aesthetics of the clients’ mind, i.e., the ego-less self-centrism, emerging through their engagement. This is noticeably contrasted with the people- or social-directedness assumed to be intrinsic to a common mind, in which the psychological and behavioral reinforcements for a person are fundamentally based on the needs of his or her ego-consciousness engaging in interpersonal relationships.
Other Principle of Other Mind

One possible question is whether the distinction between ego-less self-centrism and ego-consciousness – which is related to the distinction between non-social and intrinsic-centered aestheticism of action and socially inclined behavior, respectively – is more of a population-dependent (i.e., autistic versus non-autistic individuals) or a context-dependent issue (i.e., creative music-making versus social decision making). The answer is not to come readily through a single study, and especially not through this particular study in which the scope of investigation was limited both as to population and context. The findings of this study are most directly relevant for those three research clients with autism who participated in the client-centered and music-centered music-making processes, which, depending on one’s informed judgment, could be extended to include the contexts involving other autistic individuals engaging in creative music making.

With the limitations of the findings in place, I feel it still important to explore what may be implicated through the study with regard to the uniqueness of the intentionality of autistic individuals in music-making. A set of implications has developed from a synthesis of all findings from the study, including those from the clinical investigation and cross-filed literature examinations. They are summarized as follows.

First, with respect to the clinical investigation, the manifestation of the ego-less self-centrism, which was conveyed essentially through favoring a non-social and intrinsic-centered aestheticism of behavior over people-centered
behavior, was pronounced across the clients in their varying states of consciousness, therapeutic relationships, and phases/moments of therapy.

Second, the ego-less self-centrism found as a fundamental guiding principle for the clients engaging in music-making overlaps substantially with the non-primacy or absence of social cognition of the minds of autism recognized throughout the relevant fields, e.g., cognitive behavioral psychology, cognitive neuroscience, music therapy and various clinical and anecdotal documents.

Third, recent studies in cognitive neuroscience have suggested that the conscious state of a person deeply immersed in artistic or creative experience of some sort, such as being deeply engaged music-listening and playing or meditation, is mediated by brain activation that is in part characterized by the decrease of regional neural activities known to be crucial for processing and performing self-consciousness and social cognition (Jourdain, 1997; Young and Zatorre, 2001). One example of this is provided by a study investigating intensely pleasurable responses to music, namely “musical chills”, using positron emission tomography (PET) (Young and Zatorre, 2001). The results showed that there were two distinctive subsystems in the brains of the subjects while they were involved in pleasurable emotional responses to music, one substantially activated and the other deactivated. Based upon the analysis of the neurological findings, the authors concluded that the brain system which was activated during intensely pleasurable responses to music corresponded to the one that was involved in processing intrinsic rewards such as those in sex, food or psychotropic drugs, while the system which was deactivated corresponded to learned behavior. The
latter regions are also known to be related to social cognition and self-reference in an ordinary state of mind, and are recognized to be critical for marking the brains of autistic individuals due to their abnormal activation patterns (significantly weakened for the most part).

Piecing together the information reviewed above, it may be suggested that the ego-less self-centrism of the clients in music-making was that which approximated a root principle for their minds and behavior emerging in the context, rather than being a merely context-dependent phenomenon. In other words, the clients’ behavioral directedness on all levels in their music making – i.e., patterns of relating to music, to the therapist(s), and to their own reactions – were consistently and primarily guided by the non-social intrinsic-centered aestheticism of their desires. This was to be distinguished from occasions when one transiently enters such an ego-transcendent self-centered space under some specific circumstance and weaves in and out ego-conscious and ego-transcendental states.

Meanwhile, the non-social, intrinsic-centered aestheticism found not only in the research clients but also suggested in anecdotal reports as well as neurological evidence, seems to do overlap in part with the altered state of a normal individual deeply engaged in a creative or artistic moment, in which an absence of ego or self-consciousness is frequently reported. (Copper, 2001; Csikszentmihalyi, 1988, 1990, 1997; Fidelibus; 2004; Ruud, 1998; Storr, 1992). This may be a significant consideration for future studies about the nature of the minds of autistic individuals with regard to their ego-less expressive desires. Such
research can also involve attempts to further unearth the role of self-consciousness both within an individual and across different individuals of different “psychological styles,” through which the minds of autism may be illuminated within a fuller landscape of human consciousness.

The ego-less self-centrism found in the clients during their music-making can be suggested as a fundamental motivation for their minds and behavior emerging in the context. This was demonstrated by the non-social reward based intrinsic aestheticism consistently centered in all realms of the clients’ musical engagements, including their musical, intrapersonal and interpersonal relationships. In light of neurological and cognitive mechanisms, this may indicate that there can be a neural correlate in the clients’ brain system that assumes the role of a central motivational and regulatory mechanism, which mediates a different set of Theory of Mind (rule-following), Central Coherence (bottom-up information processing), and the Executive Functioning (top-down information processing). This way, the “other mind” notion of autism can be functionally equated with an assumption of “other central principle” within the cognitive neurological system of an autistic individual. The significance of this “other principle” as suggested here is that it is potentially to replace the principal mechanism in an ordinary human brain-mind system – i.e., the “self-aware homunculus”, as recognized by Frith (2003) – that mediates the Theory of Mind, Central Coherence, Executive Functioning operating in service of the ego-consciousness of the person.
Again, suggesting the existence of a different central principle operating within the brain-mind system of autism is a consequence of a thorough examination of the research clients’ behavior against the background of the existing knowledge reviewed. The significance of this view, specifically for this current study, lies in its acknowledgement of the uniqueness of the other minds of the research clients that are distinct from the minds of the ordinary persons. The focus of acknowledgement is on their positive distinctiveness, i.e., a different form of pursuit based on different motivational pre-disposition, rather than their negative distinctiveness (*weak theory of mind, weak central coherence, and, ineffective* executive functioning).

**Self-Awareness**

As was noted earlier in this chapter, one important issue in the “other principle” of the other mind of autism is that of self-knowledge or self-awareness. In fact, it was found to be one of the most crucial aspects characterizing the clients’ behavior during their music-making. At this point, it appears that the properties related to the “self” of the clients observed in the research context were discernable in the ego-less self-centrism conveyed through the non-social, intrinsic-centered aestheticism of music-making actions, i.e., the sensory-perceptual, presentational rule-seeking on a continuum. But what does this suggest about the property of self-knowledge or self-awareness in the clients? By the ego-less self-centrism expressed as such, what is indicated about the clients’ conscious experience of their “self”?  

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These are controversial questions by nature within the basic framework of this research, because they are generally concerned with understanding others’ subjective experience of knowing or feeling. The research was originally formulated and progressed based upon the perspective of the enactive mind, i.e., meaning in action, which essentially objects to making an arbitrary translation of behavior observed from a third person perspective into a first person’s subjective state of experience. For Cheryl, for example, there were occasions when she verbally related to herself, her experiences, and her likes and dislikes. Except for those occasions, however, the self-awareness of the clients was a completely subjective domain of experience to which no one else had access: neither the therapists, the caretakers, or myself as a non-participant third viewer. Nor is it part of the original object of the research to translate the observed behavior of the clients into their subjective experiences (e.g., feelings and understanding of the experience).

The current discussion is rather focused on what the clients’ behavior could suggest regarding the functional or mechanistic aspects of self-awareness specific to them – i.e., the mechanism of self-awareness as opposed to the contents or the subjective experiences of self-awareness. This is a concern directly relevant for music therapists working with autistic clients because it addresses how their clients might be approached more effectively and how the clients’ relatedness to self and others can be facilitated in a way that would “make sense” to them and “work” for them. It is an approach different from the one in which the
therapist seeks to gain personal understanding of what the client knows and feels about his or her experience including him or her self.

Referring back to the research, necessary for this approach was to explore the working mechanisms of the clients' behavior that might indicate how their self-awareness was mediated. The research findings overall led to a notion that the clients' self awareness during the music-making arose in relation to two major features of their cognition: 1) their other principle mechanism of mind, that is, the non-social intrinsic-centered aestheticism, and 2) their cognitive primacy in relating to their experiences including themselves, that is, more implicit than explicit relationship with their experiences.

A fundamental question arising in relation to these observations was, 'what does is mean for an autistic individual, or for anyone, to be self-aware?' – can one's implicit relationship with one's experience imply a form of self-awareness? If self-awareness refers to conscious or explicit awareness of self, then it requires more specific events both psychologically and neurologically than the broader state of self-relatedness or experience of self in general. Psychologically, a conscious state of self-awareness requires a process of referring to one's self based on a coherent image of the self, i.e., a “self-object”(Kohut, 1971; Kaufman, 1996; Silverstein, 1998; Tolman, 1986), which necessarily involves a process of objectifying one's self. Neurologically, this correlates to a mechanism for mapping the patterns of one's internal affairs in response to his or her experiences with the world (Edelman, 1992).
Provided this, Frith’s theory of the self-aware homunculus – as one’s central psychological mechanism that serves to map one’s internal experiences of contacts with the world – as marking the difference between the ordinary minds and the minds of autism seems to be insufficient: what it suggests is ultimately that the autistic minds are characterized by the absence or abnormality of this self-aware homunculus in their mind-brain system. There are more than a few autistic individuals who have highly self-aware reflective skills or even write brilliantly about their experiences of self and the world as autistic persons, such as Temple Grandin (1998, 2005), Dawn Prince-Hughes (2004), and Donna Williams (1992, 1998, 2003).

A homunculus, by its definition as “a little man” within one’s mind-brain mechanism who monitors and regulates one’s behavior on all levels as the “last visible self” (Frith, 2003, p.209), is always self-aware internally – whether one’s relatedness to oneself is conscious or pre-conscious, or whether explicit or implicit. Based upon the scientific studies reviewed in this document, I must conclude that what makes a homunculus the defining feature of a common mind is not only the fact that it is self-aware, but also, and more importantly, that it is socially self-aware. In other words, a homunculus marks a common mind only when its self-awareness is guided by its social awareness.

This connects to the following reasoning about the self-aware homunculus in the mind of an autistic individual:
If the potential "other" central principle of the other mind of autism mediates all "other" kinds of motivational and regulatory activities (emotional, cognitive, and physiological) of an individual that are defined as autistic, and,

if, in his or her case, this other principle in the mind-brain mechanism of involves a mechanism of mapping the patterns of his or her internal affairs during experiences (i.e., mechanism of objectifying one’s self),

then, it can be said that,

underlying all realms of his or her behavior, a homunculus of an “other kind” – the so called “autistic” – is at work in his or her mind-brain mechanisms, whereby his or her behavior is directed based on the “other” operating principle of autism and he or she has (or, is capable of developing) a coherent image of self or an “self-object” and thus a conscious or explicit awareness of his or her self.

In this case, the self-awareness of the autistic individual differs from the self-awareness of an ordinary individual because his or her self-awareness is not based on social awareness but based on awareness by an “other principle,” that is, “other self-awareness.”

In essence, whether or not one is able to develop a conscious or explicit self-aware mind is no more a problem in relation to an autistic individual than it is to any other, as this is more concerned with the extent of development

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differentiation of cognitive ability in the person to have an explicit relationship with his or her experience, than with a particular cognitive style. More specifically relevant to the self-awareness of an autistic person is the nature of the underlying principle behind his or her potentially becoming self-aware.

With this in place, if the findings of the research are to suggest self-awareness of any sort and degree in the clients, then inherent in this suggestion is that their self-awareness was fundamentally centered on their intrinsic-centered aesthetic experiences during the context, i.e., an aesthetic-experience based self-awareness. It is important to note that this "other self-awareness" as suggested for the clients did not correspond to their conscious or explicit awareness of themselves: only Cheryl had shown behavior explicitly relating to her experience and herself. This, again, can be explained by the fact that such an explicit awareness of self requires the specific cognitive ability to objectify and develop an explicit image of one's self or the "self-object."

In summary, for all three clients, it didn't seem to be the case that their relating to themselves during their engaging in the music-making were centered on their objective image or "self-object." Nevertheless, the indisputably strong sense of directedness and persistent pursuit of their intrinsic needs led me to conclude that their implicit relationship with themselves within their musical surroundings had a significant implication for their implicit awareness of their selves arising and deepening through their engagements.
Language of the Intentionality in the Other Minds of the Clients

This document has already covered the major features of intentionality found in the clients' musical engagements, including what was characteristic about their musical actions, how they were expressed and shaped into certain patterns and what the fundamental principle was underlying the emergence of such directed patterns of behavior. My yet choosing to add this section is to underscore the fact that all these manifestations of "other" directed intentionality of the clients were at the same time language phenomena, i.e., phenomena of expressing and communicating the inwardness of the clients. After all, this consideration was the fundamental impetus for me to embark on this project and, if our work as therapists is to be centered on understanding the clients and creating a relationship with them, this should be the very aspect that concerns us the most.

Language, as used throughout the discussion from this point, is defined by its two most basic functions, i.e., expression and communication – the essential properties that make an action language regardless of its constituent elements, contents of delivery, rules of operation, or recipients. Language defined so fundamentally encompasses actions by a language user ranging from unintentional, unformed, and untargeted gestures and sounds to an intentional, specifically targeted, and highly systematic use of words or other formulated signs. The main function of language in this perspective is to serve as the means for the language user to relate to one's self and the world. In other words, it allows one to express and communicate something to someone (or something) somehow. In this

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way language is an important component of intentionality, as the former conveys the latter.

Taking into consideration the language aspect of the intentionality of the clients, the following summarizes what was expressed and communicated through their musical engagements:

“Something”: It was substantially the non-social intrinsic-centered aesthetic desires emerging in them through their musical engagements that were expressed and communicated in the clients’ musical actions were.

“To someone (or something)”: “To someone (or something)” as an umbrella term for the recipient or the target of expression and communication was a multi-faceted component. In the short-term, there were many moments in which the clients’ musical actions were explicitly and straightforwardly directed to the therapists, to themselves for self-stimulation or self-regulation, or to a specific form of events. Ultimately, however, their actions as a whole were always targeted towards the experience of performing the actions themselves. This means that even those actions that were momentarily targeted, for instance, towards the therapists or towards a certain objective event, were all eventually an integral part of seeking to realize their intrinsic aesthetic desires. This points to the experience-centeredness of the clients’ actions as language.
Somehow: The clients’ expressions and communications during their musical engagements were conveyed primarily through their sensory-perceptual, presentational rule-guided search for a continuum of experience within the context.

The significance of language involved in the intentionality of the clients emerging through their musical engagements lay in the fact their expressions and communications emerged in favor of their own immediate experiences more than of anything else. Such experience-centered language of a mind is distinct from the language of a mind centered on communicating socially with others, that is, communicating one’s social meanings with others. Inherent in this was how the experience-centered language actually operated. In the clients’ expressions and communications conveyed through the sensory-perceptual and presentational rule-seeking of actions, there was no possible way for an outsider, or themselves, to equate their subjective meanings with the meanings collectively or socially agreeable. Experiences mediated through such form of action were unique, indivisible in terms of their meaning constituents and subjective to each client. Translating those experiences into more collectively conformable forms of expressions was not an interest of the clients.

It was useful to explore the clients’ intentionality and their directed actions from a language perspective, because it led me to a further understanding of how crucial it was for them to be able to speak (express and communicate) and to be spoken to in their own operative language in order for them to begin to relate with
the surroundings in a way true to them. The language that the clients spoke and
listened to was one that allowed for them to seek experiences that served towards
the realization of the non-social aesthetic desires. Therapeutically, this involved a
set of conditions:

First, the process of music-making needed to unfold in the service of the
clients spontaneously coming to terms with and actualizing their intrinsic
energy states through sensory-perceptual experiences.

Second, the process of music-making needed to lend itself to the ongoing
process of differentiation occurring in the states of attunement, emotion,
and recognition in the clients, which took place in the development of
regularities i.e., consistency, balance and alternation, expansion, and
integration, in their musical engagements.

Third, the therapists needed to be able to tune into, support, and facilitate
the formal properties (structural, textural, and processional constructs)
emerging through the unique unfolding of the clients’ intrinsic desires.

Fourth, the therapy process in general needed to hold and further facilitate
the indivisible whole of meanings of the clients arising through their non-
discrete presentational forms of expression during the music-making.
Lastly, the therapists needed to relinquish their common-sense-based reasoning and rule-following in favor of carefully observing and following the rule-following of the clients.

In summary, for the therapy to evolve in a way that was true to the clients it was critical that the therapists be mindful of the “otherness” of the clients’ minds and that the therapy process was able to support and facilitate the clients’ following of their intrinsic rules and desires without imposing rules or desires extrinsic to them.

Helping People of Other Minds

An Active Stance of Asking

The in-depth exploration of the research findings on the “other mind” of the clients carried out in synthesis led me back to the basic question of therapy, i.e., ‘how can one help those of other mind?’ or more precisely, ‘what does it mean to “help” them?’

If the purpose of therapy is in essence to help the clients in needs and it involves a context directly shared between the therapist and the clients, then inherent in participating in therapy as a therapist is to meet those clients and understand what their needs are as they are manifested in such shared context. One question that constantly arose in my mind from the inception of this study was, “could there be ever an occasion in which I spent an entire session meeting my autistic client and trying to understand and help him or her with his or her
needs, only to have him or her leave the music room without any sense of "our"
having shared an experience together – not to mention a feeling of having been
"helped"? Could I ever have participated in a shared reality with a client, or
helped the client participate in creating a shared reality with me, to miss that it
was a reality perceived as "shared" only by myself in which the client’s
experiencing mind was not present because it was preoccupied with an utterly
"other" reality? If there was ever such a situation, in which our "meeting" did not
truly take place or took place but only one-sidedly at best, could the "help" I
intended to deliver still have happened?

While realizing that these questions address the fundamental issue of
"inter-subjectivity" raised in phenomenology (Cohen, 1987) and thus pertain to
all therapy contexts, I hope that this document so far has articulated clearly
enough the compelling need for some re-examination of the basic assumptions
involved in helping autistic clients. This comes down to a question, 'how can an
"ordinary mind" meet and understand an "other mind" and help with its "other
needs"?'

It has never been my intention to advocate a general protocol of some sort
for doing therapy with autistic individuals. However, I am convinced at this point
that there is a set of basic therapy questions that need to be redeemed for helping
autistic clients with their "other intentionality," and they are as follows: First, who
are the clients as individuals directed by meanings?; Second, what are their needs
in therapy, as well as in general?; And, third, how can they and their needs be best
understood and met in therapy? It is important that every music therapist ask him-
or herself these questions as the basis of his or her working orientations before entering the space of “helping” them.

My emphasis here is on assuming an active stance of asking rather than answering these questions. This emphasis was arrived in the course of the research process and its findings which led me to a conviction that a therapist can meet an autistic client and understand and help with his or her “other needs” in the truest sense when the therapist continues to ask these questions without being determinedly answered about them at all times.

On the one hand, the ability to ask without being answered amounts to an ability to remain in contradiction. This reminds me of the “Negative Capability” reflected in a letter of John Keats (1818/1970), which he referred to as the capability of “being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason…”

On the other hand, an active stance of asking involves more than open-mindedness and a suspension of knowledge. It demands that the therapist adopt and adhere to a therapy orientation that is in accordance with the “other” meanings and actions of their autistic clients. Inherent in doing so is for the therapist to re-value the clients’ “condition” known as autism as well as his or her view of how to intervene in it. For instance, the “music child” – a concept developed by Paul Nordoff and Clive Robbins (1977) to refer to the child’s “unconditioned” inner self achieved through his or her musical expression – or the “new self” as opposed to the “old self” – a concept proposed by Aigen (1998, p.145) in the same connection – may need to be regarded and pursued as not
unconditioned of, but fully realized of his or her “other” mind of autism while connected to the surroundings in a manner true to him- or herself.

Having established the significance of an active stance of asking in working with autistic clients, I will now move on to summarize what has emerged through the research in terms of helping clients with their needs through making music with them.

Helping with “Other” Needs in Music Therapy

Asking Who They Are

The search for an understanding of the “other intentionality” of the research clients amounted to a search for who they were as individuals directed by meanings. The detailed properties of the other intentionality found during the research may be unique and specific to these research clients as well as to the context of client-centered and music-centered music therapy. With this in mind, the non-social, ego-less self-centrism found to be the central property of the other minds of the research clients provides an implication for music therapists working with autistic individuals, because it addresses the fundamental “other” motivation and its rule-following mechanisms underlying the clients’ unusual behavior characterized as autistic.

With regard to the improvisational music-making context in particular, the rule-following tendencies observed in the research clients were centered on their intrinsic aesthetic orientation. This points to the non-conceptual, “presentational”(1957) meaning seeking of the clients while engaged in music
making. The dominance of their presentational meaning seeking culminated in the
*introversion* of their rule-following behavior: the clients' sensory-perceptual
pattern-seeking in the music-making was essentially for the purpose of actualizing
the implicit forms of ideas during their musical engagements, and not for the
purpose of following the explicit rules imposed on them externally (e.g., by the
therapists).

The research process and findings reassured that employing the
perspective of the "enactive mind" (i.e., meaning arising in action) is a useful
approach in the search of understanding the "other minds" of autistic clients.
Assuming this perspective demands that music therapists expand the landscape of
their work to one that includes the distinctive cognitive patterns involved in the
autistic behavior of the clients.

**Asking What Their Therapeutic Needs Are**

Also involved in the enactive mind approach is that the therapists are
mindful of the "other mindfulness" of their autistic clients throughout the entirety
of therapy. This requires that music therapists remain conscious of their stance in
relation to *how the needs of autistic clients are distinctive in music therapy as well
as in general, and thus how the therapy should address such needs.*

Being mindful of the "other needs" of their autistic clients and gearing the
therapy accordingly may involve therapists’ asking personal questions such as the
following:
“Am I trying to facilitate the emergence of an ‘ordinary’ mind in the ‘other’ mind of my autistic client? If so, what is my stance and working direction in relation to his or her ‘other’ mind—e.g., should I work towards discouraging its ‘other directedness’ in favor of encouraging the ‘ordinariness’?”

Or, on the contrary,

“Am I helping the client towards realizing his or her ‘other’ mind in the therapy? If so, how can I help reconcile his or her intrinsic ‘other’ demands with the unavoidable demand of the outside world, i.e., the demand for adaptation?”

The research findings suggest that it is important that all dimensions of the therapeutic needs of autistic clients be addressed in accordance with their “other intentionality,” that is, their “other minds” directed by the non-social, ego-less self-centrism. For the research clients, for instance, it was crucially through the music-making process undertaken in the service of helping realize their intrinsic expressive desires (i.e., non-semantic, sensory-perceptual pattern-seeking) that they came to enter into and be further directed in their states of attunement, emotion, and recognition; and it was through the emergence of these differentiated states of consciousness in their minds that they became increasingly connected to themselves as well as to the surroundings (including the therapists), on all levels of their being (i.e., the physical, the emotional, and the cognitive).
An important aspect of considering the therapeutic needs of autistic clients is acknowledging their “other” type of self-awareness. The research findings suggest that music therapists should also consider the following questions:

First, what is the fundamental motivation underlying the patterns of the behavior of the autistic client during the music therapy sessions – i.e., what is the central principle of his or her mind?

Second, how does the client relate to his or her own experience, and how explicitly or implicitly is such relationship expressed? – i.e., what is the client’s cognitive orientation and level of development in relating to his or her experience?

Third, how can music be used in support of the “other self-awareness” of the client in accordance with his or her basic behavioral motivation as well as its rule-following mechanisms?

Therapy conceived and carried out in this way addresses the need of the autistic client to build a repertoire of experiences of relating to him- or herself within a context supportive of encouraging – rather than discouraging – his or her “other” directed mind.

Additionally, music therapists should take into consideration the specific therapy context in which the autistic client’s needs are addressed. Context-dependent therapeutic concerns are significant not only for the immediate effectiveness of therapy but also for its continuation into a broader context of the
client's life. For the research clients, it is important to note that their sensory-perceptual pattern-seeking centered on their implicit aesthetic orientation was one aspect of their rule-following, realizing their central principle of non-social egoless self-centrism, which was specific to the improvisational music-making context. For instance, for Cheryl, her cognitive grasp of her physical surroundings (e.g., operating the musical instruments or perceiving/remembering a new office environment) was based on her mind following highly explicit regularities, and thus was contrasted with her musical expressions responding primarily to her implicit aesthetic ideas.

By acknowledging the context-specific responses of the clients, the music therapist can avoid bringing his or her therapeutic observations to a premature conclusion and, instead, can place them in a larger therapeutic perspective. A possible consideration then would be related to applying such context-specific responses to a further therapeutic aim (e.g., how to further utilize the therapeutic music-making and the resulting form of rule-following behavior evoked in the autistic client for achieving a more autonomous self- and other-relatedness).

 Seeking to Meet Them in Music-Making

Pivotal to the continuation of the client's experience in therapy into his or her life outside the therapy in general is for the client to be helped to actualize within the therapy his or her autonomy (whether psychological or physical) as fully as possible. Important for this is that the client should not be pacified, but allowed to exercise who he or she is. On the therapist's part, this involves meeting
the client as a whole person with his or her unique personality and unique
language of expression.

Seeking to meet the autistic clients in music-making involves committing
the discipline and effort necessary to actually learning the language of clients,
including learning the fundamental motivation behind their pursuits and
corresponding operational rules within different contexts. This means that the
therapists must remain willing and able to hear and speak to their autistic clients
without imposing their own language with their own motivations, principles, and
operational rules. For the research clients, again, it was their non-social aesthetic,
spoken in the language of the sensory-perceptual rule-seeking in the continuum,
and expressing their intrinsic presentational ideas and meanings during their
musical experience that were essential.

The concept of therapists’ speaking in the language of clients should be
clearly distinguished from lulling the clients into a therapy utopia, in which their
experience in the therapy can’t be transferred outside of the therapy to their lives.
On the contrary, the approach is geared toward reaching the clients and helping
them learn and relate to their everyday surroundings in a way that naturally makes
sense to them rather than being arbitrary and coercive to them. The therapists’
learning and speaking the context-dependent working language of the clients
involves more than the humanistic intention (i.e., unconditional regard for and
acceptance of the clients as unique individuals): it requires a rigorous process of
observing, following, and actively applying the principles and the rules of the
clients’ behavior on all levels, thereby helping the clients communicate their non-
social minds and form a relationship with a social world. This should be in
essence not so different from the situation of a person from a foreign land, whose
meanings arise in that foreign language (in both contents and rules of expression),
can be best reached when approached by another person speaking in the same
language.

Conclusion and Thoughts for Future Research

The research concludes that the distinctive intentionality of the research
clients emerging while they have been engaged in music-making was
characterized by the ego-less self-centrism expressed through the non-social
intrinsic-centered aestheticism of their actions. This conclusion was reached
through a research process that evolved based on the following assumptions: 1) autism is a distinct form of mind, i.e., other mind, that involves a distinctive
cognitive style mediated by a distinctive neurological mechanism; 2) one’s intentionality can be observed and described through the regularities (patterns) of
object-directed behavior emerging through his or her direct engagement in the
surroundings.

The other mind notion of autism approached from a perspective of
enactive mind adds to the client-centered and music-centered humanistic
approach of music therapy in that it contributes to expanding the scope of therapy,
in which the meanings and mechanisms of the clients’ mind and behavior can be
understood and helped to be realized in a way that is truer to them.

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Ros Blackburn (2005) made an insightful statement as she appealed towards educators and clinicians how important it is for them to be mindful of the other minds of autism as they work to help their autistic clients learn and relate to the world.

“Never, never make excuse of autism, but help the person overcome the problems caused by it. …She needs to learn things rather than being pacified, [but] you [too] need to learn how she can be helped. It is scary that educators are assuming that [an] autistic kid will go down on the avenue of theorizing they assume she will. In fact, there might be hundred of other avenues of theorizing.”

Further clinical studies involving a wider spectrum of autistic clients and musical contexts should add to what substantiates the “otherness” of their musical and relational behavior. One of the possible focuses of these studies can be on exploring more deeply into the connection between the emotional meanings and the cognitive mechanisms involved in autistic clients’ behavior emerging within the therapy process. Meanwhile, further investigations could be undertaken to discover the cognitive and neurological mechanisms and their functional basis involved in the connection between emotional rewards and higher information processing in the brains of autistic individuals. Information drawn from such studies will hopefully provide deeper insights on the central aspects of the
findings of this study, i.e., the qualities of non-social self-centrism, intrinsic-centered aesthetic orientation, and implicit self-awareness.
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APPENDIX A

LETTER OF RECRUITMENT
Letter of Recruitment

Dear Music Therapists at the Nordoff-Robbins Music Therapy Center,

You are invited to take part in a research study to learn more about intentionality of autistic individuals while engaged in creative music making. Intentionality of autistic individuals in creative music making, as defined for this study, is a problem that pertains both to cognitive features of autism and emotional experiences of each autistic individual.

This study will be conducted by Mijin Kim from the Music Therapy Program in the Department of Music and Performing Arts Professions in the Steinhardt School of Education at New York University. This study is being conducted as a part of her doctoral dissertation. Her faculty sponsor is Barbara Hesser who can be contacted at NYU Music Therapy Program (212) 998-5452.

Through the research, the researcher aims to investigate musical behaviors of autistic individuals both in reference to their neurocognitive aspects and emotional/interpersonal aspects, thereby adding further understanding to current practice and theory of music therapy for individuals with autism.

The preliminary criteria for the potential client subjects for the research are as follows:

1. Subjects must have been former clients of the Nordoff-Robbins Music Therapy Center at New York University.
2. Subjects must have been evaluated as having autism through formal diagnostic examinations and/or clinical assessments by qualified professionals. Individuals with otherwise known developmental,
neurological, and/or psychiatric problems will be ruled out in order to minimize obscurity involved in diagnostic classifications.

3. Subjects must have been 4 years old or older at the time of the onset of therapy so ambiguities involved in the early developmental processes will be minimized.

4. Subjects' gender, ethnicity, and levels of their cognitive, verbal and motor-physical functions may vary. This will allow for the investigator to identify a group of subjects that would reflect the wide spectrum of autism.

5. Subjects must have been treated in an individual treatment setting utilizing client-centered improvisational music-making process, and whose therapy has naturally undergone without any external influences and been terminated prior to the onset of this research.

6. Subjects must have shown interest and motivation to participate in therapeutic musical improvisations as demonstrated by increases in their spontaneous engagements and positive emotional responses over the progress of therapy.

The investigator respectfully asks for your cooperation for the recruitment process for the project. Your cooperation will involve tasks as follows:

1. You will recommend your former clients, who meet the preliminary criteria, for this research.

2. When necessary, you may be asked to take part in a meeting with the investigator (member-checking interview), in which you will be asked to verify the accuracy of portions of her session transcriptions or musical notations.

Cooperation for this study will involve approximately two hours of your time: approximately 30 minutes to send out a written announcement to the potential subjects and possibly an hour to an hour and a half in addition for the member-checking interview. There are no known risks associated with your cooperation for this research beyond those of everyday life.

Although you will receive no direct benefits, this research may help us to increase our understanding of intentionality of autistic individuals while involved in creative music making both in their cognitive and emotional/interpersonal aspects.

The focus of this study is on the clients therefore the actual clients for this study will be only composed of them and not you as the therapist. However, since you will be a part of the research data, confidentiality of your research records is important. Confidentiality will be strictly maintained by using pseudonyms or codes and identity will not become known or linked with any information you have provided.
If there is anything about the study or your agreement to cooperate that is unclear or that you do not understand, if you have questions or wish to report a research-related problem, you may contact Mijin Kim at (917) 767-5237, mk951@nyu.edu, or 777 Education Building, 35 West 4th Street, New York, New York 10003, or the faculty sponsor, Barbara Hesser at 212-998-5448, bh3@nyu.edu, or 777 Education Building, 35 West 4th Street, New York, New York 10003.

For questions about your rights as a research participant, you may contact the University Committee on Activities Involving Human Subjects, Office of Sponsored Programs, New York University, 212-998-2121 or human.subjects@nyu.edu.

If you are interested in and agree to cooperating for the research, please contact Mijin Kim at (917) 767-5237, mk951@nyu.edu, or 777 Education Building, 35 West 4th Street, New York, New York 10003.

Thank you for your time and consideration of this project.

Sincerely,

Mijin Kim, MT, CMT.
APPENDIX B

FIRST ENCOUNTERS: WITH THE ANALYTIC MEMOS

** (The parenthesized, bolded and italicized are the researcher’s thoughts, reflections and questions).

Stephanie

She is an early teenage girl.

She gets down and rolls on the floor immediately after entering the room, gets up, sways her body side to side, covers her ears with her hands, and makes a vocal discharge of sharp, high-pitched, and scratchy sounds.

She paces around the room seemingly randomly, with eyes gazing blank, not looking directly at anything.

She slaps herself on the cheek at the end of the phrase David (therapist) plays on the piano. She gets down on the floor and slaps herself again in time with the music’s phrasing. She then gets up to shake her head in a subtle, fast, and well coordinated head-neck motion, syncing with the piano’s fast repetitive triplet notes.
She comes around the piano to sit by David. She keeps making vocal expressions, alternating between soft moaning-like humming and harsh breathing. This (the vocal expression as a whole) is then interspersed with a head movement back and forth, along with occasional slaps to the face. *(patterns emerging within her own playing).* Her eyes gaze blankly into space. *(she doesn’t seem so directed in the context yet?)*

David plays an ostinato bass, outlining two chords (Dm-V6) in staccato followed by a pause on the last beat of the phrase. Stephanie does not readily engage in playing the wind chime as she is directed, but stomps her foot consistently at the pause.

As David and Rori (the co-therapist) take turns on the piano and the conga, Stephanie gradually slows down and stops her rocking. She sits still and smiles with her head turned to the instruments, though not directly looking at the therapists. *(attention to the material source of the sounds, and not to the people source of the sound?)*. Soon she begins to beat the conga spontaneously with her hand. David plays the simultaneous beats with Stephanie so their beats together make a call-and-response dialogue with Rori’s. Stephanie laughs joyfully, looking more present and connected in the moment. Her gazes alternate between the piano keyboard and the conga drum exactly in time with the beat.
The music is loud, with a tri-tone chord unfolding in arpeggio. Stephanie repeatedly takes the left sleeve of her shirt off then puts it back on. *(Is this some sort of randomly targeted discharge of inward energy provoked in response to the music?)*. David plays ascending chord progressions in open arpeggio, leaving a pause at the end of each phrase. Stephanie responds to these pauses through bodily actions of some kind, tapping on the conga drum. She follows this by shaking her head, leaning over to the piano or throwing sticks in the air. *(I am not sure what is being registered and experienced in her, but there is a strong sense that all her gestures, e.g., eye gazes, motions, beats, are in response to possibly both inwardly and outwardly generated demands for certain forms).*

David sings hello in a mellow singing voice. Stephanie affectionately leans over to David. She appears to be calm and her bodily movements are relaxed. David repeatedly sings hello each time, followed by a short pause. Stephanie begins to respond to this with uttering “e–llo~” several times. She seems happy as she does so, looking up into the air and smiling. *(Is there an interpersonal notion here, or is she happy purely with the sound experience?)*

David plays a very dynamic and strongly steady rhythmic pattern in 4/4 while singing “la, la, la” excitedly. Rori plays along with it on the drum. Stephanie seems excited and happy. She remains smiling and focused as
she continues to walk and jump around the piano in sync with the music.  

*(She is spontaneously related to the music in rhythm and mood).* Rori attempts to assist Stephanie to play the conga ‘on the beat.’ Stephanie snatches herself away from Rori repeatedly. *(Interruption externally imposed on the spontaneous unfolding of bodily energy and pattern?).*

*Engel*

He is an adolescent boy in his late teens.

He runs into the music room, his body tense with one hand covering his ear. He instantly grabs the drumsticks and begins to play single beats on the snare in a steady, even rigid motion. He makes a droning sound in a muffled voice.

He impulsively and loudly plays the drum and the cymbal in alternation, rocking his upper body back and forth. Joan (the therapist) asks “What do you want to play… do you want to play the drum?” He shouts “no!!” while he continues to play the drum. *(His words do not align with his actions).* Joan plays slowly progressing chordal passages in f minor with basic beats in synch with those of Engel’s. She sings the melody in a soothing voice that hovers over the instrumental sounds. Engel hums along with Joan’s singing, and as he does so, his drumming becomes gradually less rigid both in motion and sounds.
He comes in looking very happy and excited. The therapists sing
“Welcome back to music.” Engel excitedly sings while alternating
between fast tremolo on the snare drum and a loud beat on the cymbal.
Dan (co-therapist) tries to direct him to end the phrase with a beat on the
conga. Engel does not follow this correctly, playing steady and loud beats
on cymbal instead. **(In excitement, he is driven by internally provoked
energy and form, i.e., the steadiness, and no external rules are easily
accommodated).**

He plays very heavy drum beats, like heavy slow marching. His other
hand is covering his ear. His body is making a tense back-and-forth
rocking motion. He frowns with a seemingly a disgruntled look on his
face and utters out repeatedly “I don’t know, I don’t know.” The voice is
dragging into deep low groaning, “Huh... huh...” Suddenly then arising
is a Middle Eastern melody in his higher-pitched, uplifted voice singing
“Ya-ha-ia-ya-ia...” He soon goes back to the low-dragging groaning.
This goes on for several minutes. His vocal, facial, and bodily expressions
together convey a quality of frustration and dissatisfaction. **(There is a
sense of a desire for a certain aesthetic expression in him, which does
not seem to be so readily realized. Sense of desire, frustration and
striving. Process of creative birthing).**

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He sits by Joan with a microphone in his hand as he sings an improvisatory blues tune in a deep and fully affected voice, "How about some more [music, wine, etc.]" interjected with "Come on! No, no, no, no!" His vocal expressions are quite expressive conveying the blues mood. His body is swaying gently in synch with the singing. The music is getting groovier, the verses alternating back and forth between him and the therapists. His singing gets freer and more fully expressive and he seems to feel joyful and humorous within the groove. Finally he bursts into laughter. Everyone laughs together. *(Shared joy and humor as part of her aesthetic direction while creating music).*

Cheryl

She comes in and walks around to explore the room. She looks carefully at things in the room such as the camera, pictures and instruments while constantly shaking egg shakers. Marie plays trills sporadically on the piano reflecting Cheryl’s curious exploring. Cheryl becomes more engaged in playing the shakers in response to the music, which develops gradually into a Middle Eastern mode. Still walking around, Cheryl adds the tambourine to her playing.
Constantly looking and smiling at the camera, she stands up at a musical cadence to go have a closer look at it. She asks Marie, “What, what does this camera do? What’s the use of it?”

She sits at the drum. Marie asks if she wants to play it. Instead of answering, Cheryl clicks the sticks and walks to the piano where Marie is sitting. She touches the wind chime and says, “What is this? How do you use it?” *she is interested in the operational mechanism of things.*

She moves over to the chime and taps lightly on it. Music between Cheryl and Marie is unfolding beautifully in a mysteriously flowing Middle Eastern mode. Cheryl’s chime playing alternates between single taps and glissando. The music between Cheryl and Marie becomes more and more blended and intensifying as a whole. Cheryl seems to be deeply immersed in this merging with Marie in the music. Her face is tilted slightly upward to one side with a somewhat sensual looking expression on it. She is dancing and now shaking the whole chime as if she is dancing with it. She seems pleased and she continues to play, dance, smile, and occasionally throw in some fast fill-in taps with sticks.

A discussion of scheduling: Cheryl confirms skipping sessions: “So, so, next Monday we are out, and, and also next week the…”
th...Thanksgiving’s coming up.” …[dialogue between Cheryl and Marie about the holiday plan]. Marie asks, “Do you eat turkey?” Cheryl replies, “Yes, but I only eat white meat...” I NEVER eat dark meat!” Marie responds to this in music by singing “NE-VER!!” accompanied in a resolutely played chords. Cheryl continues to talk and plays the drum pacing along with Marie’s singing, “Yes, and I, I do not like turkey fat either!” Marie sings “No dark meats please on Thanksgiving turkey for Cheryl”. Cheryl smiles, dances, and plays the drum and fills in saying, “Yes, that’s right! And make it skinless turkey, please!” (sense of humor in verbal-musical exchanges).

Cheryl sits at the other piano in the room. Marie asks “Should we play two pianos together?” Cheryl determinedly says “No.” She then begins to play some single melodic notes filling in spaces in Marie’s playing. (How is this perceived by Cheryl if it is not “playing two pianos” together – if she really meant “no”? Or perhaps she did not mean it when she said it?). She slowly and gently moves her body to the music. Cheryl’s piano playing is flowing slowly, leaving lots of space in between the notes. She uses both hands in free and relaxed motions, sometimes single light staccatos and other times sustaining chords, always followed by space filled in with slow head and upper body motions. She appears to be in a
pensive and deeply immersed state. *(Although Marie was musically supporting her, there is little sense of interpersonal interactions here. Cheryl seems much like she is in immersed in her own creative state alone).*

Cheryl sits back with eyes closed looking relaxed. Marie stops playing to ask “Did that make you sleepy?” Cheryl does not respond to this and sits motionlessly covering her ears with hands. Marie abruptly throws some fast and loud notes on the piano singing “Wake up!” No response from Cheryl.

Marie approaches Cheryl singing, “What is it??”

No response from Cheryl.

Marie continues singing and throws in some lightly bouncing notes on the metalophone.

No response from Cheryl.

Marie walks back to the piano. Cheryl hits the windchime once, then pauses. Marie sings “What is it? What is it that you have to say? You can talk to me, Cheryl. Something that you need to say, you can talk to me. You can play with me.” Cheryl covers her ear and occasionally smiles mildly. *(Is she in a resistive mode? If so what is she resisting against? Or, is she simply engaged in this moment of this particular quality? Whichever way, she is not choosing to verbally communicate about her momentary state).*
She drinks water out of a bottle and taps her fingers on it. Marie asks,

“Are you thirsty?” Cheryl says “When summer is hot, you have to hydrate your body. Water’s got no calories, no fat and no bad stuff.” Marie replies, “You care about that stuff.” Cheryl says in a somewhat elevated voice, “YES! I just drink my, my, my water. YES, Marie, I drink water every day!” (Marie speaks in terms of “caring about” stuff as opposed to Cheryl, who speaks in terms of facts she knows)

[In the second to last session] Marie asks, “So what special thing should we do for the goodbye next week?” After a short silence, Cheryl says, “Next week is the last week for our music.” Back to silence, then. As she leaves the room, she says, “Ah... ah... last week, week is the last, last session for... for... huh... our... our music.” She adds, “Thank you for another beautiful music hour and have a good week, Marie.
APPENDIX  C

AN EXAMPLE OF ATTUNEMENT

Engel immediately jumps into this familiar hello song by singing with the therapists ‘Welcome Back To Music [the therapists’ names]’ while playing the drum assertively in steady beats. His singing voice and accompanying bodily movement and mood state projects a sense of familiarity. His voice and bodily motion are both assertive and relaxed at the same time. As the song repeats, Joan leaves longer pauses in between the phrases, which Engel gradually fills in with louder drum beats and bigger drumming motions as if he were playing cadenzas in between the pre-composed phrases. His motions become bigger and more expressive to the point that almost his entire upper body bends up and down in sync with the basic beats. Engel’s singing now shifts to some sort of unintelligible vocal utterances, while the melody is still being played clearly. Joan mirrors this newly created musical pattern through her voice and piano playing. Engel’s singing gradually becomes a chant like vocalization. Joan plays strong steady down beats on the bass of the keyboard with syncopated notes over them, over which Engel’s voice fills in with fragmented notes in a consistent rhythmic pattern. Engel’s voice is of expressive and free-flowing quality, and gradually turns back into a more sustained, singing manner. Joan softly sings the melody in duo with Engel. Engel’s singing becomes fairly solid in its basic melodic form, while at the same time more refined and flexible with embellishing notes around the basic notes. The formal properties of music (e.g., the rhythm and melodic patterns and structures) and its dynamic properties (e.g., mood and energy components) created between Engel and the therapists are closely in sync with each other.

Engel’s excited mood and energy was initially undifferentiated and rather non-targeted, then gradually seemed to be moving into a more specifically directed state of attunement: 1) first by expressing a sense of familiarity with the hello song, 2) then gradually accessing the song’s overall mood and dynamics, 3) letting his vocal and bodily expression in music flow and intensify on their own, 4) till a more formed musical pattern emerges, and then 5) letting the intrinsically
generated pattern now develop into a more interactive musical pattern created between him and the therapist.
APPENDIX D

AN EXAMPLE OF EMOTIONAL MOBILIZATION

Gradual addition of new structural components and intensification of dynamics
Cheryl stands up to walk over to the other piano, facing the one Marie is playing. Without hesitation, she begins to play some notes on the piano, mostly on the white keys, that are lightly felt and wide-spaced in pitch and time. Cheryl uses all of the fingers of her right hand to play up and down the entire register of the keyboard then adds the left hand in the upper register. She plays freely ascending and descending notes using both of her hands and gradually adds chords and clusters in an expressive manner.

Bodily synchronization
Cheryl's upper body is constantly in motion, yet this involves less stereotypic rocking and more relaxed swaying motions to the music created between her and Marie. The music goes on spontaneously without ceasing for a several minutes. Cheryl looks a bit tired as she rubs her eyes and face.

Cheryl actively participates in the open reflective musical context provided by the therapist and lets it develop into a space of interplay.
Marie musically reflects this slowed down mood by playing slower, softer and more intervallically spaced notes. The notes now shift gradually into a pentatonic scale. Cheryl plays along with Marie, her notes slower and more mellow. Marie occasionally interjects some abrupt repetitive notes and chords interspersed with the ongoing mellow melodic passages. Cheryl picks them up immediately to play back at Marie in the similar way. This interactive play lasts only a short time.

Looking at an immediate term, the gradual shaping and expanding of Cheryl's music playing evolved as follows:

- playing with the left hand only at first, then gradually moving on to using both hands;

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starting from fewer, more discontinuous, and non-rhythmic notes, and moving toward more rhythmically formed and densely continuous notes;

playing single tones initially and gradually adding notes to eventually form clusters;

expend from a mainly intrapersonal level of playing to a more interactive level; and,

in general, introducing more regularity of patterning and raising the dynamic level as she became more immersed in the music-making experience.

These emerging patterns seemed to parallel changes in her mood and energy, which seemed to be directed toward expansion and continuum of experience.
APPENDIX E

THE PROGRESS OF INTERPERSONAL RELATIONSHIP:
CHERYL AND MARIE

1. Cheryl settles into a certain mood while the therapist provides a musically open space.
Cheryl enters the room and walks immediately to the metalophone (her favorite recent instrument). She quietly sits at it, rocking her body with eyes closed. Marie plays some sporadically spaced notes in a Dorian mode. Cheryl, sitting parallel to Marie, continues to sit quietly and does not readily start playing. She momentarily grabs the penny whistle. Marie say, “Go ahead, Cheryl. Try it.” Cheryl immediately puts it back down.

2. Cheryl adheres to her momentary emotional need.
With her eyes still closed and rocking her body gently back and forth, Cheryl occasionally looks upward with a dim smile, adjusting her bodily movement to the music as if she were feeling her way into it. Marie’s music gradually shifts into a Middle Eastern mode, with slow-paced pedal tones. Cheryl puts her hands on her ears to cover them, and coils her body into an almost fetal position while rocking continuously. She appears contented for the most part, except when she squints her eye as if she were trying focus on an object. She lifts her face to look at the camera and smiles at it. Marie continues to play the slow-paced successions of pedal tones along with melodic figures of Middle Eastern associations, creating a mood reflective of the introverted space Cheryl seems to be in.

3. Gradual addition of new structural components and intensification of dynamics
Cheryl stands up to walk over to the other piano, facing the one Marie is playing. Without hesitation, she begins to play some notes on the piano, mostly on the white keys, that are lightly felt and wide-spaced in pitch and time. Cheryl uses all of the fingers of her right hand to play up and down the entire register of the keyboard then adds the left hand in the upper register. She plays freely ascending and descending notes using both of her hands and gradually adds chords and clusters in an expressive manner.

4. Bodily synchronization
Cheryl’s upper body is constantly in motion, yet this involves less stereotypic rocking and more relaxed swaying motions to the music created between her and Marie. The music goes on spontaneously without ceasing for a several minutes. Cheryl looks a bit tired as she rubs her eyes and face.
5. Cheryl actively participates in the open reflective musical context provided by the therapist and lets it develop into a space of interplay. Marie musically reflects this slowed down mood by playing slower, softer and more intervally spaced notes. The notes now shift gradually into a pentatonic scale. Cheryl plays along with Marie, her notes slower and more mellow. Marie occasionally interjects some abrupt repetitive notes and chords interspersed with the ongoing mellow melodic passages. Cheryl picks them up immediately to play back at Marie in the similar way. This interactive play lasts only a short time.

6. Cheryl is no longer inclined to go on in the same style of playing, yet waits to move on until therapist brings the music to an end. Cheryl looks tired and leaves a long pause without playing, rubbing her eyes. Marie brings the music to an end. Cheryl immediately gets up to move back to the metalophone.

7. Spontaneous, immediate and determined actions
Cheryl then sets the temple blocks close to her and begins to tap them with sticks. Marie reflects these tapping notes in a Phrygian mode. A melodic theme [e— e-e-e-A— e — A— e—] is created. Cheryl suddenly stops as if she were interrupted by this newly introduced Phrygian theme. Her stopping seems abrupt, but very certain and assertive. Cheryl leaves a long pause.

8. New, nonverbal expressions associated with NOT playing music
Marie plays various melodic passages to reflect Cheryl’s actions. Cheryl sits still, facing away from Marie, giving little sign of responding to the music. Cheryl closes her eyes and brings her hands to her ears to cover them.

9. Cheryl in a state of neither- yes- nor- no.
Approximately a minute passes in complete silence. Marie finally says to Cheryl, “Should we play some more? Or have some more silence?” Cheryl does not respond.

10. The therapist continues to make musical gestures toward Cheryl. Cheryl still does not pick up on any external patterns, but instead responds to her inner state using bodily motions.
Marie plays some dissonant, heavily pedaled notes and chords leaving extended space in between. Little response is shown from Cheryl. Marie pauses to leave a long silence. Cheryl opens her eyes and takes her hands off of her ears. Her body starts to move again, subtly at first then gradually with more active upper body dancing movements.
11. An ending and a new beginning
Marie finally stops playing. Cheryl then immediately begins to play the
two-leveled, full-scaled metalophone (diatonic notes on the upper level
keys, and the flat and sharp notes on the lower level keys).

12. Gradual extension of musical structure and an intensification of
dynamics in Cheryl’s playing: introduction of a new musical theme →
stabilization/consolidation of the theme → addition of a new musical
element → alternations and escalation
Cheryl continues to play the metalophone in a light, free-floating mood.
There is a short pause. Briefly she begins to play the sharp and flat notes
on the upper level keyboard of the metalophone (she was previously
playing the C major diatonic keys on the lower level). Then she goes back
to the lower level keys and again returns to the upper level. A clearly
alternating pattern of playing is developed, as Cheryl continues to play
distinctly back and forth between the two key levels. Her playing is
going busier and faster. The music gets lighter and livelier.

13. More dynamic escalation
Marie leaves many pauses in between her notes for Cheryl to fill in and
additionally throws in playful trills and disharmonic notes. Cheryl plays
along with this, interjecting with similar patterns and qualities of notes on
the metalophone. Cheryl then moves to the drum to throw in a series of
fast beats. Her musical dynamics are escalating in general. Marie plays a
prominent pattern of steady beats. The music is becoming groovier as
turns into a Middle Eastern theme. Between Marie and Cheryl, the music
speeds up and the dynamics increased. Notes are getting busier and busier
to the point where they become almost excited trills. Cheryl plays a loud
cymbal beat occasionally at the end of each phrase, highlighting the
cadences.

14. Cheryl is deeply immersed in the experience and rocks her body.
At one point, Cheryl suddenly stops her playing while still rocking her
body to the rhythm.

15. Cheryl verbally responds to therapist’s announcement.
Marie stops playing and says it is time for them to stop. She adds that
they will skip next week’s session. No response from Cheryl. She sits
quietly facing away from Marie. Marie says, “What are you thinking?” S
says in a rigid and slightly stuttering speech, “I will miss… next, next
week then.”

16. Cheryl leaves the room silently without saying goodbye.
Marie sings in a soothing voice and melody, “We will miss next week
then, but we’ll be back on the 16th.” Cheryl listens to this quietly looking
calm, yet without looking at Marie or responding otherwise. Marie keeps on singing the good bye song, leaving pauses for Cheryl to fill. She sings to Cheryl "Say it. Say it, Cheryl!" S smiles only instead and walks out of the door before the music is over.

The progress of the interpersonal roles between Cheryl and Marie can be described as follows:

Marie provides an open and supportive background while Cheryl initially settles herself into a certain mood state: 1

Michel reflects and supports Cheryl's musics as it continues to develop and consolidates into a specific form and quality of expression within itself; and Cheryl allows Marie to partner her in this way: 2,3, and 4

Cheryl chooses to take on Michel's musical components to develop them into a more mutually interactive, call-and-response pattern of musical dialogue: 5

Cheryl chooses to withdraw from the musical interplay but without shifting to something new until Marie has finished her playing; and Marie is receptive to this and brings her playing to an end: 6

Cheryl initiates something new which better matches her intrinsic state; and Marie supports this, and once more Cheryl chooses to withdraw from it: 7
Marie tries to reflect Cheryl’s silence musically and urges her verbally to talk about her experience; and Cheryl remains silent and unresponsive: 8, 9, and 10

A shift of interpersonal dynamic: Marie decides to just be with Cheryl without trying to initiate any interaction with her; and Cheryl initiates a new pattern of music: 11

Cheryl immerses herself in her own musical playing and takes it in the direction of greater differentiation (in structure and dynamics); and Marie supports this: 12

Cheryl incorporates Marie’s music actively into her playing and, as a result, a more interactive musical play between the two develops; and Marie gradually increases her musical role (i.e., from a reflector/supporter to a co-creator of an equal partnership in terms of, for instance, initiating, alternating and escalating together) in order to deepen the musical interaction: 13

Cheryl, fully immersed in such interactive musical play, introduces a pause into the music: 14

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Marie agrees to this and brings it to an end for the session, and,

Cheryl, in turn, agrees to it: 15 and 16

Cheryl's relating to Marie was such that she communed with Marie implicitly yet assertively about her intrinsic desires, and invited her to become a part of it. Marie, on the other hand, seemed to remain carefully tuned into Cheryl and responsive to her intrinsic needs through modulating her musical role. In doing so, Marie became an integral part of the music within which Cheryl sought a certain sensory-perceptual, formal, and aesthetic experience, with her emotional stated deepening in a certain direction.