Chapter 11

EPISTEMOLOGICAL FOUNDATIONS OF OBJECTIVIST AND INTERPRETIVIST RESEARCH

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At the heart of music therapy research, as in any field, is a search for knowledge. For centuries, researchers in a remarkable range of disciplines have conducted research and published findings in a vast array of professional journals and books. It therefore seems reasonable to suppose that we ought to know by now how to go about conducting research, and more importantly what it means to have gained knowledge. Yet problems have persisted along the way and have at various times proven quite challenging and even inconvenient for researchers and their claims to knowledge (Kuhn, 2012). Of particular significance are philosophical beliefs regarding what actually constitutes legitimate knowledge and how knowledge can be gained, or in other words beliefs about what can be known and how we can know it (Alvesson & Sköldberg, 2009; Denzin & Lincoln, 2003; Pascale, 2011). These are questions of ontology and epistemology.

Ontology and Epistemology

Ontology is the study of being, of the nature of existence. Said other ways, it is the study of what exists, what is in reality, what is real, or in Crotty's simplest form, "what is" (1998, p. 10). Ontological beliefs, or assumptions in philosophy parlance, shape the types of questions a researcher might pursue about how the world works or how people act or interact. For example, in the natural sciences, key assumptions about reality fall under the ontology of realism. Realism holds that a reality exists outside of our consciousness of it and that certain fixed laws of nature—that is, given relationships between phenomena—are permanent fixtures of that reality, for instance the laws of gravity (Madill, 2008). Once discovered, these laws are considered true and reliable toward explaining the natural world. Alternatively, idealist ontology holds that we humans construct experiences of reality in our minds through thoughts and ideas, individually and/or collectively, and that that reality is open to all varieties of interpretation—there are no fixed laws about how reality may be or how it may be experienced. Further, in opposition to the realist perspective, in idealism it is precisely our consciousness that brings reality into being (Alvesson & Sköldberg, 2009; Giacomini, 2010).

Intimately related to ontology (what can be known) is epistemology. An *epistemology* is a theory of knowledge concerning beliefs about "how phenomena [can] come to be known" (Giacomini, 2010, p. 131); that is, how valid knowledge is produced. Pascale (2011) elaborates that epistemology is concerned with "the nature, sources, and limits of knowledge," and that it

provides "a *justificatory account* of the scientific production of knowledge" (p. 4, italics original). Said differently yet, epistemology addresses how we come to know that which we believe we know. As with ontology, a researcher might approach the pursuit of knowledge through a range of different epistemologies. Each epistemology rests on its own variety of assumptions (theoretical beliefs) regarding the nature of the relationship between a researcher and the subject(s) of research—between the knower and the known. Therefore, in research with human beings, such as in music therapy treatment studies, there are always dynamics at work between the researcher and those under investigation that result in a researcher's access to different sorts of knowledge; for example, objective versus interpretive knowledge or distantly observed versus relational knowledge. Whether and how such dynamics are accounted for is important for a consumer of research to clearly comprehend the processes that led to the findings and then to most effectively apply the findings to practice.

Epistemological assumptions are reflected in the theoretical perspectives, methodology, and methods of research studies. In other words, depending on a researcher's beliefs about what can be known (ontology) and how to approach coming to know it (epistemology), different decisions will be made toward designing an effective study. These decisions are grounded in a *theoretical perspective*; in essence, an encapsulation of philosophical assumptions that form a cohesive way of viewing relationships between the sorts of knowledge we seek and what must be done to produce it. Thus, a theoretical perspective provides an explanatory stance for our pursuits and our actions. ***Methodology*** is sometimes referred to as a framework "of logically related means and ends to guide … research design" (Giacomini, 2010, p. 129) or as the supporting rationale for decisions made in designing methods for data collection and analysis, whereas ***methods*** are the hands–on procedures or actions used to gather and analyze data (Crotty, 1998).

So what might be the benefit of bringing the concept of epistemology to our attention in a book about research? Isn't epistemology the realm of philosophy? To be sure, concepts such as epistemology, ontology, axiology (values brought into a study), and methodology are fundamental aspects of philosophical thinking in our never–ending pursuit of knowledge about the world and our place in it. Yet the fact that research is a highly significant avenue of knowledge acquisition means that philosophical foundations are always implicated; every research question, every methodological decision, every procedure, every data analysis has a philosophical and theoretical origin (Crotty, 1998; Pascale, 2011). Understanding the epistemological assumptions that guide a research study means that the reader/consumer of the research can either more deeply understand the findings or can more knowledgably challenge the findings and the processes that led to them. Either situation is beneficial to the nature of the research process itself and to its eventual application to real–life circumstances— which undoubtedly is the hope of all researchers.

As noted above, epistemological assumptions provide justification for research decisions and indicate beliefs regarding the relationship between the knower and the known—that is, between the researcher and those under investigation. Interpretivist researchers tend to include fairly explicit, and sometimes rather elaborate, explanations of their ontological, epistemological, cultural, professional, and personal positions and values with regard to a topic at hand (Aigen, 1995). Such information supports the integrity of the research, reveals motivations and therefore potential biases related to the research project, and assists readers to best understand how they might apply findings in their own contexts (p. 294). Historically in objectivist research, however, the researchers' beliefs and positions relative to a research topic are more often than not left undisclosed, if in fact they receive the researcher's reflection at all

(Pascale, 2011, pp. 4–5). Failure to disclose epistemological assumptions in objectivist research is in part due to the fact that researchers are typically trained in data collection methods and analysis techniques without attention to the underlying philosophical foundations for why these might lead to knowledge of a particular sort (Alvesson & Sköldberg, 2009). In essence, students inherit a value of ignorance of the necessity to articulate epistemological assumptions in objectivist research reports (Pascale, 2011, p. 5). For those trained only in objectivist research models (often referred to as quantitative research), realist ontology and objectivist epistemology and methods have come to be considered simply "commonsense," requiring no judgment as to their legitimacy as aspects of knowledge and knowledge acquisition processes (p. 4). Consequently, the reasoning behind objectivist approaches to data gathering and analysis is left largely unexplained and readers are to simply accept that sound philosophical and theoretical foundations were applied. The ethical situation as regards objectivist research, therefore, is one wherein research processes, including method decisions, are rendered unapproachable to critical challenges. How can that which is considered commonsense be challenged as possibly invalid or flawed? Pascale explains:

> Processes of research, which are rendered as matters of common sense, are not easily available to doubt or critique. This is true in part because these assumptions are implicit, but also because common sense prepares one to think about the world in particular ways by excluding some topics from consideration, while making others appear obvious. (Pascale, 2011, p. 4)

The situation is made more challenging and intractable if the broader community of researchers responsible for holding each other accountable for producing exceptional and creative research (e.g., editorial committees and editors) accepts reports lacking epistemological justification due to shared *commonsense* beliefs (Aigen, 2008; Edwards, 2012). Critical evaluation of situations where traditional methods might actually fail to serve the welfare of participants, either in the moment of research engagement or after the fact in its findings is obviously essential. As Alvesson and Sköldberg (2009) stress, "Interplay between philosophical ideas and empirical work marks high-quality … research" (p. 10). We might add that a researcher's openness to expanded views of methodologies and methods allows for exercising of greater creativity in the research process; a value that may lead to positive innovations (p. 274).

The purpose of the present chapter is to highlight a small sample of epistemologies from objectivist and interpretivist research paradigms that inform music therapy research. We'll begin, however, with a brief exploration of what has been the dominant epistemology for social and human science researchers as well as for music therapists, namely positivism and its somewhat more liberal revision known as postpositivism. For music therapy, the tenets of positivism continue to shape much of the extant published research literature, at least that produced in the U.S. Yet as will be noted, the tenets of positivism impose serious limitations to knowledge acquisition when applied to the study of human beings and their health promotion via music processes.

Objectivist and Interpretivist Research and the Study of Human Beings

During the past 200 years or so, a variety of epistemologies evolved in and through the human and social sciences via critiques of positivism and the objectivist stance that is foundational to its assumptions about reality, knowledge, and knowledge production (Denzin & Lincoln, 2005;

Madill, 2008). As reviewed below, positivism is the theoretical perspective from which research methods of the natural sciences originate, arguably providing the most well-known processes for apprehending and comprehending the natural world—that is, the world of objects. *Objectivism* as an epistemology assumes a realist ontology, meaning that a reality exists *out there,* whether we are conscious of it or not, and that discovering the truth about that reality is best achieved through an accumulation of carefully planned observations. More basically, objectivism holds that we may come to know the truth about reality through repeated observations of it in highly controlled situations.

  Positivism, as an objectivist research perspective, undergirded most human and social science research throughout the 19th and into the 20th century and still has impact in the 21st (Pascale, 2011). Positivism is a philosophical system of knowledge that only accepts observable or measurable (i.e., empirical) experiences of the world as data for analysis, the findings from which are considered positive or absolute truths about reality. Researchers thereby treat persons whom they study no differently than objects, believing that the truth of individuals' experiences, including interpersonal and social experiences, can be studied objectively (p. 8). A long held belief is that particular laws of nature exist—that is, cause–effect statements—regarding the workings of the human psychological and social worlds and that through careful observation these laws could be discovered and truths about humans and how they function thereby explained (Crotty, 1998). Critiques of positivism occurred due to the realization that human beings are by nature vastly different subjects of study than the objects and workings of the natural world in which they live. Humans are beings who possess minds and bodies and who use minds and bodies to exercise will and individual capacities of judgment and action— that which we might refer to as one's agency (Pascale, 2011). Consequently, the meanings of human actions and how these might be understood created important challenges for researchers. These realizations quite obviously presented very different problems for researchers of human beings than for researchers of the natural world, and therefore called for different approaches to the then dominant positivist–objectivist viewpoint.

  Out of severe and unrelenting social science critiques of positivism emerged alternate theoretical perspectives. An alternative that remains anchored securely in much of positivist epistemology and methods, but with a less rigid stance on the veracity of knowledge claims offered, is postpositivism. A **postpositivis*t** theoretical perspective allows that, regardless of a researcher's faithful adherence to objectivist *scientific* methods, findings are not considered absolute truths but rather are *conjectural* and *circumstantial* (Phillips & Burbules, 2000).

  Particularly during the second half of the 20th century, as reevaluations of epistemological views ensued, philosophical and ethical concerns for addressing research participants' capacities for thinking, feeling, and acting—factors unaccounted for in mainstream objectivist social and human sciences research—were stressed (Pascale, 2011). Humans, it was emphasized, make their own meanings both individually and collectively via consciousness, agency, and sociality. Such meanings are valid slices of reality, even if wholly subjective in nature for those experiencing them, and are not simply awaiting observation by an external, objective researcher to be realized. Recognition that these deeply human aspects were unaccounted for in most human science research led to an ongoing search for ways to give voice to meanings belonging to research participants. Even the voices of researchers themselves, who were previously avowed to remain objective and distant from their objects of study, were reconsidered as potentially informative in knowledge production rather than contaminants to the process (pp. 30–32).

Through the ongoing critique of positivism, researchers turned toward interpretive frameworks. ***Interpretivism*** holds that humans construct knowledge as they interpret their experiences of and in the world; rejecting the objectivist notion that knowledge is simply there to be identified and collected (Constantino, 2008; Pascale, 2011). From an interpretive perspective, all knowledge is grounded in our particular experiences; it is subjective and bound to the natural contexts in which we enact our lives and is thus ontologically *relativist* (Alvesson & Sköldberg, 2009; Denzin & Lincoln, 2005; Greene, 2010). Therefore, interpretive knowledge is also imbued with our values, local and political, and is thus not universal and not generalizable in the sense that it may readily apply to other agents in alternate situations. Pascale (2011) highlights the interpretivist belief that, "In order to understand a situation … researchers must understand the *meanings* the situation holds for the participants, not just their behaviors" (p. 23, italics original). Schwandt (2003) adds: "From an interpretivist point of view, what distinguishes human (social) action from the movement of physical objects is that the former is inherently meaningful. Thus, to understand a particular social action … the inquirer must grasp the meanings that constitute that action" (p. 296).

In fact, in contrast to the positivist aim of explanation of causes and effects, *understanding* is the aim of interpretive approaches to knowledge; therefore, an accounting of the meanings ascribed by researchers and participants is required (Crotty, 1998; Schwandt, 2003). Meaningful interpretations of phenomena are considered constructions (also referred to as reconstructions) rather than simply representations of a given experience. Greene (2010) explains:

> Interpretivist knowledge comprises the reconstruction of inter–subjective meanings, the interpretive understanding of the meanings humans construct in a given context and how these meanings interrelate to form a whole. Any given interpretive reconstruction is idiographic, time– and place–bound; multiple reconstructions are pluralistic, divergent, even conflictual. (p. 68)

Thus from the interpretivist perspective, knowledge constructions are understandings from inside the meanings of participants and therefore also embody those persons' contextual meanings. In other words, an interpretivist researcher seeks to gain access to the developed meanings that participants bring to experiences and that entail the broad cultural and experiential worlds from which those individual's perspectives and beliefs are formed. Yet these understandings also include the same breadth of meanings belonging to the researcher, for the researcher brings her or his own world of beliefs and experiences to the interpretive process. Hence, knowledge is co–created or *intersubjective*—produced through the interactions of the researcher and study participants. Evaluations of understandings are reliant on assumptions of internal consistency and coherence among the various meanings represented rather than through correspondence between a researcher's descriptions of an observed reality and the purported reality itself (Constantino, 2008; Green, 2010).

As indicated above, interpretivist knowledge is idiographic and relative to the situations and persons from which it emerges. No interpretation is privileged over another; no interpretation is a definitive one. The question, then, of how a discipline builds a base of knowledge via interpretivist research will inevitably be posed. In response, Greene (2010) likens interpretive knowledge to "context–specific working hypotheses" rather than absolute or even probabilistic propositions, as in the attempted generalizations of positivism or postpositivism, respectively (p. 68). Greene then introduces Lincoln and Guba's (1985) evaluative notion of *transferability*, which places responsibility for applications of interpretivist knowledge in the

hands of practitioners who can most meaningfully use it, given their intimate understandings of the contexts and people with whom they work. The researcher, on the other hand, is charged with providing detailed and well–articulated (*thick*) description of contextual information associated with the study and its participants in order for a practitioner to meaningfully enact transfer. Successful transferability is possible due largely to the fact that interpretivist research is conducted in the natural settings of participants (p. 70). Ways to achieve understanding of meanings—of interpreting—contribute to the various delineations of approaches found in interpretivist research and the philosophies that support them. Examples include grounded theory, constructivism, social constructionism, ethnomethodology, hermeneutics, and variations of phenomenology.

Evolving Music Therapy Research Paradigms

Music therapists in the mid–20th century responded to an ongoing need and responsibility to systematically explore and communicate about the therapeutic benefits of music experiences for human healing, growth, and development. Since its inception, at least in the U.S., the organized music therapy profession has sought to gain acceptance from the dominant medical professions. To do so, music therapy researchers embraced the paradigm of the medical establishment, which was and is today dominated by objectivist epistemology and positivist/postpositivist perspectives and methods. Hence, music therapy researchers continue to try to uncover truths about how clients respond to music through repeated, controlled observations in settings that often infuse typical clinical scenarios with laboratory–like interactions, and, as in earlier social science research that was based on positivist values, music therapy research participants' capacities as human agents with minds and bodies, wills and desires, thoughts, feelings, and individualized meanings have largely been deemphasized in service to an objectivist epistemology. It was not until the 1980s that music therapy researchers with an eye toward more fully accounting for participants' experiences began to explore alternate epistemologies and to apply non–positivist frameworks and methods for collecting and analyzing data (Aigen, 2008; Wheeler & Kenny, 2005). An interpretivist epistemology (sometimes referred to as the qualitative paradigm) undergirds these alternate approaches that first included grounded theory, naturalistic inquiry, and phenomenology, and have since expanded to also include methodologies such as action research, arts–based research, discourse analysis, ethnography, first–person research, hermeneutic inquiry, morphological research, narrative inquiry, participatory action research, and qualitative (interpretivist) case studies (O'Callaghan, 2009; Wheeler, 2005).

Bruscia (2005) clarifies that objectivist and interpretivist research methods are employed to pursue very different sorts of questions. Objectivist research is valuable in pursuing questions wherein generalizable truths are sought via explanations of cause–effect relationships between specific variables. Interpretivist research, on the other hand, is suited to pursuing questions regarding "the lived world of human beings and how that world is subjectively constituted, construed, and made meaningful by individuals and groups" (p. 83). Methodologies and methods brought to bear in both paradigms are founded upon ontological and epistemological beliefs, assumptions, and commitments. When these are reflected upon, enacted through careful decision making while conducting the study, and clearly articulated in the final document, consumers of research are helped to more fully comprehend the processes undertaken and therefore the potential benefits of the findings.

What follows are descriptions of objectivist and interpretivist research methodologies with explanations of related epistemological assumptions and beliefs. Included are positivism and postpositivism, constructivism and social constructionism, phenomenology, and hermeneutics. For each methodology, a study from the music therapy literature is described and analyzed so as to highlight and explicate how particular epistemological commitments were manifested via the design decisions made and the methods employed, and that ultimately led to the findings offered.

Objectivist Research Epistemologies

Research methodologies described below adhere to an objectivist epistemological perspective and include positivism and the closely related perspective of postpositivism. These are the primary methodologies that employ objectivist epistemological assumptions and reflect a perspective wherein a researcher controls all possible variables and interactions of those variables in order to explain the nature of the cause–effect relationships witnessed. A realist perspective and objectivity are considered essential aspects of such knowledge pursuits.

Positivism and Postpositivism

For nearly 400 years, positivism has been the dominant perspective for what has been understood to be science and *scientific* investigation (Denzin & Lincoln, 2005). The root of positivism is a belief in objectivity as the cornerstone of knowledge and knowledge acquisition. An ***objectivist*** stance accepts as ontologically true the notion of a singular reality existing independently of humans' experience of it, and that it is possible to increasingly know this extant reality empirically through the senses (or via measurement devices that substitute for observation). Thus, the meanings of observed objects or phenomena are believed to be *in* those objects or phenomena; they exist before a researcher intentionally accesses them through observation methods. For instance, from this viewpoint, a tree in a field is a tree, with all of the understandings of what a tree means that goes with it (e.g., wood for fire and furniture, shade, leaves to rake, the provision of a higher viewpoint than from the ground) regardless of whether a human happens upon it or not.

Positivism is the perspective held in natural science research that has as its focus explanation of cause–effect relationships between inanimate objects (e.g., rocks, trees, and planets) and/or natural phenomena (e.g., gravity, rainstorms, and earthquakes). Positivist research can thus provide glimpses of a reality wherein mechanistic cause–and–effect events occur predictably, relevant variables can be controlled, data are value–neutral, and unequivocal truths may thereby be revealed (Giacomini, 2010). Explanations (theories) that are well–warranted by analyzed data are considered general laws about the relationships observed between or among phenomena (Phillips & Burbles, 2000, p. 4). This means that predictions are possible about the nature of how the world and people in it function. A key positivist claim is that the process of objectively and systematically observing, describing, and analyzing specific aspects of reality leads to facts—the way things are—that are value–neutral; that is, research processes and results are uncontaminated by a researcher's values, perspectives, or opinions (Alvesson & Sköldberg, 2009; Fox, 2008).

Findings in positivist and postpositivist research are based on inductive inference or hypothetico–deductive processes. ***Inductive inference*** entails inferring "general conclusions

(e.g., laws, descriptive categories) from particular phenomena (i.e., data observations). Inductive inference involves repeated empirical observations of similar phenomena, to make conclusions about their shared nature" (Giacomini, 2010, p. 131). In contrast, ***hypothetico–deductive processes,*** also known as ***hypothesis testing*** or ***falsification,*** seek to prove or disprove theoretically true statements through controlled experiments. The most typical procedures used to uncover the truths sought by positivist and postpositivist researchers include: establishing hypotheses (theoretically–grounded guesses) about the sorts of cause–effect relationships that can be discovered, creating operational definitions to specify precisely what is relevant to observe, controlling variables that might interfere with observing the operationally defined phenomena, gathering relevant observations or measurements (data), and analyzing the data, most often through statistical processes. These procedures, considered classic scientific methods, reveal relationships and the nature of relationships (causes and effects) believed to be present in phenomena and thereby provide explanatory knowledge. Strict control and structure of the process allows for the belief that a researcher's observations do not alter the phenomena observed in any way. Hence, the researcher's identity, values, cultural context, reasons for carrying out the study, and relationship to the phenomena under investigation are believed to have no (or minimal) impact on the data, provided the proper controls are upheld, and therefore the data are a value–free, true representation of reality. Application of statistical procedures for data analysis to determine whether results are likely to have occurred by chance also theoretically removes the possibility of a researcher's values, including speculations or desires about outcomes having an influence on eventual findings. Conclusions are thus considered factual, accurate, verifiable, *positive,* true knowledge (Crotty, 1998; Ruud, 2005).

As noted above, postpositivism grew out of critiques of positivism and its foundationalist perspective on knowledge. *Foundationalism* holds that knowledge uncovered through research is absolute and securely *founded* (established) in sensorial experience (observation) and/or indisputable reason (Phillips & Burbules, 2000). Postpositivists understood that these sorts of claims, particularly when applied to research with human beings and societies, were faulty and required adaptation. The need for a perspective that accounts for the obvious inconclusiveness of all truth claims was recognized.

Postpositivism retains some established beliefs and values from positivism while altering others. Postpositivism maintains ontological belief in the objective nature of reality but recognizes that undertaking to know objective reality will always be deficient due in part to the limitations of our human capacities. Therefore, what we come to know is considered incomplete and imperfect and will (and should) be revised in light of new evidence (Phillips & Burbules, 2000). Whereas the positivist ideal of seeking absolute truth is worthily maintained, achieving the best-warranted, highly probable explanations of phenomena is the postpositivist agenda (Fox, 2008; Phillips & Burbules, 2000).

In practice, postpositivists maintain belief in the power of the data gathering methods applied by positivist researchers, but findings are considered conjectural rather than absolute and are admittedly bound to certain conditions rather than comprehensive (Phillips & Burbules, 2000). Clark (1998) explains, "The contextually bound nature of research findings, consequential in acknowledgement of researcher and theoretical biases, warrants that knowledge deemed to be 'truthful' under postpositivistic inquiry is not universally generalizable to all cases and all situations" (p. 1246). Yet the ideal of generalizable truth findings remains the paramount aim of postpositivist research.

Phillips and Burbules (2000) report that critiques of positivism as an epistemological stance from which to conduct meaningful research in the human and social sciences have rendered this position all but abandoned by researchers, yet many of its tenets live on through the postpositivist perspective. Therefore, for the remainder of this chapter we shall refer to postpositivism as the prevalent objectivist methodology.

Below, we will analyze a music therapy study designed according to postpositivist epistemological commitments. The purpose of this review is to make transparent certain choices related to design and enactment relative to postpositivist assumptions, in order to bring attention to issues surrounding their application in research with human beings. As noted earlier, some objectivist epistemological stances and their manifestations in design and implementation are considered *common sense* and thus immune to critique or even explanation (Pascale, 2011). However, philosophical transparency in research reporting may greatly enhance readers' ability to fully comprehend and apply relevant findings in clinical work or future research (Edwards, 2012; Pascale, 2011). This particular analysis is lengthier than the subsequent analyses of interpretivist studies because postpositivist studies draw on a fairly specific and detailed batch of procedural decisions and actions that necessitate explanatory attention, while, in contrast, interpretivist studies tend toward transparency with regard to their epistemological underpinnings and method development and therefore typically require less explanatory detail.

Postpositivist methodological concepts analyzed below include statements of hypotheses, sample characteristics, operational definitions, data collection and analysis, and generalization of findings.

A Music Therapy Research Example. In the selected example (Cevasco 2010), a therapist's nonverbal behavior relative to research participants' affect and participation during music activities was examined. The purpose of the study was to determine cause–effect relationships between four treatment conditions and participants' participation and affect response rates. Research participants were 38 older adult nursing facility residents with Alzheimer's disease and related disorders (ADRD) in five care facilities. The participants were separated into seven distinct groups, each of which underwent a 45-minute session. The treatment conditions were implemented by a single therapist, presumably the researcher. The treatment conditions included when the researcher–therapist (a) altered her affect and physical proximity to the participants while leading varied music activities, (b) altered facial affect only, (c) altered proximity only, and (d) used no altered affect or proximity (that is, stood still and purposely evinced no natural alteration of affect). Music therapy methods used were (a) movement to recorded instrumental music in accordance with modeled movements and verbal instructions, (b) singing of songs with modeled vocalizations and guitar accompaniment, and (c) rhythm imitation exercises wherein participants copied modeled rhythms on handheld percussion instruments. The sequences of music methods presented during the seven singular sessions were predetermined rather than determined in response to participant needs or emergent responses in the moment. Given the predetermination of the researcher–therapist as leader (the researcher was not the residents' usual music therapist), the predetermination of the music therapy methods used and their sequence, and the rigidity of the treatment conditions, the environment in which the research took place does not seem characteristic of an authentic music therapy treatment process but rather has much in common with a laboratory–like situation

Four music activities per method occurred each session, each facilitated with a different treatment condition. Thus 12 music encounters were undertaken per session. Whereas rationale

was provided for choices of music to support movement activities and rhythmic materials for instrumental imitation exercises, rationale for selection of specific song material was not except to state that the music was believed to be familiar to the participants. Descriptions were not provided of the character of the live music presented nor of the participants' musical responses. Sessions were observed and the rates of participants' affective and participatory responses recorded by student assistants who also rated responses evident in limited videotape footage. Data were collected via a time sample rate of every 15 seconds. Statistical analyses were conducted and conclusions articulated, indicating differences in response rates to the different experimental conditions imposed on the groups.

Analysis of *postpositivist epistemological commitments* in this study reveals that, while not explicitly stated, the study was designed in accordance with these epistemological assumptions. Hypotheses are not explicitly stated, yet the researcher–therapist's predictions can be inferred from the introductory material and subsequent design: specific nonmusical actions by the researcher–therapist will lead to specific participant nonmusical responses (cause–effect relationships). Sampling criteria are not clearly outlined; however, basic criteria can be discerned as male and female older adults with Alzheimer's disease who live in a nursing facility. No mention is made regarding randomization of participants into groups. Participants' individual characteristics are unaccounted for. Providing no information about the individual participants (e.g., cultural contexts and life experiences) infers an assumption that individual differences (e.g., sex, personality, life experiences, cultural background, musical background) were non–confounding variables and thus were irrelevant to the types of responses sought. Irrespective of the de–emphasis of participants' individual characteristics, according to the postpositivist notion of generalization, findings from this study are assumed to apply to all persons fitting the basic criteria noted above.

The unstated ontological assumptions are foundational and realist. Foundationalism is inferred from the case made in the related literature section supporting possible cause–effect relationships between the independent and dependent variables via predominantly objectivist research findings from music therapy and non–music disciplines. A realist view is inferred through the stated belief that persons with Alzheimer's disease respond to particular stimuli in specific ways and that these responses have stable meanings that are imbedded in the responses themselves. In other words, given the controlled study design, the meanings of participant responses are believed to be present in the responses themselves and are given; they already exist and are not based on the researcher's interpretations. Hence, the objectivist assumption is that one only needs to observe and track responses in order to gain knowledge about them. Specifically, for this study, enacting *affect* (the act of smiling) and *participation* (exerting effort within music activities) are held to mean that participants' are somehow in a greater state of well–being when such behaviors are present than when they are not.

Epistemologically speaking, postpositivist study designs typically develop or identify and report highly specific operational definitions of independent and dependent variables in order to reduce the possibilities of extraneous phenomena interfering with the particular responses under investigation. Operational definitions also focus data collectors' observations on the exclusive responses sought by the researcher and not on other events that might occur, regardless of their potential clinical significance. In this study, procedural aspects of the independent variables (how and when the treatment conditions were enacted) were described in detail, along with brief descriptions of the researcher–therapist's facial affect and relative proximity to the participants demonstrated during each condition. Of significance is that characterizations of the live and recorded music presented—aspects essential to understanding

the interpersonal and inter–musical context through which the independent variables were experienced by the participants—are conspicuously absent. Neither the attributes of the therapist's musical contributions nor those of the participants appear to have been considered relevant except, perhaps, as potentially confounding variables. The music activities appeared to serve only as environmental contexts for manipulating nonmusical variables. The music itself as a stimulus or as a medium of interaction seems inconsequential.

The four treatment conditions (independent variables) were predetermined and were reportedly not altered in nature or sequence during sessions regardless of the nature of participants' responses in the moment. The condition wherein the researcher–therapist used both affect and proximity seems most similar to actual music therapy engagement processes, whereas the others do not. Precise monitoring of applications of the independent variables was not conducted, potentially compromising the study's internal validity. Regardless, attempting to maximally control for the character of independent variables applied is in this case based on the objectivist assumption that it is possible to add or withdraw certain aspects of natural human interaction processes in order to study those remaining. Further, from a postpositivist perspective, it is believed that the observed responses to the reduced interactions are nonetheless valid representations of participants' interactional functioning. Design decisions that attempt to maintain the most natural environment possible for participants are reportedly valued in postpositivist research (Guba & Lincoln, 2005; Phillips & Burbules, 2000). Yet tightly controlling interaction variables, in essence, introduces contrivances or artificiality into interactional processes. This is a long–standing concern and challenge regarding objectivist research approaches in the human sciences, impacting the balance between internal and external validity (i.e., generalizability; Phillips & Burbules, 2000; Prickett, 2005).

Reducing the independent and dependent variables and their relationships to one or a few concrete behaviors, as in this study, is congruent with the objectivist assumption that discrete human responses can be isolated, manipulated, and explained. From the postpositivist perspective, however, these participants' unique individual and socio–historical contexts (e.g., personality, emotionality, cultural influences, musical history) are of no relevance to the observed, operationally defined responses sought. Similarly, the researcher–therapist's individual context is believed irrelevant to the interactions between the independent and dependent variables. The unstated postpositivist concept explaining this irrelevance is that the existence of unique human attributes is *controlled for,* accomplished by believing that the participants' unique human contextual factors are spread throughout the groups and are therefore of little or no influence on the findings (a statistical concern), and that the researcher–therapist's unique attributes are minimized in their influence by limiting her actions to just those relevant to the treatment conditions (a theoretical concern). Studying humans means studying highly complex beings with unique contexts, aspects that can be considered quite challenging, even inconvenient when addressing certain types of research questions. Postpositivist researchers deal with this challenge through various design decisions made in service to the methodology and the type of knowledge sought, such as the statistical control just mentioned.

The two dependent variables in this study (alterations of affect and effort exerted to actively participate in music activities) were considered evidence of participants' level of well–being and are representative of the postpositivist concept of construct validity. As is typical in objectivist research, this predetermined meaning was imposed on the participants' responses based on earlier objectivist study findings. Hence, neither participants nor their guardians/agents were consulted regarding alternate viewpoints. Atypical of postpositivist

methods, however, operational definitions of the dependent variables were not provided. Nonetheless, incidents of the dependent variables were reportedly observed and numerically accounted for by data collectors; the character or quality of responses, however, was not.

From the postpositivist perspective, reducing data collectors' perceptual focus toward interactions between the stated independent and dependent variables alone—regardless of the nature of the music or of the musical context in which the variables interacted—is intended to provide a level of certainty for capturing the presence of specific nonmusical cause–effect relationships. This also means, however, that other potentially important clinical phenomena are, by methodological necessity, left unaccounted for as factors that might influence the dependent variables or as clinically important events in their own right. This study design also seems to evince the postpositivist belief in the value of ascertaining predictability in cause–effect relationships and that such relationships indeed exist among particular groups and are highly probable clinical truths to be applied to similar contexts. Designs that reduce phenomena quite narrowly are considered unproblematic and, in fact, are favored in objectivist models of research with human beings.

Impartial data collectors tracked their in vivo and videotape observations of participant responses. Data points collected were subsequently turned into numerical units that were analyzed through statistical procedures. Here in the research process, the data points are believed to be true representations of the nature of reality regarding the phenomenon under investigation. The essential belief is that numerical data collection schemes of ostensibly unbiased evaluators (who undoubtedly possess human strengths and fallibilities) are considered unbiased evidence of the reality of another human being's experience. Through statistical procedures, relationships between the frequencies of participants' actions relevant to those of the researcher–therapist were calculated and the resulting numerical relationships submitted in the report. These numerical relationships are believed to accurately reveal the probability that participants' responses are true reflections of ways that older men and women with Alzheimer's disease exhibit or manifest well–being. Consequently, the probability statements from statistical analyses are described in the discussion section as the best currently warranted explanation of the phenomena surrounding these participants' experiences. The article unequivocally states, "The results of this study indicate that a board–certified music therapist's nonverbal behavior impacts the affect and participation of older adults with ADRD to a significant degree" (Cevasco, 2010, p. 295).

As noted earlier, our analysis of this study is intended to highlight the often unreported yet fundamental beliefs concealed within the process of conducting research with human beings through postpositivist epistemological commitments. A careful reading reveals that the researcher found the topic to be of great interest and believed that benefit would come to participants in a nursing facility and their music therapists from the explanations of cause–effect relationships provided. Not atypically, the way the research question was set forth initially (e.g., "The effects of …") revealed the researcher's postpositivist epistemological stance. These epistemological assumptions subsequently foreshadowed the nature of the methodological procedures that would be undertaken. Pascale (2011) argues that postpositivist researchers tend to simply assume that traditional objectivist research methods, long established in the natural sciences, are the undisputed best ways to gain explanatory knowledge—even of the actions of human beings. Such methods are therefore not questioned but applied without explicitly accounting for their theoretical foundations (p. 46). Concerns about this lack of transparency are what led earlier human and social science researchers to seek alternate perspectives and to account for participants' individuality, experiences, and potential meanings therein. Whereas

postpositivist research has value for approaching certain types of questions regarding human action, it is of benefit to readers to have access to explicit information regarding a researcher's epistemological stance. Providing this information in a report also allows readers to hold researchers accountable for their decisions/choices and subsequent truth claims. Further, it allows readers of research to better evaluate the processes and findings reported and thus more carefully scrutinize potential applications of the knowledge gained—a primary reason why such research is conducted in the first place. For the benefit of the music therapy discipline, particularly with the current emphasis on evidence–based practice, objectivist researchers might assist the discipline by providing the most complete picture possible for how they acquired the knowledge they claim as evidence of effective clinical methods, procedures, and techniques.

Interpretivist Research Epistemologies

Research methodologies described below adhere to an interpretivist epistemological perspective and include constructivism/social constructionism, phenomenology, and hermeneutics. These methodologies reflect a perspective wherein an individual or group may ascribe meaning to phenomena or experiences based on encounters with actual objects and people—in other words, meanings that are empirically based encounters but explicitly understood through an individual's or a group's interpretations. Relativity and subjectivity are considered natural and expedient aspects of such knowledge pursuits.

Constructivism and Social Constructionism

Constructivism is a perspective that views meaningful human reality not as objective—not *out there* to be discovered or uncovered—but rather as *constructed* by individuals through their interactions with and interpretations of the world and each other (Alvesson & Sköldberg, 2009, Crotty, 1998). Crotty emphatically states, "There is no meaning without a mind" (pp. 8–9). However, meanings are not simply created in and from one's mind, for that would indicate a pure form of subjectivism. Meanings emerge, rather, from constructions—or more accurately, reconstructions of our experiences of an empirical reality. There is a merging of object and subject; of first–hand experiences of reality and contextualized perceptions—"subject and object emerge as partners in the generation of meaning" (p. 9). Meanings are therefore impermanent and change when new experiences bring new perceptual elements and awarenesses (Schwandt, 2003).

Constructivism differs in focus from objectivist research epistemologies in that its aim is *understanding* phenomena through interpretive processes. These processes are intended to explicate meanings rather than explanations of causes and effects identified through distanced observation and subsequent description (Constantino, 2008; Schwandt, 2003). A focus on understanding is particularly relevant for studying human actions and interactions, for unlike the physical world, these are inherently and essentially meaningful (Schwandt, 2003, p. 296). From a constructivist view, it is the meanings (and meaning–making processes) that people ascribe to their experiences that are of greatest interest and these are internal processes that are context bound, unpredictable, and independent of natural laws. In fact, constructivists reject the very notion of natural laws with regard to human agency and meaning–making, believing rather that such processes are idiographic, individualized, and socio–historically context specific.

Constructivist research seeks to understand phenomena through the perceptions of those under investigation (Denzin & Lincoln, 2003). According to Guba and Lincoln (1994), constructivist research is epistemologically *transactional* and *subjectivist*: "The investigator and the object of investigation are assumed to be interactively linked so that the 'findings' are *literally created* as the investigation proceeds" (p. 111, italics in original). Meanings are explored between the experiences of a situated research participant and her or his life contexts and those of the researcher. Researchers working from a constructivist stance are interested not just in the experiences of participants but in the ways that participants construct meanings from and about their experiences. Constructivists believe that humans do not simply receive imprints of objects and events encountered in the world (facts), but rather interpret these through individualized perceptual schemas. In fact, Alvesson and Sköldberg (2009) explain that phenomena are always interpreted in some way: "We never see single sense–data, but always interpreted data, data that are placed in a certain frame of reference" or perspective (p. 6). Thus, meanings ascribed from an individual's interpretations are *relative*—they belong to the *knower* in that time, place, and cultural situation. Knowledge and the knower are thereby inseparable. Schwandt (2003) describes constructivism as a form of *perspectivism*, meaning that an individual sees or experiences a given phenomena through a particular lens; that is, a *conceptual framework* developed through enculturation and socialization processes that inform each individual's personhood and interpretations of the world (p. 306). Accordingly, who I am, based on my life experiences, the contexts in which I live, and the language I use to describe my experiences matters to the potential meanings I construct and communicate about any given phenomenon. And the same goes for everyone else who experiences the same phenomenon (Crotty, 1998). In other words, there exist neither value–neutral perceptions nor singular, permanent truths. Instead, all perceptions are value–laden and truths are multiple and sometimes disparate and conflicting (Pascale, 2011).

Research via the tenets of constructivism seeks understanding of the meanings that human participants ascribe to their experiences of a particular phenomenon. Studies are therefore conducted in the natural environments where phenomena of interest occur. Schwandt (1994) shares that Guba and Lincoln, early proponents of constructivist research methods, initially referred to their conceptions of constructivist methods as "naturalistic inquiry" (p. 128). Data *generation* methods used are those that provide opportunities for participants and researchers to articulate and share their meanings and meaning–making processes. From the constructivist perspective, human science data are not collected since they are not simply in existence and awaiting discovery, but are generated through interactive processes between researchers and participants (Mason, 1998, in Aasgaard, 2005). Participants' and researchers' uses of language are of great import. In fact constructivist research methods have direct lineages to conceptualizations of hermeneutics and phenomenology, which are highly reliant on linguistic processes of understanding (Constantino, 2008). Consequently, transcriptions of recordings of sessions, open–ended interviews, and narrative response open–ended questionnaires are often applied methods of data generation. Reconstructions of participant and researcher's meanings are produced for analysis. From interpretive yet systematic analyses emerge varying levels of understanding of a particular phenomenon (Crotty, 1998). Evaluative criteria for the *goodness of fit* of linguistic reconstructions relative to the experiences under investigation are used as means of ascertaining credibility and trustworthiness (Denzin & Lincoln, 2005).

Social constructionism embraces most of the philosophical factors described for the constructivist viewpoint such as a pursuit of understanding of meanings rather than

explanation of phenomena, the notion of knowledge as relative to a particular socio–historical situation, and the belief that meanings are multiple—no single interpretation is more authoritative than another. Crotty (1998) clarifies that in social constructionism, *social* has to do with seeking to understand the approaches to meaning–making that are used by groups in constructing knowledge rather than a pursuit of knowledge about social life. A principle difference between constructivism and social constructionism, then, is the belief that interpretations of meaningful reality are inter–subjectively co–constructed among persons who share a particular socio–historical context and language, rather than produced via an individual mind (Crotty, 1998; Pascale, 2011; Schwandt, 1994). Moreover, social constructionist thought holds that it is the transactional and subjective nature of interpersonal relations that bring reality and meanings into being. Thus interaction is essential for understanding both natural and social phenomena, and language is a primary medium through which such meanings are transacted and communicated dialogically (Crotty, 1998; Denzin & Lincoln, 2005; Schwandt, 1994). Even the notion of one's self is believed to be a social construction, emergent through social interactions and subject to ongoing change via new relationships, interactions, and dialogues (Alvesson & Sköldberg, 2009). This means that knowledge about given phenomena not only bears traces from the many layers of culture belonging to human agents, but is in fact emergent from and because of those contextual/cultural attributes and experiences; "Social constructionism emphasizes the hold that culture has on us: it shapes the way in which we see things (even the way in which we feel things!) and gives us a quite definite view of the world" (Crotty, 1998, p. 58).

Guba and Lincoln (2005) characterize social constructionist ontology as "relativism—local and specific co–constructed realities," meaning, as indicated above, that interpretations of meaningful reality are context–specific and multiple, and may also be conflicting but nonetheless are potentially viable (p. 258). Epistemologically, given the transactional and subjective nature of co–constructed meanings, it is believed that the everyday processes involved in situated human living are the very processes that create meaningful realities and are therefore what a researcher must seek to understand in order to be involved in interpreting those emergent realities (Denzin & Lincoln, 2005; Schwandt, 1994). Gergen (1994) emphasizes that language itself, inherent in thought, feeling, and social processes, gains its capacity for meaning–making through the human interactions in which it is used. Therefore from the social constructivist view it is believed that we humans are in a constant state of meaning–making. Cultural–contextual influences shape our capacities for experiencing and making sense of our world and our interactions bring meanings about life into being. Further, the language we use to live out and describe our experiences is shaped by cultural–contextual factors and continues to evolve as we continue to use it. Consequently, our experiences and meanings also continue to evolve individually and collectively. It seems then that, according to social constructionism, meaning making through contextually grounded interpretations of our natural and social worlds is simply an occurrence of living in community (Berger & Luckmann, 1966).

Constructivist epistemologies are relevant for music therapy researchers interested in exploring the meanings and meaning–making processes that emerge from clients and therapists during treatment. The very nature of these individualistic processes calls for an approach that is nondeterministic; that is, it does not assume predetermined categories of response. Rather, the approach taken should account for the ways that meanings emerge through the myriad sorts of actions and interactions that unfold during music therapy (Bruscia, 2005).

A Music Therapy Research Example. Aasgaard (2005) explores the meanings that Norwegian children who were hospitalized for cancer treatment ascribe to the song writing processes that they experienced with the music therapist–researcher as well as the songs composed therein. The study also includes perspectives of others who had any involvement with the song material after the songs had been composed such as family members, nurses, other patients, teachers, and journalists. This latter part of the study sought to understand the breadth of impact the songs had from years and sometimes great distances beyond the clinical times and spaces of their creation, referred to as the "song histories" (p. 71)

An analysis of *constructivist epistemological commitments* in this example suggests that the researcher decided to conduct the study according to epistemological assumptions of constructivism due to beliefs about the highly individualized character of song writing as a form of personal and social process for children. The constructivist perspective further lent itself to exploring song histories as these are also social by nature in that song material produced by one person may affect others in numerous and unpredictable ways as the song is presented outside of its context of origin.

In the hospital setting where the children were treated, song composition is a typical music therapy method in which to engage patients. The sample of five pediatric patients chosen for the study was purposefully made in order to acquire information relevant to the research focus. Each of the five children had already written at least one song during hospitalization when the study commenced. Children of a range of ages (4, 7, 7, 13, and 15 years) were chosen as a way to broaden the potential scope of perspectives explored. Nineteen songs in all were written. The sample of research participants was eventually expanded to include others who experienced the children's song material in various ways, as described above. Examples of the numerous data sources accessed by the researcher include dedicated interviews, unplanned conversations, progress notes and case reports, diary entries from parents, music therapy students, the researcher himself, letters from patients, and news media, as well as the artifacts of the songs themselves in written and recorded forms.

In emphasizing the individual nature of the patients' experiences, Aasgaard (2005) notes, "There is no average paediatric cancer patient (as there is no average song). A child who participates in song creations is neither typical nor untypical in relation to anything" (p. 72). Thus, as understood from the constructivist perspective, each individual's interpretations of and meanings ascribed to the songs and related experiences (e.g., composition processes, performances, recordings, presentations on television) are constructed through the influence of socio–historically evolved contexts. The researcher did not predetermine them nor are they of a generalizable or universal nature. The meanings described are therefore multiple. While not described explicitly as such, data analyses were carried out continually throughout the research process as new data and sources led to new insights that were accounted for in subsequent analyses. Analyses were thus conducted in a manner reminiscent of techniques applied in grounded theory studies (Amir, 2005). Accordingly with regard to the meanings that emerged for the children, Aasgaard identified and elaborated on the categories of expression (communicating with others), achievement (optimistic evolution of conceptualizations of self), and pleasure (hedonic value of engaging in creative acts) as highly relevant impacts of engaging in clinical song writing.

The sorts of relativist, interactional, and interpretive knowledge produced through a constructivist study such as this one honors the perspectives of its many participants. The voices of pediatric cancer patients, their parents and extended family members, related professionals, the researcher, and others are treated inclusively toward understanding the

potential impacts of music therapy. Meanings emerged from the interpretive research processes, in contrast to an objectivist, hypothetico–deductive approach that would have imposed limitations on the range of possible response categories available for analysis. Aasgaard's conclusions span a wide range of meanings and meaning–making processes that undoubtedly could not have been foreseen or predicted prior to the study, and indeed would not have come to light without the open and inclusive processes allowed for through constructivist epistemological assumptions. Conclusive findings were not sought, but rather the rich range of understandings that emerged over time is one indication of the usefulness of the study. How understandings from the study are applied is an issue of transferability as interested clinicians make use of them in their particular contexts. For certain sorts of questions, therefore, the constructivist perspective is useful as a process that opens a way for expanding possibilities of knowledge generation. Finally, in contrast to social constructionist methods, Aasgaard as the primary researcher was ultimately responsible for the categories constructed and that shaped final interpretations articulated for this study—that is, constructions of meanings. In the spirit of interpretivist research, Aasgaard (2005) reports,

> My role as a researcher includes understanding lay interpretations as well as developing relevant theoretical reflections about the song phenomena. … Interpretive conclusions by this researcher are not necessarily more true than those of other investigators (professional or not) studying the same material; proposing well–founded answers and prolific questions are, however, major (and sufficient) goals here. (p. 80)

Phenomenology

Phenomenology, like the other interpretivist approaches discussed herein, has taken various turns in its evolution as a philosophical and methodological perspective, and therefore its epistemological underpinnings have also transformed over time. Depending on which tenets a phenomenologist embraces (which are themselves dependent on the object of study and how best to approach it) and how these are applied in knowledge production, focus on understandings to be gained may vary from aspects of human consciousness (transcendental phenomenology) to language (linguistic phenomenology) to processes of interpretation (hermeneutic phenomenology) to disciplinary concerns (experiential phenomenology) and to existential and ethical concerns (existential and ethical phenomenology, respectively; van Manen, 2011). At the core, ***phenomenological research*** seeks understanding of *lived experiences* and the meanings that emerge as individuals experience phenomena in their everyday lives—in the *lifeworld*. The lifeworld may be described as the context wherein an individual has meaning as a person as the result of enculturation and wherein meanings are made through perceptions, cognition, and language surrounding phenomena and experiences (Adams & van Manen, 2008).

From the phenomenological perspective, and in stark contrast with realist and objectivist beliefs, humans are not understood as beings who simply inhabit a world, but rather are understood to be *being–in–the–world*. One's being–ness is predicated upon the nature of the world in which one lives, and the nature and meaning of the world in which one lives is predicated on the interactions the individual has with that world. Thus, human consciousness is seen as inextricably linked to the experiences one has in the world, and likewise the world is seen as only meaningful through having been encountered by a conscious being who ascribes meaning to it. Consequently, the Cartesian dualist notion of a conscious subject who makes

sense of a distantly observed reality *out there* is undermined and the classic subject–object split vanishes (Crotty, 1998). From this phenomenological belief comes a key tenet of phenomenology referred to by Husserl as *intentionality*, referring to the intentional focus an individual exercises toward a phenomenon (Alvesson & Sköldberg, 2009). Crotty (1998) articulates the resulting viewpoint thusly: "Consciousness is always consciousness *of* something. … We are beings–in–the–world. Because of this, we cannot be described apart from our world, just as our world—always a human world—cannot be described apart from us" (p. 79). Therefore, lived experience is the object of study in phenomenology.

Ontologically speaking, early phenomenological researchers sought to go beyond, or more accurately beneath descriptions of their own experiential meanings to identify *essences* of experiences—essences being foundational elements undergirding and making experiential meanings recognizable and unique to the experience of a given phenomenon (Adams & van Manen, 2008; Alvesson & Sköldberg, 2009). With regard to identifying a phenomenon's essence, van Manen (1990) adds, "The essence or nature of an experience has been adequately described in language if the description reawakens or shows us the lived quality and significance of the experience in a fuller or deeper manner" (p. 10).

Note that in earlier phenomenological research, the researcher studied her or his own experience—the immediacy of experience therefore being direct between the source of experience and the perceiver. The researcher then described and interpreted her or his own meanings. The process was subjective yet rigorous (Adams & van Manen, 2008). In modern phenomenology, researchers study, with equal rigor, the subjective experiences of others and the meaning–making processes they engage in within the contexts and cultural lifeworlds in which their experiences occur. Forinash and Grocke (2005) clarify different approaches when they refer to *reflexive phenomenology* and *empirical phenomenology* as research methodologies wherein researchers study their own experience of a phenomenon versus the described experiences of others, respectively (p. 323).

Epistemologically, a phenomenological researcher studying experiences and meanings of phenomena believes that by engaging in a crucial process of *bracketing*, that is, setting in abeyance one's own culturally mediated presuppositions and preconceptions regarding a phenomenon, it may be experienced anew—fresh and unadulterated. Behind the concept of bracketing is a theoretical understanding—or as Crotty describes it, a "suspicion" (1998, pp. 80–81)—that our enculturation, while enriching of our lives and providing us with well learned and hopefully accurate perspectives on each other and the world, is also limiting with regard to what we see and how we comprehend phenomena. Our cultural foundations, including our language and thought processes, are not inclusive of *all* explanatory and expressive possibilities and perceptual attitudes. What we see and understand regarding phenomena are always filtered through a particular lens, limiting what and how we see, hear, touch, feel about, and make meaning of experiences. Significantly, the language we use to describe our experiences to ourselves (and to others) influences the character and the very nature of what we experience and share. According to phenomenological thought then, a good deal of the fullness, completeness, and/or richness of what may be experienced is limited due to not only our fallible human perceptual systems but also to the limitations of our representational systems. By setting aside our prior *taken for granted* meanings and through freshly and openly experiencing phenomena in a theoretically first–hand manner, we may come to new perspectives, or at least to changed perspectives understood as *reinterpretations*, or to new or newer meanings (pp. 82–83). Yet the phenomenological researcher must experience, must be present and available to the phenomenon of interest for it is from the open, immediate, and subjective orientation to the

phenomenon that possibilities for understanding arise: "Subjectivity means that we are *strong* in our orientation to the object of study *in a unique and personal way*—while avoiding the danger of becoming arbitrary, self–indulgent, or of getting captivated and carried away by our unreflected preconceptions" (van Manen, 1990, p. 20; italics original).

Procedurally, various levels of *phenomenological reduction* were developed with regard to a researcher's lived experience and the invariant, universal essences therein. These reductions resulted in interpretations of the nature of how particular essences are constituted (Alvesson & Sköldberg, 2009, p. 77).

Analysis of data generated in a phenomenological study is often closely tied to hermeneutic practices in that the researcher's analyses most often deal with language via descriptions of experiences. Jackson (2016), in Chapter 41 of this book, provides a useful table comparing various approaches to analyzing linguistic data but note that a common characteristic is "that the interview protocols are distilled to a statement or essence that authentically reflects the experience" (p. 324). It is important to highlight again that, as with all aspects of interpretivist inquiry, analysis processes are not performed with an attitude of objectivity nor as inviolate protocols, but remain open and susceptible to variation in technique and sequence as meanings are revealed across analyses. Such is necessary in that not only are the data unique to the individual participants from which it was generated but that the researcher too, given her or his humanness and particular lifeworld, provides a unique point from which analyses takes place. Hence, phenomenological analysis procedures are indeed interpretive, but they are also rigorous but not rigid, creative but not arbitrary, and always focused on emergent meanings and the structures that enliven them (essences) rather than predetermined categories.

In addition to analyzing language–based data, music therapy researchers might also seek to understand the meaning potentials of music created by clients or between client and therapist. A variety of analysis procedures are explicated in the music therapy literature for analyzing and/or interpreting music and musical interactions as phenomena of interest. A short list includes Amir (1990), Arnason (2002), Bruscia (1987, 2001), Ferrara (1984), Lee (2000), Pavlicevic (2000), Perry (2003), and Trondalen (2003). The following study by Markworth (2014) focused on the communicative nature of improvised music between client and therapist and is informative for explicating epistemological assumptions revelatory of a phenomenological attitude. The study entailed analyses of both language and music data.

A Music Therapy Research Example. Markworth (2014) investigated the ways that improvised music provides a medium through which a non– or minimally verbal client and therapist communicate. Participants included a purposefully selected sample of three Nordoff–Robbins music therapists whose videotape footage of sessions with three children on the autism spectrum (ages 3–6 years) was analyzed toward identifying essences of communicative meanings experienced between client and therapist.

An analysis of *phenomenological epistemological commitments* reveals that the researcher employed a phenomenological approach due to the nature of the research questions posed, which in turn are based on the nature of the phenomenon of interest. In this case: "In what ways do children with autism engage in communicative interactions through the [co–improvised] music?" (a question for description), "How does the music therapist use improvised music to invite or elicit communication?" (a question for description and/or explanation), and finally "What seems to be communicated through the musical interactions?" (a question for interpretation; p. 7). The sorts of knowledge sought seem inferred through the research

questions, as indicated in my parenthetical statements. The first two questions might have been approached through an objectivist methodology wherein the researcher would operationally define what communication in this context looks and sounds like, then would simply note the frequency and/or duration of such events as identified on the videotape footage. But such knowledge would be inadequate toward addressing the researcher's stated true interest. Given the final research question then, it seems that Markworth ultimately wishes to know what the nature of the communicative musical interactions might be when they occur—that is, the kinds of communication that occur and the essence of these communicative acts. The researcher's decision to work through an interpretivist methodology more closely aligned with the musical processes undergone by therapist and client and their experiences.

The researcher leaves the reader with no doubt as to whether she believes that communication occurs between client and therapist via improvised music. As articulated in a section titled the *Researcher's Context*, Markworth notes that in her own work with minimally verbal children with autism, she has "experienced the phenomenon of communicative interactions where music was the primary means for expression," and adds, "I approached this research project with an existing expectation that music can be an effective vehicle for communication…" (p. 2). Description of the researcher's context for pursuing the topic is a methodological procedure known as *bracketing* or *epoché* intended to make explicit the researcher's preconceptions and beliefs about the phenomenon, and to thereby consciously hold these perspectives in abeyance during the study, allowing the data to be experienced freshly and hopefully leading to new or deeper knowledge about the phenomenon. By making preconceptions and beliefs explicit, a researcher, in the spirit of the phenomenological attitude, provides the reader the opportunity to judge whether the findings have been influenced by the researcher's biases or not, thereby enhancing the trustworthiness of any eventual knowledge claims.

Data were generated via analysis procedures adapted from Lee's (2000) approach to analyzing clinical music improvisations and included the verbalized perspectives of both the researcher and the participant–music therapists about the music and the interactions. Procedurally, Markworth first reviewed the videotape footage alone, "listening, writing out music transcriptions, and documenting observations and personal perceptions of the communicative interactions between the client and therapist" (p. 9). The initial review also included indexing (time markers) meaningful events in the sessions. In the second stage, a preliminary analysis of the researcher's impressions from the music transcriptions and written documentation led to identification of emergent themes revelatory of meaningful groups of musical interactions. In the third stage, semi–structured interviews with the music therapists while reviewing their respective videotape footage were conducted, guided in part by the researcher's initial discoveries from the music transcriptions and themes. The interviews were audio–recorded and transcribed. In the fourth stage, direct quotes from participants specifically linked to indexed events on the videotapes were charted as were themes that emerged from these statements. As the analysis process unfolded, a chart was created including indexed events, the researcher's observations, initial themes, participant–therapists' statements, and themes relevant to therapist quotes. Thus it became possible to compare perspectives of both researcher and therapists across meaningful events. In the last stage of analysis, a comprehensive list of themes was created and synthesized into categories.

A careful examination of the synthesized list of categories relevant to the question of communication through clinically improvised music led to identification of two general perspectives surrounding method (musical techniques used) and meaning (communicative

content) of communication, but these essential aspects required greater specificity in order to integrate all of the data. A subsequent return to the raw data allowed for more useful coding of thematic ideas into the interrelated themes of Music Language, Musical Expression, and Music as Shared Experience for which the earlier identified perspectives of method and meaning are described as essential (p. 13). After providing a detailed account of the nature of these themes along with narrative descriptions linking the musical transcriptions and verbal data that support their inherent relationships to the processes of communication, Markworth follows through by further connecting prior research and theoretical conceptions that are coherent with her findings.

From an interpretivist epistemological perspective, Markworth drew on a particular set of assumptions and beliefs to guide the research process, as well as to enhance the trustworthiness of the data and emergent understandings. For example, understandings emerged for the researcher from experiences interacting with the videotape footage rather than attempting to fit observations into predetermined categories; multiple perspectives were clearly valued in that a synthesis of researcher and therapists' views was embraced rather than relying on the researcher's or the therapists' meanings alone; and analysis of data was an ongoing endeavor, revealing openness to new or alternative interpretations (meanings) that were allowed to inform both the process and the findings. It is also important to emphasize that knowledge gained through this phenomenological study were heavily reliant on concepts drawn from hermeneutics wherein interpretations of the *texts* of both verbal and musical natures figure prominently due to the experiential phenomena under investigation. As noted previously, hermeneutics and phenomenology have long standing ties. It might also be noted that, whereas Markworth classified her study as related to transcendental phenomenology (study of consciousness), we might also relate it to reflexive phenomenology (study of researcher's own experiences) as well as to empirical phenomenology (study of the experiences of others), as both sources of data and meaning–making were relevant. Such borrowing across varied related areas of research is not at all uncommon in interpretivist research, particularly in light of the fact that it is the research question (supported by ontological and epistemological beliefs) that determines the methods used in pursuit of understandings.

Hermeneutics

The world of hermeneutic study is enormous and far ranging. Therefore the topic is here considerably delimited in order to work within the length and scope of the present book. The form of hermeneutics examined below for its epistemological assumptions is referred to by Alvesson and Sköldberg (2009) as alethic hermeneutics in reference to the notion that this type of research seeks to reveal something that is hidden in a given phenomenon. Such an approach leads to deeper understanding than meets the eye during our typical daily routines of interpreting and making meaning of our worlds (p. 96).

Hermeneutics has had a long history and complex evolutionary process among interpretivist approaches. Its origins reach back to ancient Greece (Crotty, 1998). What follows, therefore, are some general concepts relevant to understanding basic epistemological assumptions foundational to current hermeneutic research practices. **Hermeneutics** as "the art and science of interpretation" (Kenny, Jahn-Langenberg, & Loewy, 2005, p. 335) was developed by early Protestant scholars for interpreting ancient religious texts and by early humanists to study *classic* texts (Alvesson & Sköldberg, 2009). Thus from the beginning, language, linguistic meanings, and interpretive processes were and continue to be of great import. In current

hermeneutic thought, the ways that humans use language to describe experiences influences the ways that such experiences are perceived and understood. Our language, as a system of symbols, thus shapes what we see and how we see our realities and interpret their meanings (Crotty, 1998, p. 88). Expanded perspectives of what constitutes a *text* occurred mostly during the 20ᵗʰ century, leading to a perspective that construes human actions, art works, and speech as forms of texts and therefore susceptible to interpretive hermeneutic inquiry (Kenny, Jahn-Langenberg, & Loewy, 2005). Modern hermeneutic studies, therefore, take as objects human experience(s) and the individual and collective meanings that humans ascribe to these. More broadly, Crotty tells us that hermeneutics has been applied toward "human practices, human events, and human situations—in an attempt to 'read' these in ways that bring understanding" (p. 87). Such human practices, events, and situations are believed to be meaningful symbols available for interpretation. Hermeneutics joins other interpretive perspectives in rejecting the objectivist and foundationalist tenets of positivism, seeing them as unsuitable to address questions outside of the natural sciences and wholly inappropriate for inquiry into human affairs (Alvesson & Sköldberg, 2009; Freeman, 2008).

Hermeneutics has as its aim understanding meanings underlying human experiences, in contrast to, for instance, postpositivist explanations of causal relationships regarding phenomena or phenomenological pursuits of essences of objects, events, and experiences (Alvesson & Sköldberg, 2009; Forinash & Grocke, 2005). Moreover, rather than seeking to establish law–like statements of causes and effects between phenomena, hermeneutics rejects the existence of such laws (Freeman, 2008). And, although hermeneutic practices (like phenomenological studies) are retrospective in nature (meaning that researchers and participants reflect back upon events, experiences, and texts that have already transpired or come to be), rather than seeking essences (invariant/universal structures extant at the core of given experiences), hermeneutics seeks to interpret *meanings* regarding these phenomena. From a hermeneutic perspective, understanding itself is even a process of continually coming closer to true understandings, but that fully incontrovertible understandings or truths are not achievable for many reasons, not the least of which is the imprecise and ever changing nature of the language with which we represent experiences and meanings to ourselves and others.

Current hermeneutic practices, as might be applied in music therapy research, seek to understand the processes whereby humans ascribe meanings to their experiences. Foci are on the linguistically described experiences of those who are studied, their actions, and the products of their actions (e.g., creations of art or music), as well as the experience of the researcher in the process—and significantly, the confluence of all of these (Crotty, 1998; Freeman, 2008). To gain understanding of another's experience requires comprehending and empathizing with the contexts (historical and present) in which the other lives and through which their meanings emerge and are shaped. But such comprehension is not enough. The researcher needs also to draw from her or his own self–understandings and contexts in order to interpret the contexts, actions, artifacts, and meanings of the other. These various *parts*—that is, the people studied, their historical and cultural contexts, their actions, artworks, and linguistic descriptions of their experiences, as well as the researcher's contexts, experiences, artworks, and language—are perceived as a *whole*. These contextual aspects (the parts) as constitutive of the totality of a given experience of interest (the whole) form the elements for the methodological analysis process known as the *hermeneutic circle*. Understandings are achieved and transformed into new and deeper understandings through engaging in an ongoing cycle of analytic movement between the parts and the whole and back again. The parts can only be understood in their relation to the whole and the whole can only be understood in its relation to the parts. Knowledge gained

from working back and forth via the hermeneutic circle was earlier believed to close the gap between explanation and understanding (Crotty, 1998). More current conceptualizations emphasize a gap between pre–understanding (those understandings that are already in place for us through the processes of living; that is, *being in the world* [Alvesson & Sköldberg, 2009, p. 117]) and new understandings, meaning the gap between what a researcher brings to a study in terms of tacit knowledge and beliefs about a phenomenon and those that emerge through analysis processes. Of consequence is the fact that through the process of back and forth movement between one's pre–understandings and new understandings, one's *horizon of meanings* (that is, one's perceptual context) is also changed. Therefore how one comes to understand also continually changes—and the same goes for research participants' horizons of meaning. A *fusion of horizons* thus occurs through interactions between the researcher's meanings and those of participants, thereby enriching potential interpretations and understandings of each (Alvesson & Sköldberg, 2009, pp. 120–121).

Epistemologically speaking, the processes of hermeneutic knowledge production, then, are recollective (recalling of experience), self–reflective (researcher and participants' awarenesses of *self* at various levels regarding the focus of a study), socio–historical (meanings are time, place, and cultural context specific), collective (attempts are made to integrate meanings), empathic (attempts are made to understand the experience of the other), intuitive (applications of tacit and imaginative ways of knowing), and ultimately interpretive (Alvesson & Sköldberg, 2009). Alvesson and Sköldberg stress the importance of intuition and empathy in the interpretive process:

> The idea is that in the last instance the mind of one individual—especially its more creative, non–rule–bound aspects—is not accessible to the reason of another individual, trying to analyze it from the outside; only intuition can fully assimilate the mental universe of another human being. In so far as this empathy is complemented by the interpreter's broader or at least different stock of knowledge, is it possible—and this constitutes one of the main theses of hermeneutics—for interpreters to understand agents better than the agents understand themselves. (p. 93)

For music therapy, hermeneutic inquiries might, for example, seek understanding of how clients make meaning of their experiences of music, of musical processes (e.g., improvising, composing, re–creating, listening), of the therapist, or of aspects of the therapy situation itself. The researchers in the study example below sought to understand meanings ascribed by independent listeners exposed to recordings of piano improvisations that were created during therapy by abandoned and traumatized children. The children were living in residential care away from their families. Understanding was also sought of the children's verbalizations about their improvisations as well as those of the therapist–researcher. In this case, the *texts* analyzed included recordings, verbal descriptions, and transcriptions of the improvisations. In a contrasting way, the researchers might have used hermeneutic inquiry as a way to study the actual processes of improvising that the children experienced or the experiences of the independent listeners as they learned of the true life histories of the children whose improvisations they heard and what the music may therefore have meant in treatment. In any of these situations, it is the texts—in whatever form they might take—that a researcher analyzes through her or his particular horizon of meaning, alongside that of the participants, toward uncovering potential meanings.

A Music Therapy Research Example. Amir and Yair (2008) used hermeneutic processes to analyze the following data: (a) three recorded piano improvisations, one each from three Israeli children living in a residential care setting (two females and one male, ages 5.5, 7, and 8 years, respectively); (b) verbal descriptions of the improvisations provided by independent listener/describers (a math student, a business student, and a music student interested in attending a music therapy graduate program), a professional pianist who transcribed and musically analyzed and commented on the improvisations, the therapist/researcher, and the children themselves; and (c) the analysis of the music transcriptions. The authors noted that they drew from phenomenological as well as hermeneutic methodologies in designing and carrying out the study, and noted the close relationship (historically and methodologically) of phenomenological and hermeneutic approaches to research. However, the primary emphasis of the study was on analyzing the verbal descriptions provided by the various participants and the meanings to be potentially uncovered through these textual materials. Further, the researchers drew transparently from their own intuitions and pre–understandings regarding the children and clinical musicing prior to formal analyses of the various texts rather than attempting to suspend their beliefs about the phenomenon under investigation as in a phenomenological study (Forinash & Grocke, 2005). Therefore the study is considered principally hermeneutic in nature, drawing on interpretive data that lends itself to hermeneutic analysis as well as pursuing the uncovering or discovering of hidden meanings.

An analysis of *hermeneutic epistemological commitments* in this study suggests that the researchers' epistemological assumptions, which in part guided research design decisions, are themselves uncovered through analyzing the text of this article. The researchers state clearly the assumption that the children possess continuously developing *inner worlds* that are shaped through life experiences, and that these inner worlds can be accessed in part via interpreting the children's words (albeit this aspect—the *texts* of the children's verbalizations—was found to be limited in these particular children). The researchers state the assumption that the children's improvisations also provide a form of text or "musical narrative" (Amir & Yair, 2008, p. 134) for analysis:

> Based on the assumption that a musical improvisation represents the client's inner world (Amir, 2004), and that one can find meanings in musical improvisations via verbal language and the use of images, metaphors and stories, it can be said that in the present study, the three improvisations tell the clients' stories. (Amir & Yair, 2008, p. 133)

Acquiring knowledge about the children's inner worlds transpired by studying the children's verbal descriptions of their experiences while listening to their improvisations as well as on revelations from interpretations of the improvisations themselves. It is apparent in the report that interpretations of the improvisations are based on the belief that the music can symbolically transmit meanings relevant to the children's experiences and therefore to their inner (hidden) worlds: "We can conclude that the analysis showed the ability of the music to mirror the clients' inner experiences and represent the clients' clinical profiles" (Amir & Yair, 2008, p. 133).

The researchers based procedures for collecting the independent listener's interpretations of the improvisations on an interesting assumption steeped in valuing

interpretive (hermeneutic) processes. The explicitly stated assumption is that the listener's verbalized interpretations could, in essence, *serve as* or *be* the voices of/for the children whose own interpretive statements were considered by the researchers to be limited toward *richly* describing their experiences (Amir & Yair, 2008, p. 120). Hence an additional, apparently unexpected level of meaning was inferred in the analysis—the meaning reflected in the listeners' voices as surrogates for the children's voices. The listener's interpretations included words and phrases characterized as *qualities* of different sorts to describe evoked scenes and images, emotions heard in the music, and emotions evoked from the music listening. The listener's verbalizations included many metaphors that were considered coherent with the ways that the improvisations unfolded musically and were found to be quite consistent between all participants. Rather than seeking some form of *evidence* that might *correspond* to the words or music as a means of justifying findings (as in objectivist research), the notion of *coherence* among the various interpretations guided the analyses. The idea of coherence among interpretations of the meaning–makers (participants) leaves open the possibilities of many and varied interpretations that may lead to new insights and deeper understandings, but never to deterministic and/or validated truths. The notion of coherence also speaks to the epistemological belief in the value of shared or collective meanings. The researchers applied analysis procedures to all of the participant's interpretations toward uncovering potential meanings rather than predetermining the sorts of categorical meanings that might be discovered. The researchers explain:

> Our intention was not to generalize the findings. … We believe that this kind of qualitative inquiry allowed us to discover a more holistic picture which was composed of the meanings derived while listening to the improvisations of these children. Our interest was to look for shared meanings and not to examine which factors affected which other factors. (Amir & Yair, 2008, pp. 135–136)

Research findings relevant to the epistemological assumptions noted were supported in the report by other researchers' findings from the literature but also significantly by Amir's and Yair's past experiences and intuitions about these children and the value of clinical music improvisation. As noted above, making transparent how one's pre–understandings and intuitions shape decisions regarding methodology and analysis and lead to deeper understandings is fundamental to modern hermeneutic research, and clearly distinguishes it epistemologically from the objectivist–positivistic approaches previously described. In this instance, the authors report in their discussion of the findings: "Although the general picture confirmed what we already knew based on our intuition and experience, we found some of the findings to be meaningful" (Amir & Yair, 2008, p. 132).

Implications

Objectivist epistemological beliefs regarding knowledge and knowledge acquisition through research have been fundamental for centuries. Researchers of music therapy embraced these beliefs during much of the 20th century. Methods of data gathering and analyses in objectivist research have in some sense become ubiquitous in terms of their application toward explanatory knowledge—simply commonsense, as emphasized by Pascale (2011). Thus the nature of how objectivist research is carried out changes very little from study to study.

Predictability of method, it is believed, begets a high level of predictability that a realist and objective sort of knowledge will be discovered. Interpretivist epistemological beliefs, on the other hand, support research processes that are intentionally malleable and subject to numerous changes within a study as emergent findings come to light. Recall that in interpretivist research, data analysis is often an ongoing process from the initial point of data generation through to the end. Researchers are free to draw ideas and methods from alternate frameworks as the researcher's experience and understanding of the data suggests. As an interpretivist researcher's understandings grow within a study, alterations in how subsequent data are generated and analyzed may change as well in order to more fully understand the phenomenon of interest. In fact, analysis might lead a researcher to draw from a different methodology from the one in which the study began. Hermeneutic researchers may draw from grounded theorists, constructivist researchers may draw from phenomenologists, and so on. Thus a form of cross–methodology sharing may and often does occur potentially leading to not only a deeper understanding of the particular phenomenon under investigation but perhaps also to development of new comprehensive methodologies (Alvesson & Sköldberg, 2009). Hence, interpretivist research continues to grow as humans continue to pursue more useful ways of understanding each other and how we all experience the world we live in.

Emphasized repeatedly in this chapter is the notion that epistemology matters in the process of undertaking and understanding research. For the music therapy researcher, understanding one's epistemological beliefs as they relate to the myriad forms of phenomena that occur in music therapy is essential to formulating the most appropriate research questions, determining the most useful approach or methodology through which to study a phenomenon, and designing the most useful methods and analysis procedures to answer one's questions. For just as there are different types of knowledge one might wish to gain, there are different ways of coming to know each. Objectivist and interpretivist epistemologies provide the foundations from which varying pursuits of knowledge occur. Yet researchers are often not educated about the foundational facets undergirding research work. Researchers are taught *how to* but not *why*—the methods but not the supporting philosophical and theoretical bases for them (Pascale, 2011).

> Academic institutions tend to offer research courses that are focused on techniques for data collection–often without significant philosophical consideration. Yet research paradigms offer scholars and students more than simple orientations for data collection and analysis. They provide frameworks for recognizing what we see, as well as for understanding the relevance and importance of what we see. Without understanding the theoretical underpinnings of social research methods, we are reduced to taking what is often referred to as a "cookbook approach" {Hesse–Biber & Leavy, 2006} to research that inevitably precludes a deeply critical stance. (Pascale, 2011, pp. 24–25)

A lack of reporting philosophical foundations is often more prevalent in objectivist research for reasons articulated previously, but the issue is one that should be of concern to interpretivist researchers as well. Consumers of music therapy research who seek to learn from and apply findings in real life music therapy treatment (as called for in the current climate of evidence–based practice) deserve to have the full picture when examining a study; not just how the study was conducted but, equally as important, why each step was taken. It is with this

contextual knowledge that clinicians are best able to evaluate and apply findings to benefit clients.

By understanding and embracing the now greatly expanded range of valuable epistemologies and methodological frameworks available, music therapy researchers can expand the possibilities for the types of questions they pursue and the approaches they apply. Undoubtedly such expansion will lead to much more clinically relevant and useful research to fill our journals and texts and thereby the minds of present and future music therapists.

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