THE SIGNIFICANCE OF THEORETICAL EMPHASIS OF A PRIORI LAWS FOR THE SCIENTIFIC DEVELOPMENT OF MUSIC THERAPY

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Tiivistelmä – Abstract

An issue consistently raised in the music therapy literature is the lack of a unified understanding of its concepts as well as the reasons for its efficacy. This issue is suggested to be closely linked to problems of scientific establishment of the field. Plenty of discussions regarding the achievability, applicability and even the desirability of such a unified understanding exist in the current literature of music therapy. A question consistently remaining unexplored, however, is that under which circumstances could it even be possible for the discipline to reach a unified scientific understanding of the relationship between health, music and therapy? In the present thesis, universal law is examined as the notion which constitutes the basis of the unified body of knowledge within the scientific disciplines which have historically transcended their proto-scientific stages, and the applicability of the notion to the discipline of music therapy in order to answer its similar requirements of scientific establishment is discussed.

Asiasanat – Keywords

Music Therapy, Meta-theoretical research, Meta-theoretical criticism, Universal law, Objectivity, Causality, Epistemology

Säilytyspaikka – Depository	Muita tietoja – Additional information

For my mother who brought me to life,
and my wife who brought life to me

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1. INTRODUCTION: How can a "lack of a theory" be a problem in a field abundant with theories?

Within music therapy there are diverse understandings about what constitutes theory (Daveson, O'Callaghan & Grocke, 2008) and equally diverse groups of theories which follow them (Aigen, 2013). Interestingly, an acknowledged problem of music therapy is, simultaneously a lack of a theoretical foundation (Ansdell & Meehan, 2010; Maratos, Crawford, & Procter, 2011; Raw, Lewis, Russell & Macnaughton, 2012; Cohen, 2009). This problem, referred sometimes as "a hole in the heart of the field*",* is raised out of a concern with central issues within music therapy which, according to the authors, only a theoretical foundation could resolve. Given that the authors are justified in their claim, what then is the reason for such a vital lack, despite the current abundance of theoretical work within the field? Furthermore, what may be the qualities of a theory capable of addressing this lack, which present theories allegedly cannot?

To understand the apparent discrepancy between the alleged lack and the present abundance of theories, I suggest we briefly compare the figurative "hole in the heart" with a literal one (also known as an *atrial septal defect*). As Özbek and Kotaman (2011, 2015) suggest, the suitability of an understanding in regards to a problem within a system, depends not on the existence of individuals who may have a mutual agreement on its relevance, but on its capability to respond efficiently to the system's existing order. It is on the grounds of such an order we may know the fundamental way, in this case, the human heart works; and subsequently we can identify certain deviations from it to be problematic. Likewise, if it can be provided that the system of science is not an amorphous endeavor or a mere "family-resemblance concept", then this would indicate that the competence of theories in regard to the scientific establishment of a discipline is determined by the extent they are able to respond to the *genuine* requirements of the system of science; much like medical treatments of a literal hole in the heart are acknowledged as efficient ones insofar as they take in consideration the genuine requirements of the human anatomy. Conversely, the presupposition that while certain systems like the human anatomy may possess an inherent order, some (such as the system of science or the science of music therapy) may depend entirely on social construction, simultaneously indicates the unattainability of an

evaluative criteria for the pertinence of approaches regarding the latter. Interestingly, despite the *inbuilt* suggestion that such claims about the relative nature of a system are themselves social constructs, relativism or constructivism could still be claimed as *factually* "more appropriate" onto-epistemological stances in comparison to accounts which postulate inherent orderliness or objectivity of knowledge.

In other words, it is possible to advocate the appropriateness of an objectivity rejecting meta-theoretical stance as an extra-construct "truth", although the very claim rejects the possibility of an ascertainable evaluative standard by which a hierarchical order between various social constructs could be determined. Nevertheless, it remains curious as to why it would be, or more curiously *how* it *could* be better to employ a relativist understanding as opposed to a non relativist one, if they are, as proclaimed, equal parts of a heterarchical group of socially constructed meanings without any need to refer to a reality other than their social construction processes. Or, similarly, if the content of science is constructed in-and-through language games as presumed, it is curious as to what propels the contestation of a non-relativist understanding of science, given that it is not possible to determine whether or not it is more sensible to play certain kinds of games instead of others, absent of a meta-game standard.

Be all of that as it may, in the assumed absence of genuine necessities, quite literally *any* type of understanding can have the claims of sufficiency in addressing the requirements of a system provided that it has enough social support behind it, as now the very requirements of this system are determined entirely by subjects, their social influence, and inter subjective agreements.

However, whether it is the human anatomy or a discipline seeking scientific establishment, dismissing the genuine requirements of a system means the relevant adverse outcomes will be retained at best. Therefore, it can be argued that *if* the hole in the heart of music therapy is likewise a problem that is retained despite the abundance of proposed solutions, *then* the proposed theoretical solutions either fail to address the problems or do not acknowledge the problems as ones which are genuine.

In order to argue in favor of the authors' demands for a theory capable of addressing problems regarding;

- The underlying mechanisms of practice
- Construct validity (i.e. certifiable explanations for concepts and conceptual relations relevant to the practice.)
- The nature of evidence of success of the practice
- Scientific recognition and interdisciplinary integration

firstly, the demands' relevance to possible genuine requirements of scientific development needs to be examined. Provided that they prove to be relevant scientific needs of the discipline of music therapy, then the emphasis of *a priori* or universal law can be discussed as viable a solution to address the listed concerns. Because, as argued in the present thesis, such an emphasis ensures the possibility that similar demands can be sufficiently answered in scientifically mature disciplines, its applicability to the context and the content of music therapy cannot be dismissed without a thorough investigation on the subject.

Consequently the present work, although within the structural limitations of a master's thesis, aims to stimulate an in depth academic discussion regarding universality, firstly by providing an overview as to how its emphasis is simultaneously able to respond to the respective needs of the "objectivist" and "interpretivist" paradigms within the music therapy literature without compromising the essential aspects of their respective matters of concern, which suggests the possibility of a non fragmentary understanding within the scientific discipline. In the process, the limitations of both paradigms will be discussed in respect to their propounded aims as they are identified by the present author.

Later, in order to argue that the emphasis on universality is able to complement the identified aims of both paradigms, alongside the acknowledged and unacknowledged demands of the discipline, the nature of universal law as well as the means as to how its emphasis have contributed to the scientific and social development of humanity will be investigated in detail.

In addition, because the notion of universality currently has poor to no representation within the science of music therapy (and within other relevant disciplines concerned with mental health, such as psychology), present thesis includes a brief discussion of the possible misconceptions regarding the notion, its alleged presence in false equations (such as "scientific laws predict

outcomes") as well as in false dichotomies (such as "universal laws are unable to account for culturally situated phenomena").

The research question of the present thesis can thus be formulated as follows; *Is theoretical emphasis on a priori laws able to benefit the scientific development of music therapy, in the same manner that it benefits historically established scientific disciplines?*. In the process of its inquiry, various epistemological and meta-theoretical positions which are currently prevalent in music therapy and mental health literature are examined, which suggests that the research falls under the category of *"theoretical criticism as theoretical research"* as listed in the SAGE research methods (Thyer, 2010, pp. 19−21). Although the common form of theoretical criticism may aim some kind of a refutation, present thesis instead attempts to identify that which could be an essential scientific requirement within the manifold approaches under investigation, in order to investigate the possibility of addressing these requirements in ways that are beyond the options afforded by the present limitations, which may arguably be the intended meaning of criticism.

It should also be given as a disclaimer that, throughout the thesis the intended meaning of "music therapy" is in fact "music therapy in mental health care". Music therapy as a practice has a wide area of application outside contexts of mental health, including but not limited to e.g. physiological therapy, stroke rehabilitation and regulatory uses regarding various systems within the body. Although there may be shared implications, the author due to his lack of familiarity and understanding on the physiological and medical applications of music or music therapy, does not make any claims in regards to music therapy in contexts other than mental health.

2. A REVIEW OF MUSIC THERAPY LITERATURE IN RELATION TO THE POSSIBLE REQUIREMENTS OF THE SYSTEM OF SCIENCE

The diversity of theoretical stances within music therapy is a natural consequence of the theorizing authors' varying recognitions for what qualifies to be necessary requirements of scientific explanation, and consequently their varying understandings about necessary requirements for a discipline in order to be regarded as a scientific field. Although no great consensus exists on the nature of scientific explanation among philosophers of science and philosophical scientists (Salmon, 1998), throughout human history various explanations on the nature of the world stand out as distinctly comprehensive and scientifically satisfactory, such as Archimedes' theorem of buoyancy, Maxwell's laws of electromagnetism, Darwin's theory of evolution etc., regardless of their appeal to a consensus[1]. We can thus examine the currently prevalent paradigms in the field of music therapy, in respect to their congruence with the requirements which are taken into account by such satisfactory theories in the history of scientific development.

2.1. Inter-subjective certifiability in the structure of results

One of the qualities shared by such comprehensive scientific work is that they are empirically verifiable and/or demonstrable on a consistent basis. Theories such as *"Neurological Music Therapy"* (Thaut 2000, 2008) and *"Biomedical Music Therapy"* (Taylor, 1997), which share views with implicit epistemological positions of researchers such as Dileo, Bradt (2009), Erkkilä (2013), Harris (2000), Kalas (2012), Kim, Wigram and Gold (2008) as well as other supporters of evidence based research, recognize this quality of empirical verifiability as a necessary element of any scientific endeavor, and hypothesis testing together with statistical measurement as the methods to secure it. This approach is one that is customary in positivist paradigms of psychological research; the implication is that, much like any successful body of science, the

[1] It is important to note right from the beginning that laws as such are not exclusive to natural sciences, and that such works of science from the domain of natural sciences appear to be analogous, in certain regards, with the rationales and formulations put forth in the domain of social development, from the likes of Socrates, Descartes and Rousseau. In addition, such rationales from both domains, as will be detailed throughout the thesis, are each in their own ways pioneers of wide scale development in the history of humankind

nature of evidence of success for music therapy can as well transcend the need for an agreement or consensus from individuals, as “the data speaks for itself”, so to speak.

As of the 19th century, the validity of both the diagnostic criteria and the treatments used in medicine, is assessed by experimental evidence which presents the degree in which they are able to ensure desired outcomes of observation. To rely primarily on this procedure for guidance and decision making in medical settings is referred to as “Evidence Based Practice” (Sackett et al., 2000). The means of application of this procedure to music therapy is referred to in the literature as “objectivist research” (Bruscia, 2014). This experimental rigor requires a certain epistemological stance akin to one used in medical contexts, that is, the epistemic primacy of sensory information (Bonell et al., 2018). This stance requires that theoretical terms equate with empirical terms, which is to say, the objects to be researched (such as the notion of depression, or the music therapy process itself) are either regarded as, or are converted into sense objects by the operationalization of their conceptual knowledge into empirical measurement criteria. These operationalized sense objects then can assume the role of independent or dependent variables within the research as empirical categories, in order to establish relevant probabilistic cause and effect relationships. In this way, the research is made similar to the method of establishment of cause and effect relationships between biological processes, which are the subject of biomedical research.

Within the natural sciences, i.e. the origins of this method of research, phenomena and processes are readily recognized as empirical categories (e.g. a neuron or a hole in the heart), and thus do not require any further operationalization. In other fields where the content of investigation exceeds the strictly biological domain, for example when human interaction is the subject of inquiry, there is generally more than meets the eye when cause and effect relationships are concerned. Consequently the construct (and therefore overall) validity of this type of research in such fields (e.g. music therapy or psychology) depend on theoretical foundations which could account for the rationales behind operationalizations of their concepts into causally linkable empirical categories.

However, these empirical categories of mental health can (and more often than not, do) exist independently of a conceptual rationale (Amir, LaGlasse & Crowe, 2015), and they also can be

conveniently researched as such within the disciplines of music therapy, psychology and psychiatry, much like medical research on human heart being possible without conceptual knowledge of a heart, or a certain heart medicine. This approach is sensible both in contexts of research and treatment in many areas of health where clear biological markers exist for the content of the investigated disease or dysfunction. For example, the existence or absence of e.g. a heart dysfunction, or a brain tumor, can be detected empirically, and treatments can be developed experimentally based on their efficiency in ensuring that the biology of the patient appears absent of the disease, all without any need for an etiological account; The biological disease sufficiently accounts for its symptoms, and the empirical absence of the disease sufficiently accounts for their treatment. This is because, in the abovementioned biomedical sense of disease, symptoms are understood as outcomes of an empirically detectable underlying malfunctioning, such as a brain tumor[2]. This however is not the case for psychopathology (i.e. the primary research category of current empirical mental health research) where disorders are defined entirely by their physiological and behavioral symptoms. In other words, in psychopathology symptoms are not *caused by* the disorder but instead *constitute* the disorder (van den Hout, 2014).

Although many professionals are persistent in their hopes, the long-running research thus far has not identified causes which lie in biology i.e. reliable biological markers which enable us to differentiate disordered and healthy individuals (van den Hout, 2014; Pickard, 2009). Thus the categories of psychopathology employed by the objectivist research in music therapy, psychology or psychiatry, have no other content than the symptoms which define them. Which means, in contrast with the account where the brain tumour is the reason for its relevant symptoms, the notion of mental disorders as the reasons for their symptoms is a pseudo-explanation i.e. a tautology (van den Hout, 2014). This renders the medical research methodology, as the investigation of possible treatments for the "main cause" in order to remove its symptoms, incompatible with the domain of psychopathology; as the causal relationship between the biological illness and its symptoms do not exist in the domain of psychopathology, where a disorder equals to its listed symptoms.

[2] Hence, contrary to mental disorders, a brain tumour can exist and can be empirically detected in a brain scan, even though the patient does not show any symptoms (e.g. headaches or vision problems) whereas it is impossible to suggest that a patient has a mental disorder if the patient does not show any symptoms of it. Furthermore, ensuring that the patient does not suffer from symptoms does not necessarily mean that the patient is cured of the tumor, whereas to suggest that someone has PTSD even when they are absent of its symptoms does not make sense.

Furthermore, as stated by Hout, if a disorder does not explain, but merely summarizes the presence of symptoms, this means that the disorder itself is in need of explanation. This does not mean distinct psychopathologies do not exist, but the evidence of co-morbidity (Caspi et al. 2014) is against the idea of them having distinct biological reference points as do abovementioned strictly biological diseases. And even if, in the evidence of lack of reliability for categories to account for distinct pathogenic profiles, the focus of the objectivist research shifts from treating disorders to treating directly the symptoms themselves, without an etiological basis, one cannot ensure the appropriateness of a method devised to treat a symptom the cause of which remains a mystery. In other words, without proper identification of the governing dynamics of a symptom, it becomes impossible to ensure whether or not stomach medicine is offered to treat the nausea that is caused by a brain tumour, so to speak.

2.1.1. Can the DSM ensure the objectivity of mental health research?

All of these points indicate the necessity of a sound etiological background for objectivist research in music therapy as well as for mental health in general. However, providing results of efficiency for methods without explicating the necessary theoretical framework seems to be the case for the vast majority of the music therapy research within this paradigm (Amir, LaGlasse & Crowe, 2015; Burns, 2012). This is also the case for the totality of the body of research whose construct validity is trusted with the classifications of the "Diagnostic and Statistical Manual of Mental Disorders" (DSM). It is known that the DSM avoids declaring any kind of conceptual basis or theoretical framework to its diagnostic categories (although defining disorders as "*psychobiological dysfunctions"* (APA, 2013) clearly reveals a theoretical stance, which, as mentioned, thus far suffers from the lack of evidence for reliable biological markers for different disorders). Therefore, *if* it can be argued that operationalizations of empirical research are constructs whose validity should be explicitly justified, *then* it can be said that such trend of "objectivist" research takes responsibility for only one half of the aimed sense of objectivity, namely the utilization of the positivist experimental methodology and the statistical analysis, and resigns the other half to another authority, namely the DSM.

Unfortunately, descriptive (symptom-based) classifications of mental health in the International Classification of Diseases (ICD) and the Diagnostic and Statistical Manual (DSM), although in

their origination were not designed to replace altogether etiological (i.e. theoretical) explanations, have become victims of their own success (Fulford & Sartorius, 2009); Due to the extreme convenience they provide to professionals, they have overstepped their purpose and accelerated into becoming the golden standard of mental health research, as a presumedly superior alternative to an etiological foundation for ensuring the validity of mental health research. This however, as Fulford and Sartorius reveal, is not a position which professionals and scholars, after necessary and elaborate discussions, had decided that they are suitable to take. Because of various reasons, such as ones mentioned thus far, they are by no means eligible to solely serve as the golden standard for objectivity in psychopathology research, within or outside the field of music therapy.

This is not only due to their firm basis in pseudo-explanation of disorders, as detailed above, but also because "the remaining half" of objectivity, namely positivist research methodology, as pointed out by Yardımlı (2013), does not strive to produce truly objective relations. Instead the aimed structure of results is local and probabilistic, and therefore the implications of research, in most cases, depend on researchers' subjective interpretations as to what rejecting a certain null hypothesis indicates. Furthermore, because the content of social sciences are unable to comply to the positivist methodology as seamlessly as laboratory experiments of natural sciences, whether or not "the objective efficacy" of a therapy technique itself can be derived from the experimental investigation of a local account of a multifaceted social interaction, depends on researchers and institutions' subjective thresholds regarding how well the variables outside the independent variable should be controlled.

Cohen (2009), recognizing objectivist music therapy research's correlational outcomes' inability to produce compelling results, states that if the underlying factors continue to remain a mystery, any evidence of impacts will fail to contribute to the field gaining the status which advocates desire it to have;

> "*Without established and* proven *theory to explain the positive effects of music and art on health ..., even observed changes would be questioned, trivialized, or viewed as not being real. To see even robust results as being real, science and society would need to understand the underlying dynamics or mechanisms that explained the findings"* (p. 48-49, underline is mine)

It is known that objectivist research within music therapy, along with the rest of the positivist paradigm, does not consider objective proof as a valid notion, and instead produces reports of statistics for correlations and/or sequencings of phenomena (i.e. appearances), meaning the statistical likeliness of one appearance preceding another. Yet, as Cohen argues, in order to be truly satisfied with the outcomes, both the scientific community and the society need to be introduced to the reasons as to *why* and *how* such correlations occur, i.e. their underlying principles. Because only then such demonstrations of probability can be viewed not as local occurrences of chance, but as natural consequences of proven i.e. necessary properties of music and music therapy. Consequently, the likeliness of occurrence of results that are similar to a given local probabilistic outcome could be expected with confidence in environments other than the particular setting from which such probabilistic outcome originates. In other words, we can know, for example, that the result of a research regarding a statistically significant relationship between a music therapy intervention and treatment of a disorder is not necessarily specific to the research setting.

The need for proven relational qualities is especially crucial when the subject is therapeutic application of music, firstly because of the ubiquitous sensory presence of musical influence. It is common knowledge from daily life that the effects of the "object of music", on the human psyche, besides healing, can be disturbing as well as neutral. Furthermore, it is demonstrated that it can even be adverse enough to be used consistently in various ways within settings of torture and warfare (Pieslak 2009, as cited in Andsell, 2015). In the original domain of this methodology, which objectivist research adopts in order to demonstrate the effect of music therapy interventions, if a certain dosage of a medical drug is experimentally demonstrated to both predict effectively adverse as well as curative effects, it would be more than unlikely to see it on the pharmaceutical counters. For this reason, as long as its effectiveness is presented in the same manner a medical treatment is presented, the principles of therapeutic application of music in music therapy needs to be made distinct, otherwise positive outcomes in themselves cannot be convincing for the public or other scientific disciplines.

2.1.2. The common factors on which independent variables depend

Indeed, the independent variable, or the “drug” of the evidence based music therapy is not music itself, but the music therapy technique under investigation (although the healing effects of music in daily life cannot be strictly exclusive from its role in music therapy (Ruud, 1982/2006; Aigen, 2013; Ansdell 2015). In this case another problem appears; if the individual who administers the drug was a factor in the drug's effectiveness, it would certainly raise issues in its objective efficacy. Meta-analysis on psychotherapy research (Wampold & Imel, 2015) shows that its success depends greatly on a therapist's interpersonal skills, empathy, and their ability to form alliances with their clients, which are otherwise known as the *common factors***.** Contrary to the research in medicine or other empirical sciences, the independent and dependent variables of therapy research are invariably embedded in the interpersonal human interaction and its manifold aspects. This makes it notoriously difficult to establish exclusive cause and effect relationships between two empirical phenomena (e.g. the technique and the outcome) which the experimenter identifies in the therapeutic setting, as it is shown that the outcomes are inseparable from the common factors that are “behind the scenes”. Although a meta-analysis of sorts is not present for music therapy, Rolvsjord’s discussion on the matter (2010) suggests that the results would most likely be similar.

Under this light, when evidence within the medical paradigm demands that the independent variable is isolated from common factors, it is unlikely for such design to account comprehensively the success achieved by music therapy in its entirety. If common factors are included in the design, then the main aim of the positivist methodology, which is demonstrating the evidence of success of a particular treatment method or technique as the “solely responsible independent variable” is made inapplicable. Issues, such as ones mentioned thus far, along with ones of similar nature, regarding the application of the biomedical model to music therapy and mental health in general, has driven several scholars to study health, music and musical therapy in alternative ways.

2.2. Comprehensive conceptual rationales

Many of these scholars claim that, neither music nor music therapy could be effective in bringing about health by its own “independent" activity, without the clients having the necessary intrinsic

capability to participate in it, and heal through this act of participation. Because of this, neither the medium nor the recipient, nor the notion of health can be studied as mutually exclusive objects (as studied in empirical research) existing independently of each other, or things capable of causing certain effects in each other solely on their own accord. Because of this, evidence based models whose methodologies demand that the dynamics of healing are explained through mechanistic cause and effect relations, of independently existent parts whose relations are extraneous to them (e.g. when a particular technique of therapy is defined as a curative factor by itself, regardless of the participatory activity of the recipient), are not believed to be studying the phenomenon at hand by a large group of music therapy scholars.

Authors who are convinced that music therapy cannot be rightfully explained via cause and effect relationships of categories with certain fixed sensory properties as their sole constitutive parts, seek to provide a relationally defined understanding through investigating concepts which they believe to be key in the success of music therapy and human healing in general. In these kinds of approaches, music therapy is not studied as a "medication" (as in, an independent variable) that is the efficient cause of the treatment of its passive recipient, but a medium through which clients as well as therapists are enabled and encouraged to exercise their social healing capabilities. Certain key concepts are put forward to specify the nature of relation that accounts for this social healing such as communication (Aigen 2005), collaboration and exploration of strengths (Rolvsjord, 2010), relational processes (Garred, 2006), cultural participation (Stige 2002; Ruud 2010), or equality (McFerran & O'Grady, 2006). Most scholars within this paradigm (also known as "the interpretive research"), suggest that the elements which render music valuable within contexts of therapy are the same elements that render it valuable outside of therapy[3]. Therefore, rather than examining music or music therapy as "autonomous objects" (Gibson J.J., as cited in Aigen, 2013) which act as "causes" for desired health related 'effects', they investigate the type of experiences musicking (Small, 1998) is able to afford, as well as how they relate to the notion of health in human beings.

In response to the above mentioned issues with the biomedical model, Aigen (1991), Kenny (2006), Rolvsjord (2010), Stige (2002) and others go as far as to argue for the necessity of a

[3] And thus, it can be argued that they implicitly suggest the health promoting properties to belong, not exclusively to specific instances of music, but to the universal concept of music as its conceptual necessities.

"new conception of science… that could accommodate the nature of the human engagement with music" (Aigen, 2013, p. 234). However the system of science (admittedly, not the positivist paradigm of science) is not only well able to accommodate these sensible desires, but in fact endorses them as integral aspects of comprehensive theories; as another one of the qualities shared by satisfactory scientific work, besides empirical verifiability, is that they either provide, or aim to provide c*onclusive conceptual rationales* to account for the empirically verifiable phenomena occurring as such**.** Such rationales are provided in the form of *essential* relations between their concepts of interest; such as the relationship between time, space, matter and motion provided by Maxwell, survival of species in an environment, and their ability to pass on genes by Darwin, or the gravitational force, and mass by Kepler. None of these identified relations are in the form of "x and y co-vary" or, "x is likely to predict y", the customary form of relationality of the positivistic paradigm[4], but are rather statements concerning a relational totality whose elements are defined by their essential relation with each other[5].

In order to assist music therapy's scientific establishment, it appears that the second group of theorists consider it significant to take the responsibility of providing the necessary conceptual relations, akin to those inherent in time-tested theories of science. It could be suggested, then, the scholars seem to seek ways for their field to be congruent with the requirements of scientific investigation, by demanding that their science is concerned with the inherent relationality and therefore the actuality of its objects. Aigen, for this reason, (2013) argues that his music-centered approach (Aigen, 2005) can be considered as following an even more scientific strategy than the medical model, as it allows *"the phenomena of interest to dictate the conceptualizations and explanations developed to account for what is observed"* rather than its theories and foundation being dictated by *"a prior epistemological, social or financial concern"* (p. 239).

While relational statements of such nature are absolutely essential, they are not entirely sufficient in themselves to provide the necessary grounds for scientific development. Although within this speculative paradigm provided conceptual relations on the nature of music and music therapy are

[4] The nature of the relational statements of such scientific work differ from the probabilistic relations of the positivistic paradigm which are open to interpretation on several grounds; such as the causal directionality of variables, or their mutual dependence on an alternative, unobserved variable (van den Hout, Engelhard & McNally, 2016)

[5] The implications of this holistic relationality, as well as the implications of its absence in a scientific theory, will be detailed in section 4.3

able to make intuitive sense and provide psychological satisfaction in varying degrees to various individuals, the authors who pursue this approach in their theories are generally unwilling to produce relational statements which go beyond being alternative "views" for another, due to their own "a prior epistemological and meta-theoretical concerns".

While such concerns against providing theoretical outputs *beyond* views, are aimed to support the much essential intellectual plurality that is fundamental for fruitful interaction between ideas, defining "views" as the only possible form of theory, simultaneously suggest such an "intellectual plurality" as an end in itself. However, as Özbek and Kotaman (in press) suggest, the true significance of intellectual plurality lies not in merely providing a diverse, plural environment, but in allowing the opportunity for diverse views to nurture one another in order to collaboratively investigate and ascertain that which is true for all. Yet, because of a legitimate concern with keeping the intellectually plural environment safe from a "dominating paradigm" (Ruud, 1973;1980, as cited in Stige 2006), within the literature it is difficult to even locate a mention of a proposed idea being true, without the obligatory irony punctuation (e.g. something being "true").

This epistemic concern that is shared by some of the scholars within the interpretive paradigm therefore indicates that an a priori universal relationality, in reality, is either an invalid concept, or that our theoretical accounts are not able to reveal it. Because of this assumption, the authors within this paradigm tend to aim their theoretical efforts towards providing practitioners and students useful models to think about the practice (Bruscia, 2005, Aigen 2013, Stige, Malterud & Midtgarden, 2009), rather than towards ascertaining inherent universal properties of the world regarding human health, music and therapy. Consequently, within this paradigm, the idea of a universally valid theory seems to be dreaded, and rightfully so; as, in absence of a possibility of a theoretical input being anything other than a view, perspective or opinion, claiming universality for such theoretical input implies a mere opinion subjugating others.

2.2.1. Can different views survive within an integrative universal theory?

To provide an example from the existing literature, emphasis of Stige (2002) and Ruud (2010) on the importance of cultural participation for human health, appears to be a somewhat clashing view with some of the feminist music therapy theorists' (e.g. Adrienne 2006, as cited in Aigen

2013, p. 243) criticism of utilizing products of the current patriarchal culture, such as the tonal system and the instruments used in classical music. In the former, culture is defined as a resource for action that is integral to all human activity and cultural participation is proposed as a key element for individual and collective health; in the latter, the products of the current culture are viewed to be inseparable from oppressive gendered forms and it is suggested that participating in them would perpetuate the oppression which they help constructing. As such, the notion of culture is described from different angles, and due to readily available examples to support the validity of both perspectives, neither view regarding its relation to human health could be claimed to be false (likewise, for the same reason, they also cannot be claimed as true, without the obligatory quotation marks). For this reason, and understandably so, it is unacceptable for one perspective to replace the other by claims of being universally true, or a third view to replace either; as it is not desirable for the literature to lose contact with the meaning and significance both views evidently contain.

However, integrating a range of views in a comprehensive theory does not necessarily have to *"reduce the number of ways in which humans can understand themselves"* (Ruud, 1973;1980, as cited in Stige 2006, p. 168). Such reduction of an imperial fashion would only be the case if the allegedly integrative theory was also in the form of a view (as a perspective naturally cannot contain other perspectives inside, and hence it replaces them). Yet, views or descriptions are not the only kind of theoretical output available to science, and certainly not the only form of knowledge available to human beings; and because of this, as evident from ascertained universal principles, replacing diverse interpretations of various theoretical perspectives is not necessarily an antithesis to containing them.

Continuing the previous example on the notion of culture, opinions regarding conducive conditions to human health, such as "cultural participation" or "cultural disinvolvement", may have behind them implicit or explicit rationales, as to why they are conducive to health. These rationales can be both inductive[6] as well as deductive[7], and may vary in the degree as to how

[6] "*Our tonal and timbral system of music helped construct the values required to build an industrialized, corporate, patriarchal society"* (Adrienne 2006, as cited in Aigen 2013, p. 243), which means their utilization is expected continue to enforce it, therefore they are counter-therapeutic.

[7] *"Humans have a biological disposition for interest in social interaction and shared meaning-making"* (Bunt & Stige, 2014, p. 47) therefore cultural learning and participation is integral for human health and therapy.

conclusively they support the argument as to why a condition could be conducive to health. However, even when highlighted conditions have opposing qualities as such, there is no reason for a more comprehensive rationale for one condition to necessarily exclude the conditions promoted by another view.

To oversimplify with an example from the history of scientific development[8]; prior to the discovery of the buoyancy principle of Archimedes, human beings who desired to float objects on water, could have argued for the conduciveness of both the heaviness and lightness of objects in favor of floatability. Because both perspectives could be supported with inductive evidence, neither approach could be argued to be false (and could only be "true" within quotation marks). The unironic truth of the buoyancy principle, however, provided that in practice both heaviness and lightness could be conducive to floatability, as they both can optimize the object's density and water displacement in favor of the buoyant force; which are the actual variables constituting the rationale which integrates the reasons of both opinions. As such, different, or even opposing opinions regarding conduciveness of a condition are not subjugated by another opinion regarding conduciveness of a different condition, but are replaced while being preserved[9] in a proven rationale regarding the actual relationality of buoyancy.

Thus, the relationality is no longer in a perspectival form of "X may influence Y", which would suggest a favorable condition, or approach for desirable change. Rather it is in the universal form of how X and Y are essentially related , showing how they cannot be defined absent of their relation with one another as isolated phenomena "X" and "Y" (the question "does submersion in a fluid enable buoyant force or does the buoyant force enable submersion" is therefore as valid as the famous chicken and egg dilemma). Because of this, in our efforts to float an object, we have acquired an unprecedented versatility in terms of being able to adapt our course of action to adjust the actual factors in any given situation, rather than trying to fit the situation in our opinionated course of action that is based on the primacy of conditions we believe to be

[8] Throughout the thesis examples as such will be provided. It would be useful to not regard them as attempts of justifying an epistemy for music therapy simply due to its evident validity in e.g. physics. Rather, the examples are aimed towards highlighting different forms of reasonings regarding causal relationships in the world, whether or not the particular aspect of the world pertains to the domain of natural or social sciences. In other words, they are not field specific, but refer to our essential mental faculties which we employ to comprehend causal relations within any context.

[9] In other terms; sublated (german: Aufhebung).

conducive. For this reason, Özbek and Kotaman (2015) emphasize the relation between the discovery of a universal necessity and freedom from dependency on a condition, a notion which they argue to be essentially related to human health.

We can thus see more clearly what Ruud (2006) may have had in mind when he cautioned music therapists against claiming universality of their explanations, and suggested that they instead *"try to specify under what conditions this or that approach is useful, and where they are not."* (p. 174). It is evident from the above given example that no *approach as such* regarding health promotion (e.g. cultural participation or disinvolvement) is without limits of applicability, i.e. there will always be contexts in which an approach, condition or a course of action will not be appropriate or contributory. Accordingly, when proposing "favorableness of approaches as such" is the only possible theoretical contribution, claiming their universality is naturally detrimental to the field as well as the practice. However, science also can and does provide us with integrative essential relations (of domains including but not limited to natural sciences) as mentioned above. These rationales themselves suggest no specific approach that may otherwise be inapplicable in certain conditions. They are by all means neutral universal necessities by which we can determine and adjust our approach in accordance with the needs of our situation, as opposed to being concerned only with situations in which a suggested approach applies.

Therefore, ascertaining a universal relation which integrates various seemingly incompatible views ,rather than imperially reducing the amount of ways to think about e.g. buoyancy, culture, health or electromagnetism, instead substantiates and increases them. Besides contributing a concrete relationality which can be found relevant to multiple approaches, it also provides a novel ground as to how such phenomena may fundamentally relate with ones which are yet unexplored. Nevertheless, it might as well be that the integrative rationale does not "capture" the total range of meaning implicit in the theories which it integrates. Yet, such integration will not eradicate the autonomous existence of a perspective from the history or the literature of the field. As Bruscia (2002, as cited in Bunt & Stige, 2014) articulates, *"when a new idea is introduced, the entire culture [of ideas] is fertilized… developmental process is more holistic than linear, so that there is a place for every idea of continuing relevance"* (p. xvi).

2.2.2. Does objective necessity imply oppression of subjective freedom?: Universality and social action

Perhaps a more pressing matter regarding the disbelief of availability, accessibility or desirability of universal principles, that it brings disadvantages to one of the common aims pursued by most of the authors within the paradigm; widespread social action, such as the cultural and political movement *against* the "illness ideology" (Rolvsjord, 2010), or likewise *for* music and musicking being available to all (Ruud, 1996, as cited in Rolvsjord, 2010, p. 35). The compellingness of the aimed social change is negatively impacted on a multitude of levels including intradisciplinary, interdisciplinary as well as the level of the general public.

On the first look, the literature that is outside of the objectivist paradigm appears to be an environment of a plurality of conceptual understandings in peaceful coexistence. Most scholars seem to agree that, because there cannot be a universally true rationale for music's relation with human health, all views can be equally valid perspectives in their relevant contexts. However, the idea of all views being equally valid does not translate well to the domain of action. When it comes to adopting the views on these theories and putting them to work in favor of human health, inside and outside the practice (which is, generally speaking, an incentive of a health theory), our course of action will be likely to not reflect the idea that "all views are equally valid". For example, both of the above mentioned stances on culture promote different kinds of social initiatives with seemingly no reason to contribute to the efforts of each other. Consequently, regarding social change, efforts of others who do not share similar views are bound to, at best, remain unsupported, if not hindered. Thus widespread social change which most of these authors aim at, is challenged first of all from an intra-disciplinary level.

Ruud (1973; 1980, as cited in Stige 2006) underlines the importance of plurality of views as they provide different ways to think about human health. However, being defined as mere ways of thinking about ourselves inherently sacrifices the compellingness of the theories and therefore the relevant social action; as such a framework inherently suggests the conceptual relation which is highlighted to be not a necessity that is inherent in the world; that it might just be so otherwise. For example, to the extent that the disempowering dynamics of the illness ideology, or the unnecessary restrictions the elitist music culture impose on humanity are mere opinions or

perspectives by Rolvsjord and Ruud respectively, there isn't a compelling reason for individuals or institutions to contribute to such cases, if they, for whatever ideological or financial concern, happen to disagree with these opinions. When true and all encompassing necessity is an invalid concept, mere disagreements may suffice for insisting on actions supporting the status quo. Consequently, absent the possibility for compelling action on the basis of a universal and unignorable *common and therefore unifying* necessity, political movements, whether they are *for* or *against* a given social action, may only have dogma or authority as a basis for their materialization (Yardımlı, 2014).

Conversely, for example, if a discovery is made on the *inherent* properties of oxygen, the adjustments in the natural sciences and medicine and health industries would necessarily and seamlessly follow. However, although they could prove to be useful, there is no compelling reason for another health discipline, such as psychology or medicine to endorse mere "ways of thinking about ourselves" provided by theories of music therapy.

Finally, scientific outputs in the form of "universal necessities" and "ways of thinking about ourselves" provide different levels of compellingness regarding wide scale (e.g. nationwide or global) enforcements. It is known that scientific discoveries regarding the natural world constitute a compelling ground for relevant legislations and enforcements, whereas, for example, if fault lines were certain geologists' "ways of thinking" about the Earth, it would be difficult to imagine that this would be a sufficient ground for legislation regarding construction of buildings on or close to active faults.

However, as discussed above, the concerns regarding the idea of universality of theory acting as an oppressive force to the intellectual plurality, individual and cultural diversity as well as personal freedom, make it difficult for the paradigm to provide grounds of such compellingness regarding wide scale action. However, more often than not protection of individual rights as well as the rights of diverse demographics is directly linked with universally ascertained principles. On such grounds, it appears, a general will (as first put forth by Rousseau) emerges; and nations are able to make efforts for that which is good for the totality of their citizens, e.g. via nationwide mandatory education, with no concern of imperially oppressing the "freedom" of

families who prefer their daughters to not be educated[10]. Likewise, because of the certitude of laws of geometry, mathematics and their relevant applications in physics, governments do not actually tyrannize the individual will of citizens to decide what is good for them, when they ban construction of buildings which would put all people's safety at risk. The examples can continue indefinitely.

As such, investigations of necessity regarding universal concepts, such as the concept of "human being", are efforts towards ascertaining properties which are applicable to the totality of those encompassed by the notion. Therefore thinking about that which is universal provides us with a ground to claim e.g. "all humans" benefit from education, as opposed to probabilistic account of "some families" (such as the higher casts in the Indian caste system); or that nations benefit from the votes of "all humans", instead of "some genders". The examples of injustice due to disregarding the unitary universal properties of diverse groups can also continue indefinitely[11].

The important point to consider is that the ideas who can be proved to be inherent properties of the world internally stimulate collective motivation, while mere opinions without such basis, e.g. regarding voting or education eligibility of a privileged demographic, can only have brute force of will and cultural momentum as a basis to maintain legitimacy. Therefore, presupposition of unavailability of such an integrative order is simultaneously an unwillingness to strive for a compelling and inclusive ground of wide scale social action, scientific research and education. Universal necessities, as evident from human history, far from being imperial hindrances to individual or collective freedom in the form of imposed "external necessities", actually provides the much needed assurance that constitutes the basis to perform and sustain collective scientific and social actions, in the form of "internal necessities"[12]. As articulated by Özbek and Kotaman (2015) universal necessity is an obstacle to freedom insofar as the notion of freedom is

[10] Conversely, if there was no true necessity regarding education and human being's collective value production (as asserted first by Descartes in his *"Discourse on the Method"*), legislation for mandatory education could not be more than oppressive impositions of subjective will to said families..

[11] However, as Yardımlı (2007) articulates, if one is as committed e.g. as Michel Foucault to the idea that concepts are linguistic constructs void of actual necessities, one can and should regard universal necessity as an oppressive 'social construct', and consequently (as well as contradictorily) cultural relativism as the sole reliable reality. Hence, when the value of education is not a universal property pertaining to the essence of human beings, there appears no sufficient reason for one to not support the "freedom" of e.g. radical religious groups to exercise their violent pro-slavery and anti-gender equality inclinations, as Foucault congruously did with the Iranian mullah regime.

[12] The discovery of the essential relation between necessity and freedom belongs to Hegel, as a core idea of his works. See Özbek and Kotaman (2015) for further discussions on the subject.

understood as individual choice, such as the individual or cultural choice of withholding education from female children. Conversely, universal necessities which ensure the reliable ground for collective action are relations which are not determined by choice, such as the relation between fault lines and seismic waves, or a nation's prosperity with the level of education.

The unavailability, inaccessibility, or inexpressibility of universal necessities regarding music, however is a different discussion. Juslin (2019) for example, provides that 2000 years of philosophizing has not uncovered a substantial theory regarding universal necessities of music and emotion. We can also add musicology, music therapy, and music psychology to the list (although within these fields such an aim is clearly not the most popular in neither the anthropocentric nor the positivist investigations). However, as discussed thus far, when it comes to universal principles regarding human health's relation with music, there is no good enough reason to suggest that music therapy theorists should not aspire for them. As Özbek and Kotaman (2015) points out, the denial of a common universal essence for all humanity and therefore a common necessity, leads to the denial of the applicability of the question "what kind of knowledge can serve the needs of the totality of human beings"; when the question is invalidated, no effort will be made in pursue the universal ground which can be the answer (p. 153).

Consequently, although theories which are in the form of views are all concerned with the same reality that is health's relation with music, and although the actuality of human health's relation with music does not suddenly become otherwise when viewed by different authors, lack of striving towards such inherent necessities will bind theories to sustain the fragmental implications of human health. This, as discussed above, sustains limitations on inclusive and compelling social action on a number of levels. However, influences of postmodernism and relativism on the meta-theoretical stances provides the field with the end goal of view-theories, and the parallel end goal of maintaining an environment of a peaceful fragmental coexistence that is free from the "burden" of aligning humanities capabilities in order to strive for an integrative action based on universally applicable necessities.

Accordingly, although they are indeed referred to as theories of music therapy, more often than not these theories are comprised of views which could potentially co-develop, in order to

provide, besides perspectives which could be helpful to music therapy practitioners and students, a scientific understanding on the subject which could be helpful to the public, as well as other scientific fields which share common notions with music therapy. Yet, the vast majority of music therapy theorists who do not adhere to the objectivist paradigm, continue to advocate a meta-theoretical stance which suggests views and opinions to be considered as sufficient end-theories (Bruscia, 2014, Aigen 2013, Stige et al, 2009).

2.3. Are theories views? Are views theories?

The reduction of "humanity's capacity to reason" into "humanity's capacity of linguistic construction", adopted by constructivist, deconstructivist and postmodernist figures in the history of philosophy, echoes in the modern day tendency of replacing conceptual necessities with etymological formulations (Yardımlı, 2007). Although such reduction indicates an undermining of the notion of objectivity in science and renders it vulnerable to all kinds of unscientific agendas, such influence is strongly present in the current state of social sciences. Accordingly, the etymological root of the word theory (from Late Latin, theōria; "contemplation, speculation, a looking at, things looked at", from the same root as 'theatre') is often cited by theorists who endorse end-theories in the form of viewpoints.. This etymological background however, does not appear to be a sufficient reason to consider theories as views, or views as theories; just as the term "etymology" appears to be considered as the study of the origin of signifiers, despite the fact that its etymological root translates to 'the study of truth'(from its greek roots, 'eutmos'[true] and 'logia'[study]).

It is evident from the history of science, art, societal living etc. that human societies, throughout their development in any given area, have progressively been meeting their previously unrecognized needs, and their capabilities which pertain to these needs (Özbek & Kotaman, 2015). Terms, although their signifiers may retain their roots, evolve naturally to signify novel concepts discovered and developed in the spirit of times, in order to meet ever more refined needs and capabilities of human societies. "Impressionist art" for example, indicates a much more sophisticated need and capability than "the act of producing a mark via pressure" (From Latin, in- + premō ["to press"]). Likewise, "Scientific congruence" as a concept, which is signified by the scientific terms "theory" and "theorem", stands as both a need and a capability

of humanity which appeared on the stage of historical progress much later than the prior concepts signified by the signifiers “theōrein” (to consider, speculate, look at) ‘theōros’ (spectator) or ‘thea’ (a view).

In the same vein, the term “theorem”, although evolved from the same etymological root, is used in physics, mathematics and logic to signify relations within that are absolutely fundamental within a system. For example, the Pythagorean Theorem states that the square of the length of the hypotenuse in a right triangle is equal to the sum of the squares of the lengths of the other two sides. Although the term ‘theorem”, as used here, is derived from the same etymological root “view”, this is most certainly not a way Phytagoras as an individual viewed triangles; on the contrary, *because* no right or any other kind of euclidean triangle can ever exist neither as a mental image nor as a physical entity absent of this intrinsic relation, was he able to *ascertain* this essential relation of geometry. And this is the *precise* reason it is regarded as a “theorem”, as this notion of *ascertained fundamental necessity* is what the term signifies, although the root “thea” (view) is retained in the signifier.

However, a lack of incentive for proving the essentiality of the provided conceptual rationales, may have shaped the way the notion theory is being understood and represented by many authors within what is referred to as the interpretivist paradigm of music therapy, which currently forms the opposing front to the objectivist research (or *vice versa*, these authors’ presumptions for the impossibility of objectivity for the provided conceptual relations may have shaped the opinion-like nature of their theories). When compared to the unified body of the objectivist research’s output, this epistemological concern regarding the inability of affirming that which can be true for everyone, results in the formation of various small circles of authors depending on their degree of agreements and disagreements regarding each other’s views. In other words, the denial of the possibility of objectivity and therefore provability in theories, rather than creating a flourishing, integrated scientific environment, create island groups in isolation insofar as the individuals are willing to be informed and incentivized only by views they already agree with.

One common property of aforementioned conceptual relations within time-tested scientific theories is that they are not acknowledged as scientifically relevant as a result of an agreement within related scientific circles (on the contrary, they were most likely to be dismissed strongly

in their initial propositions). But In fact, their lack of need towards an agreement from subjects is what constitutes their distinctive quality. If a certain core notion or relationship within a scientific discipline requires consensus from subjects to be considered viable, this simply shows that the notion of concern is not yet mature enough, and naturally neither of the candidates for consensus qualify to represent it (hence the possible lack of consensus). The idea of changing the location of a fault line via a consensus among a group of geologists, for example, sounds absurd and quite dangerous (Özbek & Kotaman, in press) as what is widely agreed does not necessarily have to be true, just as what is true may not always grant agreement. Andsell (2015) points out that, although in the last fifty years authors from music therapy have produced an enormous variety of complex theories in search of illumination or legitimization, their work has been often less than useful to people who are not already in the field of music therapy. It can be argued that this lack of conclusiveness of the theories and the consequent agreement-dependency represents the field in an ambiguous position, which makes it less likely for professionals from other disciplines to take an interest in what is offered by the music therapy literature.

2.4. Music therapy within a unified system of science

Music therapy carries the responsibilities of interdisciplinarity; far from existing in a vacuum, it is interrelated with numerous other disciplines of social and health sciences. Thus, it should be admitted that it is impossible for music therapy theorists to achieve conclusiveness in their conceptual explanations, without simultaneously providing conclusive rationales regarding concepts which would be relevant simultaneously to other disciplines, such as the nature of mental health or disease, However, the lack of conclusiveness regarding its conceptual relations is not a shortcoming solely by the field of music therapy, as the reverse is also the case; the lack of conclusive conceptual frameworks on the actualities of mental health and disease within music therapy, points to the same lack within the fields of e.g. psychology or psychiatry.

Fundamentally, the fields which are studying the same reality have the responsibility to elucidate the same common concepts. For example, there cannot be a separation on the actualities of the nature of an electron between the fields of chemistry and physics, as the electron they are studying is fundamentally the same one, whether the study pertains to its behavior related to optics or to ionic bonds. A development on the subject within either one of the fields would

directly concern the other, because it would be a development on our understanding of the same reality. *This mutual concern with the same reality makes science a joint effort and a unified system*. Likewise the actuality of mental health does not suddenly become different when studied by different fields, and therefore ascertained conceptual relations in any of them would have to be common values.

The problem of music therapy literature being written largely for other music therapists (Ansdell, 2015) and likewise being read mostly also by music therapists, therefore is closely tied to this lack of conclusiveness; if comprehensive explanations regarding the actuality human health, well-being or mind, as well as their relationship with music were aimed provided, the literature would *naturally* be of concern for a wider scientific audience. Or if such conclusiveness is achieved within psychology or psychiatry, music therapy would have gladly adopted and integrated them. Conversely, when such conclusive interdisciplinary relations are not provided, the proposed theories cannot be conclusive even within the assumed boundaries of music therapy. This naturally weakens the relevance of music therapy to the rest of the scientific disciplines, and therefore hinders the fields interdisciplinary establishment

Nevertheless, influential authors within music therapy define the notion of theory in ways which explicitly oppose conclusiveness. Stige, Malterud and Midtgarden (2009) define theory as *"a set of beliefs and assumptions..."* (p. 10), or Aigen (2013), for example, state that most contemporary theories focus on providing a perspective or viewpoint on existing clinical practices. Likewise, Bruscia (2005), defines theory as "*a way of thinking about what we do or what we know*" (p. 540). Bruscia seemingly avoids to provide an evaluative criteria as to what kind of properties "a way of thinking" should have in order to qualify as a viable theory, as his meta-theoretical stance demands that *"there is no one truth about the nature of theory"* (p. 541). In other words, the one single truth about the term theory is curiously proposed as it being void of certifiable truth and necessity. This postmodern meta-theoretical stance is promoted in similar assertions such as *"the propositions or constructs are <u>always</u> constructed by the theorist based on how that theorist views what we do or what we know"* (p. 540, underline is mine). As such, the term "theory" appears to be defined by Bruscia, on inductive grounds, that is, as an umbrella term reflecting the cumulative qualities of theories which are currently available in the music

therapy literature. However, as will be argued promptly the term itself signifies certain properties and distinctions, regardless of the common nature of present theories of music therapy.

Words which have both a technical and an everyday meaning often cause confusion, and even scientists can at times use the word theory when they really mean hypothesis or even just an opinion or hunch (University of California, 2012). This overestimation of beliefs and assumptions by regarding them as theories, simultaneously cause scientific theories and robust discoveries (e.g the theory of evolution) to be underestimated with the put down "it's just a theory", that it is a mere opinion whose legitimacy cannot be essentially different from another opinion. This means the proposed theory is only a viewpoint of the author, and could not be found as existing inherently in the actual world, if the world had not been viewed so by the author. For example, the impossibility of transferring genes in case of member of a species not surviving in the environment, is something that exists solely in the viewpoint of Darwin, or the submerged portion of an object displacing an equal volume of fluid is only the perspective of Archimedes based on his own meta-theoretical stance.

This is misleading in the sense that it conflates two distinct meanings of the word theory: its common usage, and its scientific usage as coherent and provable relational statements, that explain observed facts or phenomena or which set out, or aim to set out the laws and principles of something known or observed (University of California, 2012). Their unique character consists of not only being mere views, but being efforts towards capturing the essence relations existing in the actual world. These relations, such as ones mentioned above, are not mere opinions or constructs of the human mind, and are by all means concrete realities such as the relation between notions "survival" and "reproduction".

Bruscia (2014a) recognizing that there is a difference in quality among their explanatory power regarding the world, suggests "coherence" as a constitutive dimension of theory, along which theories vary in their degree of reasonableness; which means theories have the luxury to be not so coherent, yet retain the status of theory. However, while opinions, guesses and hunches of experienced professionals can be valuable additions, it would be misleading to consider them as belonging in the same kind of category with the sole notion by which scientific legitimacy is represented within established scientific disciplines. "To provide a view or an opinion" does not

appear to be an inadequate description to delineate the purpose, accomplishment or the enabled affordances of currently established scientific theories. It could be another person's “view" that submerged objects displace the amount of fluid, not equal but twice the volume of the submerged object, but it most certainly could not suffice as a theory of physics, nor could it contribute to human life and development in the way that the theorem of buoyancy thus far has.

Which means a scientific understanding of theory requires its relational statements to be supported by more than an elaboration on the views of an author. Therefore, it seems as it wouldn’t be so farfetched to argue that for a discipline to shift from a meta-theory that regards views as sufficient grounds for its scientific representation, towards a “scientific meta-theory”, namely one which requires ts theories to obtain and provide scientific knowledge on the truth of the world, could simultaneously be its shift from proto-scientific stage to scientific stage, and consequently its scientific establishment.

2.5. Are the proposed problems accurate; is there really a hole in the heart?

Within music therapy, different scientific approaches appear to be acceding to distinct yet essential requirements expected of a legitimate scientific work. On one hand, the paradigm that is based on empirical evidence responds to the reasonable call for *inter-subjective certifiability***,** through standardization of the results of efficacy research via adhering to an uniform structure of methodology. On the other hand there is a large number of authors who find that such structure of methodology does not do justice to the practice, and seek to provide *comprehensive conceptual investigations* which may explain the actualities of the interactions within music therapy.

However, as pointed out by authors from both fronts, an empirically verifiable approach does not self-evidently reflect the nature of the practice, and conceptual explanations regarding the nature of practice are not necessarily objectively verifiable. Although desires raised by both groups, namely for “conceptual congruity” as well as “an inter-subjectively certifiable framework of efficacy”, are evidently *the most sensible demands for the scientific establishment of a discipline, they seem to be separated within the boundaries of “objectivist” and “interpretivist”* (Wheeler & Murphy, 2016) *paradigms of research.* And as unfortunate for the field of music therapy, these paradigms currently posited as irreconcilable.

Both of these requirements highlight indispensable qualities of established scientific theories, therefore it is clear that a successful theory which will account for the actualities of music therapy cannot emphasize one quality and ignore the other. Furthermore, to expect the up and coming music therapists and music therapy researchers to choose between the approaches of either the objectivist or the interpretivist paradigm, is simultaneously an imposition to give up on either one of the essential aspects of scientific congruence, and as such, is unacceptable.

Accordingly, the problem of the lack of a comprehensive theoretical foundation which is identified by authors as “the hole in the heart” of the field, under this light, stands as a crucial issue, not only of music therapy, but for the totality of the mental health sciences in their current status. This is because, the possible solutions of the stated problems of music therapy regarding its underlying principles, construct validity, the nature of evidence of success and scientific integration, depend essentially on the unraveling of the universal properties governing human mental health. Via the knowledge of these properties, the means as to how notions such as music or psychotherapy are ameliorative to mental health can be clarified. The identification of such properties therefore is the prominent need of multiple disciplines other than music therapy, such as psychology and psychiatry in their progress from proto-scientific stage to scientific stage (Bunge & Ardila, 2012).

We then can argue that the problems identified by the authors as genuine requirements of scientific development, because the underlined properties that are proposed as lacking in current theories of music therapy, can be found in the scientifically acknowledged theories and the essential quality of universality which they provide as their basis. Consequently, insofar as theories for mental healing proposed within music therapy, psychology or psychiatry do not reconcile the notion of objectivity with ascertainable essentiality regarding relevant conceptual rationales, it appears that the hole in the heart of the mental health fields, in their totality, may be retained.

Conversely, when theories, whose higher objective is to strive for elucidating such essential rationales, are instead promulgated as viewpoints within a certain scientific field (in this case, music therapy), the theories produced along these lines may fail to meet the genuine requirements of scientific development. Because propositions of this kind demand that the

requirements which a theory is expected to meet to be lowered from its scientific meaning, to a set of beliefs and assumptions or viewpoints of an individual (Aigen 2013; Bruscia 2005; Stige et al., 2009). This understanding of theory is not exclusive to postmodern influences within the interpretivist front of music therapy. For example, the neurological approach of Thaut (2008), among many other objectivist approaches, is based on the "identity theory", which assumes that mental states are identical to brain states (Bunge, & Ardila, 2012) in a sense that mental properties "supervene" on the physical ones. (Bunge however, although a supporter of identity theory himself, out of scientific responsibility clarifies that it should in fact be referred to not as a theory but as identity hypothesis). Even the DSM, as the authority with which most objectivist research's validity is trusted, while claiming to be atheoretical, operates on the psychobiological paradigm, which is in reality a long unconfirmed hypothesis that different disorders correspond to distinct biological realities.

Although the term also has daily and more broad uses, Oxford English Dictionary (2008) defines the scientific concept of "theory" as "*...a [confirmed and established] statement of what are held to be the general laws, principles or causes of something known or observed*"; Thus, rather than mere opinions or assertions, they are a *system* of ideas purported to be *tested in relation to the truth* in order to *claim* their targeted explanatory power. They are theories, therefore, to the extent that they are proposed with an explicit desire to be evaluated on the basis of whether or not they correspond to the general laws or principles which they claim they do. Likewise, when we examine the established theories or theorems within general science (e.g. the theory of evolution, Planck's quantum theory, Archimedes' principle of buoyancy, Pythagorean Theorem etc.), we see their common property to be a concern with governing principles inherent in the world and in concepts, which are commonly referred to as universal laws. This concern of scientific theories, as outlined by the definition, point to a difference in quality with the etymological root of the word "to view", which is highlighted by many scholars within the literature. However, a view does not necessarily carry an intention to be anything more than a view, thus does not necessarily have to be concerned with inherent actual properties of the world. The scientific definition provided in Oxford likewise indicates a quality of universality which the probabilistic basis of the positivistic research neither can, nor is concerned to provide; the interpretations of correlative accounts instead call for individuals' agreements, towards which inherent properties of the world are thoroughly indifferent.

To conclude, it can be argued that in order to better understand as to how and why current theories within the field of music therapy are unsatisfactory to intra and inter-field scientific communities, it is beneficial to study the common nature of theories established within a wide range of scientific fields have been historically satisfactory. The identification of the scientific requirements which such historically satisfactory theories sufficiently meet, can guide the due investigation of whether or not a similar approach is possible or appropriate for music therapy in its search for scientific establishment.

The two main inclinations within music therapy research are both unsympathetic to the notion of universality, and this has been found to be the possible reason as to why their respective theoretical outputs are found to be unresponsive to the necessary requirement for an explanation regarding the underlying dynamics of music therapy. Validity of constructs and the nature of evidence of success cannot be verified in exclusion from these currently unknown principles, and consequently this makes the field's scientific establishment and interdisciplinary integration difficult. In this regard, all of the demands outlined by authors at the beginning of the chapter appear to be different aspects of the same indispensable requirement of science.

A concern with universality, which responds to similar needs within various other sciences in a number of ways, appears to be a possible solution for "the hole in the heart" of music therapy as well. Consequently, the nature of these universal principles commonly referred to as scientific laws, and their applicability to mental health as well as its relation with the current understandings of music and music therapy will be discussed in the following chapters.

3. METHODOLOGY

What could be an appropriate method to employ in pursuit of a research question which is tied to many other relevant questions regarding the present presuppositions on the nature of objectivity within the current literature? In other words, is it possible to utilize a conventional methodology in order to support an argument whose aim is to question the validity of understandings which posit the very methodologies as adequate means of supporting claims on the nature of the world? Indeed a structural limitation of sorts on theoretical work in a general sense would result in an undesirable perpetuity of stagnation in regards to exploration as to which kinds of meta-theoretical stances could possibly benefit the development of a scientific discipline.

Thankfully the University of Jyväskylä, as a progressive scientific institute, acknowledges the paradoxical nature of expecting theoretical research and criticism to conform to the limitations of the very structures it may potentially aim to evaluate, and thus, even on the level of master's thesis, does not impose a structural limitation on theoretical research as stated in the university's official research guideline:

> *"Various types of theses are written in social sciences. They combine reasoning, concepts and empirical observations in different ways. They can also be purely 'theoretical', that is, analyse a theory or concept based on earlier research literature. There is no ready-made formula for the theoretical thesis: it consists of reading, analysing, reasoning, and translating your thoughts into text"* (University of Jyväskylä, 2014, p. 6, the underline is mine)

In congruence with the scientific spirit, the structure, as well as the length (p. 2) of the thesis is thus incented to be adapted in regards to the *content* of the thesis, and not the other way around.

3.1. The type of research

However, providing such flexibility does not indicate that any sort of purely theoretical output should or will qualify for an adequate piece of research. Evidently, there are implicit and reasonable expectations that are fundamental to any kind of research output, including theoretical research. The most basic of which is the type of research to be recognizable. Thus, it can be repeated for the reader's convenience what has been stated in the introduction, namely that the research falls under the category of *"theoretical criticism as theoretical research"* as listed in the

SAGE research methods (Thyer, 2010). However, the present thesis' aim is not to evaluate specific theories exclusively, but more so their implicit meta-theoretical standpoints in order to explore the ways in which theories in general could (and perhaps should) be evaluated, as well as their implications for the science of music therapy.

3.2. Statement of propositions

Furthermore, as Thyer (2010) states, that is desirable for a theoretical work to "clearly outline its foundational propositions", which should be communicable in everyday language (p. 8). Although the propositions of the present thesis is stated in detailed fashion within the previous chapters, and will continue to evolve in their implications as their in depth discussion continues, we can summarise them in the most basic sense as follows:

I. Universal, i.e. a priori laws exist

II. The objectivity of knowledge which is provided by the inquiry of universal laws has contributed immensely to the scientific and social development of humanity

III. It is likely that their emphasis within the theoretical efforts of music therapy will also answer the scientific concerns which are voiced by the authors in the field

3.3. The means of justifying the propositions

Another implicit expectation from a theoretical work is that the propositions are justified in an intersubjectively ascertainable fashion, which is to say, they are not mere assertions or opinions of the author (although the prevalent metatheoretical position in the music therapy literature does not stipulate this as a necessary quality of theory [see section 2.3 in the literature review], which is argued to be problematic in the present thesis).

Thyer (2010), suggests a number of elements to enhance the legitimacy of a theoretical work; *"comprehensiveness"*, that is, instead of investigating a subject in isolation, accounting for its possibly relevant aspects and relations in the widest sense as possible; and *"parsimoniousness"*, that is, the quality of effectively explaining a large group of phenomena using *"as few general principles as possible"* (pp. 10–11) are few of them, which aligns with the purpose, the message and the structure of the present thesis. However, there are others suggested, which are incompatible with the particular critical position of the work; namely Thyer's expectation for

"good" theories to adhere to *"empiricism"* and *"determinism"* and aim to contribute to prediction and control, to *"operationalism"* meaning being available to measurement, and to *"falsifiability"* [13]

However, provided that they are genuine requirements from a theoretical research, an interesting question appears; What are the available affordances for a researcher whose aim is to challenge the understanding as to what distinguishes an opinion from a fact is the observational and/or experimental basis of the latter? If the said researcher has not supported his inferences with empirical results, i.e. the very structure which he is aiming to show as unrepresentative of objectivity, does this readily render his work "opinion like"? Does that indicate, and alarmingly so, that such an onto-epistemic stance is and should be eternally unavailable to criticism?

Perhaps more intriguingly, is it not the case that this assertion simultaneously renders the contested position, namely the postulation that empirical results do grant objective credibility, likewise an opinion? In other words, due to the axioms of this epistemological position *themselves* not being perceived as sense-experience or via experimentation, how is it possible to argue that these axioms are "better supported" than their contestations, that they are "falsifiable", or that they are not "metaphysical" in nature? Thus, it appears, that it is best until one perceives the "objective" conclusion of "only sense-experience grants objective knowledge" through their five senses as suggested, this position remains open to contestation.

Alternatively, it could be suggested that, as upcoming researchers of mental health, we are supposed to overlook these inconsistencies with operationalism (which have been generally clear to philosophers of science and philosophical scientists for more than a century). Or worse, that we are left with the sole option of adopting a relativist or postmodern stance which is available as the prevalent oppository position, and resigning the purpose of seeking objectivity of knowledge in science altogether.

Fortunately the University of Jyväskylä (2014, p. 6) does not mandate that all claims are supported in adherence to the empiricist epistemology, and recognizes "reasoning" as a valid

[13] Falsification, contrary to sources of popular-science, does not "work as a solution to the demarcation problem" of distinguishing science from non science as it is initially purported, due to issues which have been discussed at great length by philosophers of science as Carroll (2018, p 3–4) states, and thus it is not a criterion that is generally acclaimed by actual scientists (Bohm, 1980, p. 6).

method of justification of presented ideas of a theoretical work or criticism, as does Thyer (2010) who lists *"rationality"* as a mandatory quality, and deduction according to the rules of logic as a viable medium of intersubjective verification. This represents the means of support that is employed throughout the thesis, in order to affirm that the ideas are not mere opinions of the author.

To exemplify the potential of rationality for intersubjective certifiability, we may even consider the initial point of this chapter; we know from our reasoning faculties, that if universities mandate evaluative research to conform to the limitations of the structures they may potentially aim to evaluate, the published research output will not match the desired outcome of evaluation, which indicates stagnation for the development of the structures available to academia. Certainly, in order to grant intersubjective ascertainability, which is to say, to grant that this is not merely a subjective opinion of the author, we do not need to resort to empiricism and gather inductive data by forming a sample population of different universities imposing ill-informed restrictions on research, and measure the results of their contribution to the scientific discipline in a longitudinal study. Instead our rational faculties which are common to all human beings inform us that this is a necessary logical deduction which does not change from person to person.

However, this does not mean that all of the attempts of justification will be convincing to the reader, as there will be differences of inclinations which may raise perspectives unrecognized by the author. This is, rather than being a shortcoming of the "method", is the means by which the propositions as well as their justifications may develop (that being said, to assist the justification of the propositions I. and II., "verifiable" examples of certain unchanging universal relationships will also be provided).

Justification of proposition I and II are evidently necessary steps to take in order to justify the proposition III, which roughly summarizes the main argument of the current work. Thus the inquiry begins with a brief definition of universal law (which will be supported in the following chapters, where relevant misconceptions will be utilized in order to clarify further its nature). In addition, it will be crucial to grant that not only the content of natural sciences are governed by universal principles, in order to support proposition III and claim their importance for the discipline of music therapy. To highlight that universal order includes but is not limited to the

content of natural sciences, the author will attempt to provide substantive historical examples from societal development of humanity throughout the thesis .

In order to argue for the importance of contributions of inquiry regarding universal law, it needs to be outlined as to what a scientific discovery of universal nature provides. And in order to outline what it provides, we need to highlight the inadequacy of the scientific setting that precedes a discovery of such nature. “Fragmentary world view” or “fragmentation” as a general term used by scientists and philosophers, will be explored in respect to this inadequacy which simultaneously elucidates the implicit need for advancing to lawful knowledge. In this way, a similar need will be indicated by drawing parallels between the scientific era which precedes universal knowledge and the current state of music therapy and mental health disciplines. Historical examples will be provided to illustrate the importance of such advancement.

Also, as noted in Footnote 9, examples from other scientific disciplines will be examined in order to provide analogies on the nature of acquiring knowledge. It would be useful to not regard these analogies as attempts of justifying a certain epistemic or causal framework within music therapy, on the sole basis of its evident validity in e.g. physics. Rather, the examples are aimed towards highlighting different *forms* of reasonings regarding objects in the world or their causal relationships, whether or not the particular aspect of the world pertains to the domain of natural or social sciences or the daily life. In other words, they are not proposed as field specific examples highlighting a certain content (such as the content of gravitational relationships), instead they aim to highlight our essential mental faculties which we may employ while thinking about causal relations within any context. With this emphasis, the reasons which enable fragmentation, as well as their solutions can be outlined as common possibilities to all scientific pursuit.

In order to argue for the relationship between objectivity and universality, it is required that we also challenge the presupposition which equates objectivity with sense-perception, as well as the relevant beliefs such as accumulative experimentation being the route that can arrive (some would say “as close as we can”) at objectivity. During this investigation it may become apparent to the reader that the interpretivist paradigm, in certain regards, relies on the axioms of empiricism as much as the objectivist paradigm, and the objectivist paradigm of mental health

relies, in certain regards, on postmodern, constructivist, and relativist principles regarding “the subject-dependence nature of reality” as heavily as the interpretivists. This examination may challenge the idea that these paradigms are complementary alternatives for one another, and by showing that how they are in fact more similar than currently acknowledged it may highlight the possibility and perhaps the necessity of a real alternative.

3.4. The reasons for theoretical research on the subject

The reasons as to why it is important to pursue this kind of a subject, in the manner in which it will be pursued, can only be meaningfully conveyed in and as the whole content of the thesis. In other words the content itself, which consists of the subject and the structure, is an attempt to answer this question.However, As Mischel (2009) highlights, scientific inputs which are novel, autonomous and substantial are the means to contribute to building a cumulative science. Thyer (2009) likewise notes evaluation studies to be the least common but perhaps most valuable research type. While it is certainly my aim to explore the possibilities of an important notion of science which currently lacks accurate representation within mental health literature, and therefore be a part of what could be considered as a meaningful contribution to building a cumulative science, I would deem the work as successful if it manages to do so much as stimulating an academic conversation.

4. THE POSSIBLE CONTRIBUTION OF UNIVERSAL LAW TO THE SCIENTIFIC DEVELOPMENT OF MUSIC THERAPY

In this chapter, I will try to provide clarifications as to how the notion of universal law is able to assist with the initially listed challenges in the scientific development of music therapy (which are found relevant also to other mental health disciplines) by providing examples as to how, throughout history, the notion of universal law has provided solutions to challenges of similar nature in scientific development in general. It is my expectation that, by specifying the nature of problems which are overcome through the introduction of the notion of a priori universal law, the reader will recognize that the issues noted by various authors on the current methods of studying therapy and mental health, point towards a shared pattern with these historical examples. The demands of the authors will be outlined in this regard, as to show how the notion of universal law is able to respond to them.

4.1. What is universal law?

Things cannot be defined absent of their properties, if they did not have any properties, it would be impossible to even conceive them as things. This much is clear. However, confusion may follow David Bohm's (1984) next assertion; *"we cannot conceive how a thing could even have any properties at all if it did not satisfy some kind of causal laws"* (p. 10). But in fact, even the assertion of something having a defining property, implies a *relational* quality within this thing (as opposed to the Aristotelian idea of properties which are exclusive to things themselves):

> *"...the causal laws are not like externally imposed legal restrictions that, so to speak, merely limit the course of events to certain prescribed paths, but that, rather, they are inherent and essential aspects of these things. Thus, the ...law that hydrogen and oxygen combine to form water is a basic property of the gases hydrogen and oxygen, without which they could not be hydrogen and oxygen (just as water could not be water if it did not become hydrogen and oxygen when subjected to electrolysis)" (p. 10)*

Qualities of such nature do not change temporally or spatially, i.e. they are constant, or universal; indeed if they did change, then this property would be arbitrary in its definition as it is not a property essential to this thing[14].

Because of this, as Özbek and Kotaman (2011, 2015) suggest, it is possible to consider that just as it is the universal law which governs the workings of nature, workings of the human psyche are too governed by laws which are essential to it. Thus, both emphasising as well as disregarding the notion of universal law in scientific inquiry of mental health entail their own particular consequences. In this chapter, and throughout the rest of the thesis, I intend to specify these consequences in order to make a case as to why its regard is indispensable for the scientific development of music therapy, along with the rest of the fields concerning mental health. Before making such a case, a brief overview of the nature of its contribution to both general science as well as everyday human understanding will be provided.

Salmon, in his introduction to Causality and Explanation (1998), states one of the greatest philosophical achievements of the century to be the widespread understanding about the aim of scientific endeavor as to facilitate our understanding of the universe in which we live and our place in it. In order to claim an understanding of the universe, first and foremost, we need the universe to be understandable, which is to say, we need it to be not chaotic. It needs to pertain to a coherent relational order, so that by comprehending this order we can claim our understanding for a certain aspect of the universe. Because our species is indeed capable of this, it has been discovered that underneath all of the complexity of change and transformation taking place under a wide range of contexts, there are relationships in the universe that remain effectively constant (Bohm, 1984). Because this type of behaviour is extremely general in various contexts of the world it is compelling to consider that the constancy of certain relationships is not a coincidence. *"Rather, we interpret this constancy as signifying that such relationships are necessary, in the sense that they could not be otherwise, because they are inherent [i.e. a priori] and essential*

[14] For example, the color of a house can be changed from red to blue, which means being neither color is an essential property of what a house fundamentally is. On the other hand, the wavelength of white light reflected from the walls changing beyond a certain limit would mean the wall is no longer seen as red by the human eye, which makes the perception of this range of wavelength an essential property, i.e. a universal necessity or a law for the color red.

aspects of what things are" (p. 1). The necessary and essential order of relationships between objects, events, conditions, or other things are then termed causal laws[15].

The world as it appears to us, has historically been understood by various scientists and philosophers to be determinations formed by this necessary and essential order. In the same sense, law is simultaneously defined as the essence of all that is determinate in the world. Özbek & Kotaman (2011, 2015), as contemporaries of this stance, state that humankind's essence, just like the essence of all beings, is this universal order; their distinction is that human beings, as self conscious agents, are able to comprehend this essence. We are able to comprehend it, Özbek and Kotaman argues, because the logical essence of this order, which ensures the orderly occurrence of the universe, is at the same time what makes them comprehensible via our logical capacities, as the logic that is inherent in both is one and the same. They argue that the development of humanity not only in natural sciences and technology, but also in areas such as arts, communication, societal living etc. is due to humankind's ability to uncover the universal laws i.e. necessities which pertain to these areas[16]. In this light, for example, the development within the fields of arts and mental health is essentially linked to the comprehension of laws pertaining to mental health and its fundamental relation with the arts and creativity.

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[15] Throughout the thesis, what is meant by the term causal law should not be confused with some kind of generalization where "the X phenomenon always causes a Y phenomenon, in other words, with *efficient causation.* Rather, the intended meaning is the formative or *formal causation;* the notion that the world takes form not by external causes imposing their effects, but by and as "*an ordered and structured inner movement that is essential to what things are" (Bohm, 1980, p 12-13).*

[16] To provide an example as to how there can be a universal law for the humanities, and how its applications can take shape, we can briefly examine a universal constant on the nature of human beings put forward by Descartes, and its relation to the historical development of societal living. Descartes' statement, that "reason is the thing of all else in this world that is most equally distributed", exhibits a hitherto unseen definitive property that belongs to the totality of human beings, as the capacity to learn as well as the capacity to generate social value proportional to the knowledge they have learned. Up until then, the majority of people were seen as merely physical force, but this statement gave way to the notion that, since all humans have the capacity for reason, not only the privileged but all can and should be educated; since the more education a human being has, the more value she is able to produce (Finland, for example is one of the most prosperous countries) in the world (The Legatum Prosperity Index, 2019) despite having very little work force or natural resources, due to its steady investments in research and development). Such matters of essential properties put forth by Descartes, along with John Locke's empiricism (which suggested in similar fashion that all human beings possess faculties which enable them to obtain information about the world without any need of interference of a religious authority), were instrumental in constituting the French Revolution's infrastructure for production and education. Properties which belong to all human beings, when uncovered, allow people to be organised for the purpose of taking collective responsibility for the necessities revealed by such properties, such as national institutionalization of education. Conversely, it is by the comprehension of responsibilities determined by properties which belong to all, groups of people can act for and *as* their nation (Özbek & Kotaman, in press).

Because universal law is the essence of its determinations in various different areas (e.g. natural sciences, or societal structures as exemplified in footnote 16), insights into these laws allow seemingly discrete phenomena (i.e. appearances) in these areas to be assimilated in a coherent and holistic understanding of the world. Relevant concepts (such as "gravity" or "national government") are then used to elucidate the implicit cohesion underlying its determinations, in order to facilitate development in a multitude of areas which are thus known as pertinent. The formative principles of human mental health in relation with music, thus far has no ascertained reason to be an exception to being lawful and orderly (though, common objections regarding their availability and applicability in the context of music and music therapy are worth examination, which will be the focus of Chapter 6). However, the historical course of development in our understanding of mental health appears to be shaped by particular paradigms of philosophy, science and health which disregard or deny such orderliness and/or our species' capability to ascertain it.

4.2. A brief investigation of the departure from lawful explanation in mental health sciences

The idea of scientific explanation as demonstrating apparently disparate phenomena to be essentially or lawfully similar has been around for a long time (Salmon, 1998), long before the initial proposition from Hempel (1948 as cited in Salmon, 1998) with which the contemporary philosophical discussion of the nature of scientific explanation began. Certain courses in the historical progression of our understanding of mental health however, have led the discussion of scientific law in mental health, and consequently in music therapy to be postponed. Indeed, nowadays we see nothing on the notion of lawfulness or universal principles of mental health neither in the academic curriculums nor in the literature of music therapy or psychology. But the fields' repulsion for the notion has not always been the case. As early as 1894, William James, who is often referred to as the father of American psychology, proclaimed that *"mental therapeutics should not be stamped out, but studied, and its laws ascertained"* (Caplan, 1998, p. 63). Likewise, as early as 1940's Ira Altschuler, a pioneer of music therapy and its usage in psychiatric settings, emphasizes the importance of pursuing *every* possible therapeutic property *"inherent in music"* (Altschuler, 2001, p. 72).

This aim put forth by Altschuler, appears to be in direct contrast with the goals of modern music therapy; both in the constructivist paradigms where the idea of music being *"one thing"* with certain essential i.e. inherent properties is challenged with the idea that there are instead many *"musics"* shaped by particular anthropological perspectives (Stige, 1998), as well as the positivist paradigm which is mainly interested in the probabilistic demonstrations of known or assumed utilities of music, and the pragmatism of the independent variable rather than the necessary properties and principles of its concepts. The latter approach is in concordance with the general principles of the positivist paradigm of science; according to which, because the objective principles of a concept lay outside of the observable (i.e. the empirical domain), they have to be excluded from the interest of "objective" science, whether they pertain to natural or social sciences. In other words, only that which lies in our sensory experience is believed to comprise the subject of scientific pursuit, and the rest ought to be considered as equal in quality with the pre-enlightenment metaphysics.

Consequently, because that which can be experienced can only be relative to the experiencing subject and never absolute, absolute relations in the world or necessary properties of concepts are strictly outside of "scientific interest as defined by positivism", due to these universal properties themselves being unavailable to direct sensory experience as universals. Thus within this paradigm, scientists are concerned exclusively with that which sensory experience is able to afford; accumulating inductive generalizations rather than objective inherent orders, and with local probabilistic accounts rather than provable universal relations.

However, prior to the rise of the positivist paradigm in science, it has already been known that observation and experience is unable to provide us with the knowledge of the objective world. While the positivist paradigm insists that science must be directed by experience, Hume, as a thorough exponent of naturalist philosophy himself and a renowned interrupter of dogmatic slumbers (Stanford University, 2019), showed that only psychological representations can be derived from knowledge whose source is experience, and the connection between the representations has no more significance than being subjective associations, or even recitations (Yardımlı, 2012, p. 7). Indeed, experience is not knowledge but what is to be known; experiences, observations and phenomena are themselves determined by the hitherto comprehended properties of their concepts; accordingly, when conceptual formations develop

and change, this changes the very experience, phenomenon and observation, which were previously assumed to provide absolute objective knowledge (Yardımlı, 2016).

Consequently, scientific aims initially put forth by William James and Ira Altshuler regarding the discovery of inherent principles appear as fundamental; because, just as our current experience and observation of the phenomenon of mental health is directly shaped by the knowledge (or lack of it) of relevant concepts, the further discovery of such principles regarding the properties of these concepts is the only means to truer and richer experience, observations and predictions. In contrast, the idea that our sense-perception provides objective knowledge of reality, enables us to affirm our categorical descriptions as all encompassing actualities. This assured conviction regarding perceived notions being all encompassing realities leaves no need or possibility to pursue and develop more in depth conceptions, and scientific efforts are instead directed as investigating utilities enabled by available categories.

In accordance with this, up until 1967, the widespread approach among professionals of mental health was based on the indispensability of an aetiological account (Fulford & Sartorius, 2009). Although struggles had been noted regarding the operationalization of the concepts of psychodynamic theory as the prevalent mental health theory of the time, the need for an etiological basis of mental health and disorder, just as the need for a basis for the reasons of biological health and illness, was common sense.

The presumed dispensability of the knowledge for the reasons of mental health and disorder begins with the shift from utilization of etiological (theoretical) to descriptive (symptom based) accounts of disorder in ICD 8, the first published work with a firmly descriptive classification of mental disorders as its content. It is important to investigate this content in a historical perspective, so as to recognize it as one of the variety of solutions offered in the historical development of our knowledge pertaining to mental health. Then it would be possible to think critically in terms of the reasons as to why the professionals might have suggested them, whether or not they are appropriate solutions for issues they were aiming to solve, as well as the grounds for their approval or disapproval by professionals and institutions. Without this historical context, it is easy to regard the current mental health content shared by the ICD, the DSM as well as academic textbooks, as immediate and unquestionable biological and ontological realities,

rather than as suggestions within the then-zeitgeist with their particular utilities and impediments.

According to Fulford and Sartorius (2009), the reported history of the descriptive turn starts with the World Health Organisation commissioning of a research group led by Erwin Stengel who collaborated with Carl Hempel in order to find out the reason as to why the mental disorders section within the available edition of ICD was not adopted worldwide. One might think that this shift from a theoretical to atheoretical ground could not have occurred without the explicit approval given by Stengel, Hempel or other prominent professionals of the committee as a result of a clear decision after long investigations and pondering of its implications. In other words, it is reasonable to expect that responsible people must have been convinced that a shift towards a system of classification is indeed the better alternative, in order for such a shift to happen. Surprisingly, the history shows otherwise (Fulford & Sartorius, 2009). The WHO seems to receive nothing in terms of a recommendation for a shift towards the descriptive classifications from neither the committee, Stengel or Hempel. It was instead the suggestion of another member of the committee Aubrey Lewis, to avoid categories based on theoretical concepts and restrict the classifications to the descriptive type, to establish uniformity in comparisons of findings from different countries. This suggestion, although dismissed by the committee, found interest in the Chair of the WHO. Consequently Lewis played a key role in a programme launched by the WHO in 1965, in which the currently used classifications were designed.

Reportedly, worldwide professionals who had been struggling to assess the conditions of their patients up until then, had acquired a tool that provided them with convenience to such a degree in categorizing their patients, diagnostic categories reportedly took a life of their own, gradually leading to being acknowledged as actualities of patients' lives . The convenience and success of diagnostic categories, led them to overstep their purpose and overtime unintentionally provided professionals with the impression that diagnostic categories are biological realities (Pickard, 2009), and with the belief that a sound theoretical basis i.e. causal knowledge for handling issues with mental health is not a strict requisite. Despite the opposition from neurological research (Hyman, 2002; Andreasen, 2007, as cited in Fulford & Sartorius, 2009), along with the consistent resentment from patients for being subjected to what they feel as imposed and artificial labels (Fulford & Sartorius, 2009), as well as ever growing amount of research to

indicate various aspects of their problematic nature, general public and the majority of professionals strongly believing the categories to be sufficient representatives of mental health even today, show how enormously successful the diagnostic categories have been.

Regardless of their popularity, problems with reliability (Williams et al., 1992; McGorry et al., 1995, as cited in Pickard, 2009), co-morbidity (Robins et al., 1991, as cited in Pickard, 2009), and the lack of clear distinction between categories as shown by discriminant function analysis (Kendell and Gourlay, 1970; Brockington et al., 1991, as cited in Pickard, 2009) remain present. The unifying aspect of scientific law continues to promise actual solutions to these problems of fragmentation which are at the heart of mental health practices, research and education. But an appropriate exploration of this possibility, first and foremost requires an in-depth investigation regarding the limitations of such categories which are causally linked with the issues they arise. As will be discussed promptly, such limitations do not begin or end with the diagnostic categories of disorder; instead they even pertain to approaches which are proposed as alternatives to such diagnostic structures.

4.3. The unifying aspect of law as an unacknowledged demand of mental health disciplines

The problem that is at the heart of these issues with reliability and validity is not one that is exclusive to experimental psychopathology or diagnostic approaches. Consequently, professionals and scholars who want to overcome or bypass these issues by rejecting the notions of mental illness or diagnosis, are also in the risk of committing to the same limitations which lead to such issues. In other words, the shortcomings will be retained insofar as it is believed that they originate in the particular disorder categories of the DSM, and not in exclusively descriptive categorization *per se*.

An exclusively descriptive category invariably posits a generalization of a subjective, observational assessment for what the empirical content of the notion does and does not entail. Therefore a twofold risk ensues;

- ➔ Affirming the observational qualities of a phenomenon (e.g. grief) to correspond to an empirical category (e.g. major depression disorder) because they have been found similar in their empirical contents (e.g. behavioral criteria), when in reality the phenomenon may not necessarily indicate the notion.
- ➔ Affirming an empirical category (e.g. an anxiety disorder) to exclude an observed phenomenon (e.g. an individual on anxiety medication) because the descriptive criteria of the notion and the phenomenon have different empirical content, when in reality it can be the limited understanding of the notion which prevents the notion's recognition in the phenomenon.

In both cases, this type of categorization brings about a tendency for implicit deductive verifications and consequent inductive generalizations. An example of this could be identified in the well known controversy regarding the empirical parallels between bereavement and depression disorders; the deduction from what is thus far understood by the notion of depression, enables the notions empirical verification in both the mentally diseased as well as ones who suffer from the death of a close person. And via the inductive generalization of what the notion does and does not entail, depression's currently recognized empirical content is believed to verify all that could be the content of depression. Thus a person is recognized as depressed only if they fit in the known empirical criteria, while depression, or any other mental issue, may manifest in a much wider range of behavior or brain chemistry than current descriptive categorizations permit.

This type of categorization, that is, empirical content without a specified conceptual background, permits similar kinds of what may be referred to as false positives and false negatives to be empirically verified, also in other cases of loss. For example, the strong anxiety felt by a mother or her baby when they are (physically or emotionally) separated, may correspond to the observable symptoms of a range of anxiety disorders, while this anxiety can be acknowledged as a perfectly healthy indicator for their inherent need and consistent desire to be together. Similarly, just because some of the observable signs of healthiness in a mother who feels secure in her interaction with her baby, corresponds to the those observable signs of a mother who has utilized certain medications or meditations, this does not necessarily indicate these techniques have promoted health within her sociobiological context by addressing the necessary reasons for her distress.

In other words, different subjects despite their possible correspondence on the sensory domain may entail contexts that are determined by distinct notions and necessities. This implies that

means for healthiness depends on the particular necessities of the underlying notion (e.g. grief or separation), and that healthiness isn't ensured by methods or techniques which, independently of these necessities, provide that a person demonstrates the empirical content of a category which is believed to account for health.

Evidently, not every empirically similar “adverse” condition is an abnormality that calls for a uniform effort of its removal, similarly not every empirically similar healthy appearance is a uniform indicator of good health. Similarly, the systematic alteration of an individual’s appearance into a “healthy" appearance is not necessarily an indicator of the success for a technique or treatment. Interventions based on the pretence of “health and disorder being independent on particular contextual necessities” as though they are determined only by specific empirical criteria for how they appear, could be analogous to interventions comprised of chemically or mentally altering the sense of one's thirst for the better without providing them with hydration, or applying green paint on yellowing leaves of a malnourished plant.

As shown, health related implications of strictly descriptive classifications are not self evident. Because of this, classifications as such require a conceptual background to account for the reasons as to why a phenomenon may empirically appear as such. Mere descriptive qualities of undesirable life situations do not intrinsically comprise or indicate malfunctions which are to be “surgically removed”, from the individual; in the same way, descriptive criteria of well-being do not necessarily comprise or indicate healthiness for individuals. It is detrimental to try and remove such symptoms from individuals, to the same degree that it is detrimental to try and verify “healthy appearances” in individuals in certain contexts such as grief, separation or isolation. For this reason, domains such as positive psychology, or similar therapeutic approaches where the emphasis is not on disorders but on goals such as calmness, confidence, joy and overall “good feelings”, are subject to the same risks in regard to misidentifying notions of health and unhealthiness (i.e. problems with validity) and consistency in their measurement due to measuring individuals’ differences in their implicit conceptual understandings and perceptions (i.e. problems with reliability).

In other words, the employment of exclusively descriptive categories in whichever non psychopathological context, permits the same risk of erroneous, context defying verificationism,

due to their common epistemic nature; If health, just like disorder, is merely an appearance (e.g. of a state or a process) consisting of nothing but its empirical content (i.e. descriptive criteria), then health goals are strictly goals of appearance. And the imposition of this appearance *in whichever way* becomes the uniform means for healthiness, regardless of the particular necessities of each and every different context.

By the merit of this framework, uniform interventions in the form of drugs and techniques, that is, interventions whose nature remain the same regardless of subjects contextual needs, can be shown to be effective in bringing about health, due to their success in achieving certain mental, emotional or physiological states which correspond to the empirical content that is believed to comprise healthines, i.e. by a firm basis in tautological reasoning.

A category being defined exclusively by descriptive criteria, indicates that the category is defined irrespective of the governing principles through which it is determined (e.g. a mother's separation anxiety being possible to be identified as an anxiety disorder due to the causes of both empirical conditions being rendered irrelevant). If the formative principles of the phenomenon (e.g. heathiness or illness) is unknown, an arbitrary cause can be assigned. For example, if a certain drug or technique alleviates individuals' symptoms of anxiety, even though it does not indicate that they were suffering from a deficiency of what the said intervention supplies, it can be suggested that their problem was e.g. a serotonin or marijuana deficiency (Raskin, 2012) or a brain whose gratitude or mindfulness networks are not yet developed. In absence of contextual necessities, this is unfortunately the means by which certain drugs or techniques are shown to be effective and appropriate.

However, as Raskin (2012) suggests, in order to feel confident that an efficient cause, be it drugs or meditation exercises, produces a desired change, we need to know the governing dynamics of the desired change and how the efficient cause relates to them. For example, altering the brain chemistry with either drugs or practices can be considered as conducive to health, insofar as the health problems of the individuals are shown conclusively to be caused by suboptimal brain states. Otherwise, it can be argued that they are as justified and as sustainable as neurologically altering the sense of hunger while the logical necessity of hunger i.e. nourishment, is ignored.

4.3.1. Are descriptive categorizations of health exclusive to objectivist music therapy research?

Furthermore, whether it is objectivist or interpretivist research, within a strictly descriptive understanding, health (or disease) can only refer to an object whose presence or absence is to be verified spatiotemporally based on provided descriptive criteria. In other words, health and disease can only be things, which are either there or not there in the observed environment; similar to every other "strictly empirical" object (e.g. an apple either being on the table or not). Consequently, within this epistemology the existence of health is discontinuous and probabilistic, regardless of such probability being accounted for by experimental methodology of objectivist research, or explained in speculative causal association with other categories of interpretivist research.

The reason as to why a probabilistic understanding of disease and health is primarily associated with objectivist research lies in the simplicity and ease of measurability of the empirical criteria of its categories, whereas non-objectivist descriptions of health or disease tend to be somewhat more complex in their ability to be verified. For example, Thaut (2008) and Smeijsters' (2005) emphasis on diagnosis specific, functional goals of therapy outline clear empirical pictures for the desired state of health as an outcome. Crowe (2004, as cited in Aigen 2013), on the other hand, in critique of the adequate applicability of the medical understanding of "health as the absence of disease", defines health as a *"nonlinear state of chaos"* (p. 235). This description of health, while delineating a significantly more complex category to be empirically verified, it is in practice as linear as its medical alternatives, due to the notion of health being defined as the process humans engage in to *"function optimally in the face of change, trauma, and challenge"*. In other words it is, just as the critiqued alternatives, an either-or condition as a state or a process i.e. is a determinate understanding of health. Similarly, when Stige (2002) endorses the notion of health by Uffe Juul Jensen as *"a set of personal qualifications for participation in a community, connected to care and communication between people*" (p. 187), or likewise when he states that *"health is a process, not a state or condition"* (p. 116), health, and simultaneously the lack of it, is defined within a similar onto-epistemic framework.

This is a significant point to consider, as the majority of the criticism towards the medical model and the objectivist paradigm of music therapy advocates the utilization of resources which are already present within the clients (Rolvsjord, 2010; McFerran & O'Grady, 2006; Garred, 2006). Yet a probabilistic or determinate account of health makes it difficult for the professionals to interact with the healthiness within clients, when they are rendered unable to verify whichever determinate understanding they believe as representative of health to be "there". This necessitates a linear approach to "achieve" health within the client who, supposedly, is not yet in possession of it. Thus, frameworks of therapy devised in accordance with a descriptive notion of health may conform to the framework of therapeutic interventions within the medical model. This consequently hinders the sensible intentions put forth by the authors emphasizing clients' resources instead of linearly achieved outcomes of therapy techniques.

We can examine the notion of health suggested by Ruud (2010), in relation to the above mentioned hindrances. Ruud defines the concept of health as an *experience* of *"well-being and meaning in life"* (p. 103). This, similarly, outlines the notion of health as either a thing that is either "here", verifiable as a discernible experience of well being and meaning, or verifiable to be "not here" when such experience fades away. The significant issue to consider is that when health is defined probabilistically (e.g. as an experience which might either be there or not) it becomes difficult to suggest that the notion of health includes the inherent and active capacities of clients which enable them, from the very beginning of a therapeutic process, to collaborate with the therapist for the development of their health regardless of their initial state or condition. In other words, when a client is lacking such "an experience of well being", and therefore is not regarded as healthy, it would indicate an understanding that these active capacities in fact do not comprise the core of health which enable and facilitate her collaboration with the therapist.

Yet a successful practice informs us that, regardless of the therapists' possible failure to verify within the clients whichever determinate understanding of health they might have, the clients were indeed in possession of enough healthiness to participate in their therapeutic process, and that they were active contributors of this health development process from the very beginning, even when they could not be considered as healthy by professionalized conceptions health and their relevant empirical i.e. descriptive standards. Indeed, if such active potential for health-

collaboration was absent in the client, it would be far-fetched to expect that the therapist could single-handedly "induce" health to such presumedly incapacitated being.

This indicates that, if professionals intend to de-emphasize treatment techniques and highlight the importance of collaboration and resources of clients, it could be helpful that the notion of health is not defined as a determinate state or process which is invariably determined in contrast with the inverse state process which enables the empirical verification of an alleged non-health. Such states or processes inevitably outline a category as probabilistic as those utilized in the technique-focused approaches of the medical model. Given the intended purpose of resource oriented approaches, as suggested by Rolvsjord (2010), is to promote empowerment, collaboration, client resources and equality, professionals cannot maintain the notion of health which has even the possibility of "not being there" in the client, as this automatically implies a skewed health dynamic. Fortunately, because human health is essentially a formative a priori order (such as universal gravitation), and not a determinate category itself, suggesting health to be there in the client when it corresponds to our conceptions of health, is akin to suggesting gravity to be there while an object is falling.

Some examples in the music therapy and mental health literature, where the emphasis is on relational processes themselves, appear to be attempting to avoid aforementioned implications of probabilistic accounts of health. Garred's (2006) dialogical rationale maintains that "therapeutic change happens primarily in and through relational processes" (p. 258) and that outcomes of these processes cannot be predicted. Likewise, the Finnish "Open Dialogue" approach to acute psychosis, in accordance with its dialogical principles, emphasizes tolerance of uncertainty (Seikkula & Olson, 2004), as opposed to probabilistic expectations and evaluative criteria for healthiness. In the same vein, some examples in feminist music therapy (McFerran & O'Grady, 2006) promote a holistic emphasis on working with the healthy aspects of a person by a similar de-emphasis on the traditional notion that a person's difficulties lie within that person in an intra-psychic way. This indicates an opposition to the similar characterization of health as an intra-psychic phenomenon[17]

[17] A similar promising distinction with probabilistic objects, but this time in the domain of music, can be noticed in Ruud's (2008) compilation, where the idea of "music as an object or process" is contrasted by explored associations between musicality and inherent infant-mother inter-responsiveness.

Rolvsjord's (2010) discussion of the dialectics of health similarly promotes an understanding of "health in ways that may comprise both physical and psychological aspects of negative health and positive health" (p. 31). Likewise, just as with a continuum model, Rolvsjord suggests, the categorical discontinuity promoted by states of health and disease and its consequent implications can be overcome. However the declared interest in the "positive end of the continuum" (p. 30) suggests another categorical discontinuity of "positive" and "negative" ends. Such categorization is in contrast with a true dialectical unity of opposites, which would imply an interest in the positive end to simultaneously be an interest in the negative end (Özbek & Tekeli, 2017, pp. 91-92), as the unconditional identity of opposites, is the primary quality that distinguishes a dialectic relation from a dichotomous one.

This suggests that overcoming categorical discontinuity dialectically does not end at solely acknowledging that there is a unity of given opposites, such as the unity of health and disease; and that it needs clarification regarding the nature of this unity as this unity, instead of delineating it only as a synthetic amalgamation of given opposites. Such clarification of a dialectical unity of opposites, not only as opposites in unity but also as a unity as opposites, is enabled by the explication as to how they form a unity while simultaneously maintaining their difference. (the notion of "unity in difference" will be elaborated further in the section "how universal law unifies fragments")

Accounting for the notion of health without strictly categorical or determinant characteristics, contributes to the de-emphasis of the question "what are therapists able to do move the client from one category to another"(e.g. treatment techniques), and instead enable the discussion "what are clients continuously and unconditionally capable of" i.e. ever-present client resources. This is, as will be detailed from here on, in the same vein as to how the knowledge of a formative principle de-emphasizes methodologies while emphasizing available resources.

To summarize briefly what will be detailed in the subsequent sections; gravitation itself is a *universal* order within perpetual formation, which enables the cognition of relevant determinate categories which we can detect to be "there or not" (such as falling, flying, floating, rotating etc). However, due to our species' ability to think in terms of universals we know gravitation to be present, even when we do not observe it as a determinate category e.g. in the form of flying or

falling. Consequently, we have the possibility to utilize our knowledge of it in service of our species in an ever-developing fashion that is not limited to the affordances of hitherto known determinate understandings (i.e. by the invention of air travel, satellites, antimatter gravity experiments etc.), i.e. without necessarily fixating on one determinate manifestation of gravity and its relevant causal implications and applications.

In the same vein, *if* our desire is to promote utilization of an ever present and unconditional actuality of health within the clients in a likewise developmental fashion (i.e. while permitting the scope of known health determinations to expand), then it would be beneficial for the theories to provide rationales as to how health is an ever present formation within human beings, in the same vein as to how universal laws are explicated as ever present formations. As such, the emphasis can move from what therapists can do in order to linearly "achieve" or maintain known determinations of healthiness within the client (as well as within themselves), and towards recognition of the perpetual drive for health development in whichever evolving and inclusive shape or form.

Here it is important to note that the knowledge of such essential underlying principles regarding health or music is not a necessity not for the music therapists to contribute to the health development of their clients. As articulated by Aigen (2013) clients of music therapy (or psychotherapy) have needs no other than the essential human needs that other people have, and that music therapy is useful insofar as it addresses these needs. In light of this it is possible to suggest that people are not healed because of therapy, more so than therapy can heal due to humanity's ability to engage in socially healing situations. Social healing situations happened ubiquitously since the dawn of humanity, especially around interpersonally skilled and empathetic individuals (as the meta-analysis of Wampold and Imel [2015] suggest), without the ability to necessarily explain how they happen; in the same way that humanity had known how to utilize certain necessary orders, such as the principle of buoyancy, millennia before their scientific ascertainment.

The knowledge of formative principles of music and health is *instead* complementary in providing theoretical coherence and educational value; as such principles could clarify and assimilate the relationalities regarding relevant probabilistic outcomes, in the same vein universal

gravitation clarifies the relationalities pertaining to probabilistic outcomes such as falling, flying etc. Yet the possibility for this coherence is rejected, when manifold descriptive accounts of e.g. healthiness or disorder, or various local formations of music therapy practice are taken to be concrete realities which are essentially separate, isolated realities. It is in the nature of such a design of classification to isolate their categories by "cutting them off" from each other and from their underlying principles through which they are unified, thus the sense of coherence and rationality they would otherwise provide is discarded along.

To interlink the previous discussion regarding the descriptive categories of psychopathology with the now outlined implications of formative principles, we can suggest that although admittedly they are able to capture regularities in behavior, provide support for explanations and inductive inferences (Charland, 2004, 2006, as cited in Pickard, 2009), they are yet to qualify as categories that "carve the world at its joints", i.e. stand for objective realities of the world, when the scientists are yet to discover their underlying scientific properties (Pickard, 2009). This lack of insight into the underlying principles, forces the descriptions of health or practices to be groups of seemingly relevant appearances, with no justification as to how and why the empirical criteria for these appearances are clustered together, other than, as former director of NIMH Thomas Insel (2013) suggest, some degree of a professional consensus.

Although it is explicitly stated by DSM-IV that psychiatric categories succeed when "there are clear boundaries between classes, and when the different classes are mutually exclusive" (APA, 1994, p. xxii), the clarification of boundaries appears to require more than certain people agreeing upon a common professional opinion. The possibility of clarity instead seems to depend on the extent of their content's correspondence to genuine distinctions of manifestation regarding formative principles of mental health. Such manner of classification which is entirely based on conventions (Rolvsjord, 2010), is linked to previously listed problems regarding e.g. reliability, co-morbidity and lack of clear distinction between categories. Such problems are attempted to be overcome by the DSM, only on a surface level, by "exclusion rules" and the gerrymandering of classifications, which suggests the likeliness of *"a failure of the DSM categories to capture objectively real and distinct scientific kinds"* (Pickard, 2009, p. 90). Yet the identified central problem with a purely descriptive approach of classification renders any real solution to above mentioned issues impossible, without breaking down the foundations of the approach itself.

This does not mean that descriptive categories, regarding e.g. the notion of health or illness, are necessarily myths, as in purely manufactured categories which are not connected with the concrete. However, while these descriptive categories are commonly believed to have sufficient power to represent coherently the actuality of their objects (i.e. psychological states of human beings), they are invariably being posited as themselves as a direct result of a lack of understanding for the universal principles of their content. In other words, the outlines which define such categories are inextricable from the obliviousness towards the conceptual knowledge that is necessary for explaining their objective nature[18].

As such, attention to universal principles can provide the necessary conceptual background for descriptive categories and enable the potentially infinite evolution of the content as well as the purpose of scientific pursuit.

Therefore, concurring with James and Altschuler, we can argue the inquiry of universal principles to be a fundamental aspect of scientific investigation of any field, including disciplines which are concerned with mental health, such as music therapy and psychology. Consequently, the descriptive categories which currently exist as discontinuous, probabilistic fragments, can potentially be unified and integrated within these necessary formative principles of health and music.

In order to examine;

- What is there which needs to be unified in music therapy or other mental health disciplines?
- Why is there such a need for unification?
- How would this unification be possible?

It is helpful that the general nature of fragments and fragmentation is investigated further. We can consider the following example in the history of scientific development of humankind, as an illustration of the manner in which conceptual reasoning of law unifies previously exclusive descriptive fragments hitherto believed to be actualities.

[18] The possible concerns of the reader who may be curious as to "how can we assert that empirical categories do not reflect biological realities when there are so many cases embodying the same diagnostic features?", will be attempted to be answered in due course.

4.3.2. The nature of fragments and the fragmentation of tautological explanation

The falling of an apple and the movement of the moon in the sky are two distinct phenomena, which at a given time in history, were found assimilable in a single universal principle which we now refer to using the concept "gravity". As a result of this assimilation, we now know that these seemingly separate appearances can be regarded as different determinations of this very same principle. Hence, this principle proves to be the unifying ground for these two determinations, as well as countless others (albeit not necessarily falling ones, e.g. the reader who is reading this sentence while sitting is no less a subject to universally operative gravitational principles).

Although this is common knowledge now, up until the discovery of universal gravitation, the reason for objects being in the sky was known as them being "celestial matters", while "earthly matters" were naturally habiting the earth[19]. Quantum theorist David Bohm (Bohm & Peat, 1987) describes this insight of Newton into the universal nature of gravitation as him *"..[becoming] free of the habitual compartmentalization of earthly and celestial matter, a form of fragmentation that was implicit within the tacit infrastructure of the "normal" science of his day"* (p. 19, my underline). According to Bohm, owing to Newton's realization we now know that *"as the apple falls toward the earth, so does the moon, and so does everything fall toward everything else"*. Certainly, without the necessary insight into the nature of this common essence by which they are fundamentally linked, "earthly" and "celestial" matter would remain as strictly descriptive i.e. fragmented categories. They would continue to be referred to as empirical realities, as long as it continued to be *"evident [to the scientists] that, as a result of its celestial nature, [the moon] naturally remains in the sky where it belongs"* (p.19).

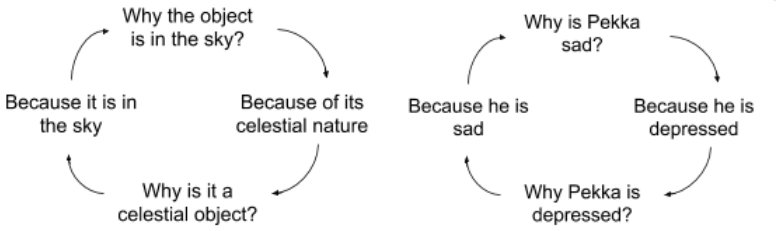

Fig. 1: An example of a circular i.e. tautological explanation. The world, as causally structured in such terms, is constituted by numerous self subsisting, essentially unrelated fragments, such as "celestial" and "earthly matter".

[19] This discovery is widely attributed to Newton, partially as a result of Newton's own efforts within the Royal Society, though historical evidence shows this narrative to be questionable (Yardımlı, 2016). To be accurate in the citing of Bohm, I will follow the popular narrative used also by himself.

The reason as to why the earthly/celestial matters mentioned by Bohm are fragmentations and why the determinations of the universal gravitation theory are not, lies within their causal structure. The cause of a "celestial matter" being as such was assumedly because it happens to exist, not bound to earth like every other daily object , but within caelum; "the heavens". And the cause of a matter residing in the heavens is likewise the fact that it is a celestial one. As we can see, the explanandum (i.e. that which is to be explained) and the explanans (the explanation) are the different phrasings of the exact same thing, providing the illusion a causal direction between two independent phenomena, when there is only one empirical category stated in different ways. As such, the moon's "celestial nature" is believed to constitute the cause of its being in the sky. However as shown on Fig.1, this is merely a circular or pseudo explanation i.e. a tautology.

Such accounts of causal relationships override the need for explanations, as to how for example the moon's celestial nature causes it to reside in the sky; it simply is given as a property of the category it belongs to, simply due to it being in the sky! This type of causal accounts are observable within descriptive categories of health and mental disorder, in the same manner depression is given as a cause for certain behavioral criteria without explicating as to how this is so; it is simply does because the category is defined descriptively by such empirical criteria.

The reason and the means for tautological explanation breeding fragments is as follows; When examined further it can be seen that the explanans (i.e the provided explanation) and the explanandum (i.e the thing to be explained) can be used interchangeably i.e. the thing to be explained can also operate as the explanation. This implicitly posits the thing the cause of itself, or self caused. Contrary to the popular opinion in the modern philosophy of science, this is not a logical problem, but a holistic necessity[20]. Likewise, proof of a notion is possible when certain relationalities within a concept (such as one between mass and gravity) determine the very nature of the individual concepts, so that the formative interaction (such as gravitational attraction) is shown to be caused by nothing external to these notions. (Conversely, if gravitation was equated to a determinate category e.g. falling, it could depend on me dropping an object, much like

[20] The whole has to have independence in order to truly be whole. As first but forward by Spinoza in his Ethics, substance, in order to be independent and therefore whole, can only be self-caused. Therefore scientific causal explanations concerned with the whole, require the form of formal causes delineating a totality,such as the self subsisting relation of mass gravitation. As such, questions such as "does mass cause gravitation, or is it gravitation which causes mass?" or similarly erroneous chicken and egg type formulations are rendered irrelevant.

therapists being able to “cause” health within clients when health is equated to a determinate category).

The problem arises when something which is posited as the independent cause of itself, has at the same time absolute dependence on a separate category of a like kind. In this case, for example, the cause of the celestial being of a matter can be stated also as its not residing on the earth, and vice versa. Thus, although their content as well as boundaries depend on one another absolutely, we have two seemingly “self-caused” or independent things which supposedly have no constitutive relation to one another i.e. they are shown as independent substances whose existences do not necessitate any kind of relationality with any other substance. And this comprises the reason as to why they are fragments, as multiple “substances” (as this and that object, state, process, or experience) giving the illusion of existing in isolation from each other and from the totality they constitute in conjunction, where in actuality they are absolutely dependent on one another.

4.3.3. The main issues with fragmentary explanation

As Bohm (1980) reports, in its essence the process of fragmentation is connected to a way of analytical thinking that is convenient and useful mainly in the domain of practical, technical and functional activities (e.g. when assessing the content of a forest in regard to particular berry one is trying to forage, one may interpret the whole content of the forest in fragmented terms of “berry” and “not berry”). The problem begins, Bohm suggests, with the extension of this process of fragmentation beyond the limits within which it works properly, e.g. into the domain of social affairs, where a human being can assess and act upon another according to his own fragmented conceptions of normality, which he believes to reflect the nature of reality. Such conceptions may pertain not only to the determinations of healthiness and unhealthiness, as we thus far investageted, but also to race, gender, nationality, religion etc.; likewise a nation may assess other nations in regard to possible economic or power benefits it may gain through their natural resources or land mass, resulting in war, exploitation, colonialism or genocide; or similarly, extending this process into the domain of science, where scientific disciplines, or the theories within these disciplines can be assumed to be concerned with separate realities.

According to Bohm, interdisciplinary fields, such as music therapy (Bohm provides the example of biochemistry), which are supposed to bridge the fragments between seemingly separate disciplines, may contribute to even further fragmentation by claiming its own separate domain of inquiry that is limited to its own terminology and methodologies. This hinders both the possibility of a multifaceted interdisciplinary development, as well as the intra-disciplinary development by undermining reflexivity with its foundations which are common to other disciplines. For example, if music therapy and epistemology research are believed to be unrelated, thought structures constituting our theories and methodologies are no longer categories which can be examined and/or corrected from inside the discipline. Because, the restriction on the content dictates the effort to be concerned with the content provided by music therapy's theories and methodologies, and this content naturally cannot suffice as a ground to evaluate its own limitations. In other words, it is not possible to evaluate structural issues with theoretical or methodological content, via the theories and methodologies which themselves are to be evaluated. This also provides the impression of disconnection with other scientific fields where the same structures are employed, and an effort to elucidate the nature of these structures by pointing to its similar application in for example physics, may be regarded as external to the content and interest of music therapy.

Here it is important to note that fragmentation is not the same as differentiation. Obviously, different scientific subjects, or different qualities or phenomena, exist in the world. Furthermore, human beings have to distinguish between phenomena in order to comprehend them (Özbek & Kotaman, in press). However, if we think about the previous example of the moon and the apple, it is certainly not suggested that unification eradicates their empirical distinction, and now we treat the moon and apples as the same. The error instead lies in assuming that the process of knowledge begins and ends with the perceived distinctions (Hegel, 1830). But as detailed thus far in the present thesis, descriptive categories are integrated with the world and our rationality insofar as they are reunited in the knowledge of their common essence and the reasons for this common essence to appear as distinct as such (e.g. why and how the moon does not fall towards the earth like an apple does). In other words, differences are integrated with the world and our rationality via the knowledge of their formative principles i.e. a priori laws.

Following this, Bohm (1980) notes that no endeavour can make sense if the implicit fragmentation itself is not overcome first, and as such science itself is in demand of a new, non-fragmentary, i.e. holistic understanding of the world. According to Bohm, the present approach of analysing the world into independently existing parts, which is in line with the now outdated atomistic theory, does not work well with quantum mechanics, arguably the most successful theory ever formulated to represent the nature of reality. This indicates that fragmentary explanation, the nature of which is detailed above, posits a danger within any scientific area, as all of them are concerned with the nature of the world. Naturally, the scientific discipline of music therapy is not exempt to the issues with widespread fragmentary worldview. The problems of incompatibility of isolated experiment categories with the nature of the actualities of music therapy interactions, recognized (Aigen, 2005; Kenny, 2006; Rolvsjord, 2010; Stige 2002) or unrecognized, exist also within the fragmented categories employed in music therapy theories and methods.

As partially discussed thus far, such incompatibilities within music therapy and other sciences of mental health include, but are not limited to the issues with notion of stigma, negative determinations of healthiness as a lack of disorder symptoms, positive determinations of healthiness as a specific state or process, pseudo explanations of unidirectional causality, poor ecological validity, tailor-made verifications of cause and effect relationships to serve subject oriented (reputational, financial or even religious) goals which consequently leads to the hollowing-out of scientific research and education. Their solutions, as argued, appear to be inextricably related to an attention to universal principles. For the same reason it appears to be counterproductive to assume, for example, that overcoming issues with mental health stigma is a matter of personal choice and will of the public, and that such issues do not naturally follow categories posited as isolated inessential fragments which simultaneously promote essential differences between human beings (i.e. denial of essentiality that unifies humanity as a whole)

The relation between fragmentary explanation and above mentioned dangers can be understood better when the nature of fragmentary explanation is examined in contrast with the nature of lawful explanation. For this reason, we will continue with the previous example of earthly-celestial matter, and distinguish the difference of quality provided by the advancement of the explanation into a lawful nature via the discovery of universal gravitation. Following this, we can

identify better the fragmentations within music therapy, their implications in relation to scientific development, as well as how an emphasis on universal law contributes to the solutions of such problems.

4.3.4. How does universal law unify fragments?

Returning to our example, we can see that it is evident since the discovery of mass gravitation, that there is nothing in the sky-residing "celestial matter", that is essentially isolated from the earthbound "earthly matter". We now know, if the moon had enough mass it would surely crash into the earth, as do objects made of "earthly matter". Consequently, we know the difference between the "fall" of an apple and the "movement" of the moon to be nothing but the particular manner they manifest the same gravitational principle, and as opposed to their previous discontinuous categorical differentiation, know this is to be how they actually differ. The distinction which maintains them as different manifestations of the same principle, is the same distinction which shows their unity as the necessary formation of mass gravitation.

Such understanding of unity in difference of determinations is possible due to lawful explanation's own epistemic form, where the various different constituting concepts are defined by nothing but their necessary relation to each other. Because of this, lawful explanation simultaneously cancels the fragmentary nature of descriptive explanation, and preserves the distinction between the objects of description (such as the falling of the apple and the rotation of the moon, or forms of mental disease and mental health).

In contrast to the relational boundaries of a lawful epistemic framework, which unite simultaneously while distinguishing, "purely empirical" (i.e. allegedly non-conceptual) categories such as celestial/earthly matter or, in a like manner, purely descriptive categories of mental health and illness, are immature boundaries. They separate the subject into fragments without explicating the formative principles of "how" they are united. Consequently "how" they came to be different fragments is also unknown;

We cannot state as to how matter that is able to reside in the sky indeed does so, in order to attain the status of being celestial instead of being earthly. In the same way, the disorder categories grant so that we do not need to explicate as to how someone happened to have "major depressive

disorder" and not an "anxiety disorder", or how they happened to manifest this disorder instead of having sound mental health. The categories simply are different without needing a reason which would account for their difference; and the verification of this simple immediate difference in the world can only be maintained by tautological explanation, which does not need to explicate any relational property with anything outside of its content: We can thus suggest e.g. Pekka is depressed because he is sad, and he is sad because he is depressed (van den Hout, 2014) or Jenni is healthy because she contributes to her society, contributing to one's society is an indicator of health because that's what healthy people do. As such, the categories fragmentary exclusion, and the fragmented nature of the world as a consequence of these categories verification, is accounted for only by circular logic which obscures the need for causal accounts as to why certain descriptive criteria is linked with the category in their formation, or as to how they emerge to be as they are.

Perhaps more importantly, such lack of knowledge for the reasons for their difference, indicates the absence of knowledge regarding how to truly influence such variance. For example it is evident that our species had not quite known how to make objects fly, prior to the knowledge that flying actually implies a sustained counter force to the gravitational force. We could manipulate their positions briefly based on our understanding of cause and effect relations, e.g. by throwing them up with a certain force, or utilizing wind resistance. These efforts which are based on cause and effect relations arise out of an understanding of "flying" as dependent on something other than itself; e.g. throwing or the wind. (similar to how currently "health" is studied to be dependent on interventions or approaches) However, the sustenance of flight had only become possible after the discovery of the essential, independent principle of gravitation, as a self-causing universal law. In short, only after the independent principle had come to be known, the causes for desired effects, as well as the desired effects themselves could be adapted in a dynamically evolving fashion to the necessities of the principle, and not the other way around; namely assumed causes being utilized to sustain a result the causal principles of which are unknown. And the same inability for sustenance naturally applies whenever categories (e.g. of health or disease) are defined absent of the knowledge of their causal principles.

As such, music therapy is influenced by the adverse effects of the application of fragmentary categories (we have investigated some of the implications of fragmentation for the notion of

health in the section 4.3.1). Ruud (2008) associates the overemphasis of properties of isolated objects such as "music", with outdated Aristotelian physics; in which dispositions of objects were explained in a manner which disregards their essential relationalities within the environment. For example, when music is understood within a fragmentary terminology (an example of this would be to regard music as the sum of it parts, or as "a huge collection of interactions and relationships generated by the essential components of music—tone, rhythm, harmony, dynamics, and form" (Crowe, 2004; Schneck, 1997, as cited in Amir, LaGlasse & Crowe, 2015). This now autonomous object first and foremost indicates a lack of understanding as to how it essentially relates to variations in human health. The inapplicability of such fragmented notions regarding music is in accordance with the objections of Kenny (2006), Aigen (2005), Rolvsjord (2010), Stige (2002) and Ruud (2010), against the research of music therapy, and/or music therapy as extraneous phenomena. When an understanding regarding the underlying principles is lacking from categories studied within the discipline, the application of such terminology to contexts of human health and music therapy education becomes problematic.

Likewise, as mentioned briefly in the previous section, categorical discontinuity of health/disease and discriminatory issues such as stigmatization are bound to go hand in hand. When a health problem is reduced to the content of a discontinuous category, this naturally results in a clear cut separation on the empirical domain between the "members" of the group and the "healthy" individuals. Consequently any incentive which employs this very notion, even if it is intended against stigmatization, may further the same marginalization due to employing the same non reconciliatory categories. Bohm (1980), regarding such incentives of overcoming discrimination states that; because fragmentation *"is in effect an attempt to divide what is really indivisible, in the next step such an attempt will lead us also to try to unite what is not really unitable"* (p. 20). It is indeed incongruous to first define a demographic by a marginalizing notion, one that is essentially discontinuous with the rest of human beings, and then try to integrate "this group" of people as though the notion which clusters them together was sufficient in representing them in their actuality to begin with.

The critical point to consider is that the carefree verification of erroneous categories like celestial or earthly matter on grounds of self-evidency or "common sense" is not a trickiness particular to

the identification of objects of physics or of natural sciences. Rather, it is a natural predisposition of thought inherent in human beings, namely the ordinary or natural consciousness (Özbek & Kotaman, 2011). Özbek and Kotaman defines it as the primitive mode consciousness which presumes its perceptions or judgements to be the reality itself, and which tries to devise solutions based on such perceptions and judgements, without minding their rational, relational, formative order, i.e. their lawful principles. Likewise Yardımlı (2013) outlines natural consciousness' dependence and overemphasis on changes occurring in sensory perception, due to its lack of knowledge regarding the actuality of its objects. Naturally this inclination of thought happens to be a liability in determining the true nature of not only objects of natural sciences, but objects of the world in general, as well as of psychology, music therapy and of everyday life.

Now, it is likely and sensible for the reader to ask "how, then, can we assert that empirical categories as they are currently posited, do not reflect realities of individuals, when there are so many cases embodying the same diagnostic or empirical features?", which will be attempted to be answered promptly.

4.3.5. The effortless verification of erroneous fragments as empirical realities

To elucidate the manner in which these erroneous categories affirm themselves in the world, consider the following example; Prior to Archimedes' discovery of the principle of buoyancy, a descriptive classification similar in nature with "celestial and earthly" matter (for both its illegitimacy and assumed certitude) was in use for the kinds of matter which were observed to float on water and the kinds of matter which were observed to sink. It is evident now, as ascertained by the law of buoyancy, that they are in fact not defining factors of different types of matter, (such as steel being a "sinking type of matter"), and floatability itself is not contingent on the matter type. Rather, as we know, floatability of matter in general depends on its correspondence with the buoyant force proportional to the amount of water it is able to displace. Knowing this, people are now able to make hundreds of thousands of tons of steel float without difficulty. Which means, the observations and measurements that had been made while the truth of this relation was still yet to be known, although seemed to be verifying the category of "floating matter and sinking matter", did not ascertain at all if the material could objectively float or sink, or that floating as a phenomena depended on the categories of matter. Thus the observers

were, in fact very effortlessly, verifying empirically an erroneous taxonomy to be corresponding to actuality.

We can now say in hindsight, that in contrast to the possible widespread belief in the pre-Archimedes era, when a measurement of such nature takes place and a steel object fails to float on water, it does not mean that steel is essentially a "sinking type of matter" or vice versa; that sinking is a phenomenon that is dependent on the matter type. Rather, it means that there exists an inductively formed category "sinking matter", with its constitutive empirical measurement criteria, "objects which sink"; and its counterpart "floating matter" which demands its objects to be observed to float. *The tragedy of the steel object is that it was simply destined to land in the empirical domain of either one of the arbitrary categories, for the constitutive criteria of the abstract categories allowed no other possibility for it.* The categories by which the results were to be interpreted, foretold their own empirical validation both at the bottom and the surface of a lake; if it sank, it belonged to the sinking category; if it floated it was indeed a floating type of matter.

Yet the fragmented categories were not determined on objective, unifying grounds to begin with, as buoyancy itself was not investigated objectively, i.e. as a manifestation of a necessary property found in fluid interactions. While we now know the phenomenon of sinking, as well as floating as moments of an independent formative principle (i.e. as the buoyant force of the fluid failing or succeeding to counterbalance the weight of the object), they were previously believed to be fragmented categories contingent to the kinds of objects. Pre-archimedes humanity was indeed able to observe this inductive association in the world, through which they could affirm their understanding of the "apparent" contingency of floating on the matter type.

However, their ability to be empirically verified whenever their constitutive criteria were observed in the word, was not sufficient to ensure that they were actualities of the world. The descriptive categories were not actual ones, because they had not been defined in terms of a provable, conceptual rationale, such as the above mentioned logical relation of the buoyant force and the amount of water an object is able to displace. Instead they were generalizations of an inductively formed causal link. In other words, they were not concerned with demonstrating the rationale as to why and how "sinking matter" sinks instead of floating. Instead, they relied solely

on cumulative observation made by employing the same erroneous categories; the definition which comprised the category of sinking matter, was that it included objects that are observed by subjects to sink. Conversely, sinking objects belonged to this category, because the category was defined in order to include them. Naturally, when this is the case, whether the actual object is found to float or sink, the categories formed in the above mentioned manner will simply confirm themselves as valid,i.e. as realities truly existing "out there" in the world.

By this we can answer the question "how can we assert that empirical categories do not reflect biological realities when there are so many cases embodying the same diagnostic features?". All we need to do is to raise the follow up question; How could we assert the sinking/floating matter taxonomy does not reflect physical reality when there were so many cases where such categories were observed? It is possible to provide an indefinite number of significantly more drastic historical examples, in order to demonstrate that sensory information does not simply "acquire" a pre-given objective reality that is out there.

In short, when defined solely on the grounds of their own empirical measurement criteria, any arbitrary category can find its empirical reflection in the world, and thereby confirm itself as an existing reality in the observer's perception. This brings us to the conclusion that mere sensory perception does not guarantee objectivity, and we also need provability of conceptual relations, to ensure objectivity in scientific theories and research.

4.4. Mental health sciences' need for objectivity in the form of provability

As noted several times thus far, objectivity of natural order, or law, is indifferent to any type of agreement made by authorities of a scientific field. Accordingly, it cannot be found in paradigms which render the content of core concepts of a field dependent on intra-field consensuses. Furthermore, such misrepresentation of objectivity, knowingly or unknowingly, makes their relevant field vulnerable to un-scientific agendas.

Similar to objectivist music therapy, psychology also stands as a proto-scientific field where the notion of objectivity is entrusted with the positivist methodology and consequently the positivist epistemology. Due to its wider popularity, psychology has been shown more frequently than music therapy to be subject to misconduct by professionals who intentionally or unintentionally

exploited the vulnerability of this epistemology and methodology; by e.g. exposing certain research or individuals who has "bent the truth", in order to further their prestige or financial interests (Chambers, 2017). Such professionals, however, conveniently affirmed the "objectivity" of their work, supposedly because they sufficiently adhered to certain methodological requirements.

More than half of the 100 studies who got published 2008 in three top psychology journals did not produce the same results when replicated (Open Science Collaboration, 2015), and from 28 landmark experiments which shaped the development of psychology only 14 yielded the same results (Klein et. al, 2018). Chambers (2017) suggests that Personal rewards such as being published in top journals, pulling in grant funds, being financially supported by businesses or attracting applause may guide individuals to bend the truth, and even those who were motivated by scientific pursuit can be led astray by excessively wanting a particular method to work, or to protect other kinds of interests. Albeit, they could do so only within a system which does not view proof as an applicable concept, and in which the nature of an "objective" i.e. independent conclusion depends on the configuration of an experimental design.

In such a system, where results which dictate scientific progress depend on interpretations of correlations regarding the verification of customized measurement categories (i.e. on plain subjective accounts), and where the warrant of objectivity of a research relies primarily on statistical sophistication, vaguely defined concepts and their unjustified operationalizations may naturally run rampant. Within such an environment, it does not take much to design correlational research to verify results aiding private agendas. A popular research design within positive psychology constitutes a good example of generating categories to affirm the desired correlations to provide the illusion of a pragmatic causal relationship, in just four simple steps.

- ➔ Cluster together empirical criteria to indicate a category; "Positive Trait X".
- ➔ Generate the inverse category that consists of the reversed empirical criteria for "Positive trait X". Name it "Negative Trait Y".
- ➔ Measure a population for the lack of "Positive Trait X", and for the presence of "Negative Trait Y" subsequently. (the results, of course, correlate, because we have successfully measured the same category twice in different names)

- ➔ Publish these conclusions to the public in the form of "Trait Y inhibits X!" or "the cure for Y is X!" or "These are the thieves of X!", deceptively suggesting a pragmatic causal relationship (e.g. "experts have found the reason for 'the lack of 'X', it is 'the lack of X'!")
- ➔ (Optional step) Declare ourselves as the world's leading expert on 'Positive trait X', publish books, hold seminars and workshops on the discoveries enabled by our illuminating research.

Although provabilty is not currently considered as a possible solution to the current discussions on "bending the truth" in research, in such an environment where objectivity can be "adjusted" in relation to the purpose of being published, the literature can quickly be filled with *"unchallenged fallacies"* (Chambers, 2017, p. 50).

In contrast with the possibility of individual profit provided by positivist methodology, when lawful relationalities are discovered in a scientific context, they are immediately recognized as belonging equally to everyone. Therefore their discovery cannot benefit an individual or a group more than others, and thus gives no incentive or possibility for manipulation. One cannot sell the law of mass gravitation, and cannot market the principle of buoyancy, the essential relation between survival and reproduction, or the essential relation between education and ability to produce collective value. Within a paradigm where the content of science is isolated from universal a priori relations due to their inability to be perceivable via senses, the content of science automatically steers away from consisting of properties inherent in the world. Consequently the discoveries no longer belong to everyone as ever present properties of what things are. Only then, outcomes become merchantable to those who do not possess them, so that they are also able to obtain results that the experimenters now found out how to obtain. In other words, within this paradigm, the content of science as the common knowledge of humanity, are replaced by techniques of prediction as intellectual properties offering the possibility of profit and individual benefit.

In accordance with this issue about disregarding fundamental conceptual relations, Bunge and Ardila (2012) argue that, in order for psychology (and by the same rationale, music therapy as well) to advance beyond its current proto scientific stage, mathematical statistics cannot remain as its main formal tool. Statistical sophistication, he asserts, is unable to compensate for theoretical indigence or experimental sloppiness (or in certain cases, as mentioned above, ill-intention). He suggests that psychology (and similarly relevant disciplines of such form, such as

music therapy), need most of all "substantive and, if possible, deep theories unveiling the mechanisms of behavior and mind, much as Newtonian mechanics unraveled those of motion" (Bunge & Ardila, 2012, p. 85). As theories become more conceptually adequate, the need to use sophisticated statistical techniques decrease (Meehl, 1978 as cited in Bunge & Ardila, 2012). The reason, Bunge and Ardila suggest, that very few physicists have heard of tests of significance (let alone Bayesian inference) is due to scientists of physics rarely remaining satisfied with formulating statistical hypotheses in the form "X and Y co-vary". They instead see hypotheses in such forms as programmatic hypotheses to be improved and eventually replaced with substantive hypotheses, because physicists learned long ago that it's much more worthwhile to invest in conceptual refinement than in data processing.

Conceptual refinement goes hand in hand with the notion of proof, as proof is the explication as to how a relational quality concerning a notion is derived from the notion itself, i.e. is not an external quality to the notion. This consequently fulfils the criteria of independence for the objectivity of knowledge. For example the proof of Pythagorean Theorem consists of showing the Pythagorean relation is an inherent property of a triangle, as opposed to its contingency to certain triplets of length as believed previously by Egyptians or Babylonians. Or proof of the buoyancy theorem consists of showing buoyancy as an inherent property of fluid interactions, as opposed to depending on types of matter. None of these self dependent principles can be achieved by showing correlational data, e.g. by showing, in a statistically sophisticated manner, how certain types or shapes of matter correlate with floating. Buoyancy would be misunderstood if it was shown as a causal relationship where an external factor such as matter type or shape 'imposes' the activity of buoyant force, as it would imply buoyancy principle's dependency on factors other than itself. It is easy to see that this would be untrue, as we know, not only those who float, such as wood, but all submerged matter is subject to buoyancy (such as the reader who is submerged in air). Yet the correlational research we are accustomed to still aims exactly at this kind of structure in results when explaining natural or social phenomena, while hoped by some, that this kind of correlations can accumulate and reveal actual causal relationships in the world. Accordingly, the soundness of this assumption regarding the relationship between accumulation of correlations and causal relationships will now be discussed.

4.4.1. Isn't cumulative empirical experimentation the only way to achieve causal lawfulness?

Objectivism is nowadays used interchangeably with empiricist methodologies in the mainstream research and education of mental health sciences. The general assumption is that sensory observations give objective, neutral facts which are not tampered with by the knowledge or the lack of knowledge of the observer. As these modest observations accumulate, it is generally believed that they will pave the way for general principles.

These general principles however are not provable conceptual rationales, but cause and effect statements regarding independent elements, therefore are still concerned with fragments that are defined independently of their relation to each other and with the whole. In other words, neither the positivist, nor the post positivist paradigm is concerned with uncovering the universal principles pertaining to their object of inquiry. They are instead concerned with statistical correlations between appearances, and these correlations are believed to gradually produce more and more "objective" inferences with further observations.

However, as Ozbek & Kotaman (2011) exemplify, Archimedes did not discover the law of buoyancy as a result of taking more baths than his contemporaries, or observing more objects in water than all the people which had lived before him. Humanity *had* been observing any number of objects floating or sinking *for millenia,* yet he was the first to acknowledge this principle. Then, it can be suggested that clearly something more than observation is at work in the discovery of objective knowledge. They illustrate this in the following example;

> *"...The falling of a solid object, in this case a lighter, is an empirical experimentation, it falls the first time, the second and the third time alike. We can thus arrive at an inductive generalization that this lighter falls when it is dropped. Only when this observation is linked deductively with its pertaining law we are able to comprehend the manner in which the whole works through its particulars; that is to say, we can know the reason as to why the objects alongside the lighter, such as a ball or a book in fact fall when we drop them, and in which cases they wouldn't"* (p. 67−68, underline is mine)

Therefore, it can be argued that repeatedly observing falling objects is not sufficient in ascertaining the actuality of the reasons for their falling. When such observations are defined by constructs shorn of the concept of gravity, the poverty of the notions naturally determines the

nature of the perceptions. Humanity had been observing the moon, falling apples, sinking and floating objects, again, for millennia. Still, the issue of unscientism laid in the constructs which we have used to cognize and represent our observations.

Evidently, it was not an issue which could be resolved by more observations utilizing the same erroneous constructs; the need was to discover the universal relationality which was already present in the observed phenomenon, yet could not be brought to light insofar as insufficient constructs were employed to make sense of the sensory information. Thus, this proves to be an issue which could be overcome, not with more perceptions that are shaped by the same former constructs, but with an objective understanding transcending prior conceptions and therefore prior perceptions. This could then permit the observations to be comprehended through the scope of entirely different, integrative, objective concepts.

In light of this, we can reason that, only when we know the governing principles of phenomena we can accurately determine in which cases they wouldn't occur. Consequently, In the absence of knowledge regarding how health problems such as mental illnesses occur and conversely in which cases they wouldn't, it proves to be difficult to delineate an accurate description as to what would indicate remission of an illness. For this reason, establishing the validity of treatment methods based on correlations between appearances can be misleading. High recurrence rate that is reported for health problems such as depression (Burcusa & Iacono, 2007), schizophrenia and bipolar disorder (Ayano & Duko, 2017), eating disorders (Berends et al., 2016), addictions (Sinha, 2011) and others, therefore seems to be a natural consequence of treatment methods devised in such fashion, for the assessment of their remissions is akin to assessing whether or not a rocket could succeed in sustaining flight, without having the necessary knowledge of universal gravitation.

Therefore, when it is acknowledged that observation is not the simple act of receiving the pre-given objective sensory qualities of what is "out there", the claims for it being the rightful representative of objectivity become questionable. Ozbek and Kotaman (2015) in response to this claim, argue that it would then be suitable to nominate cats as better candidates for discovering objective knowledge, due to their increased sensory capacities and accuracy. However, as evident whether or not an observation is informed by an objective knowledge rests

on the provability of the rationale that is employed to make sense of the sensory information, and not on the fact that it simply went through a process of sensory-cognitive observation.

Even when categories do not interconnect with universal principles, pragmatic endeavours may still strive for utilizing the limited affordances descriptive categories permit. They may maintain the illusion that they provide genuinely beneficial results, such as symptom removal treatments for OCD, yet as Wampold (2017) notes on the subject, it can be "*very misleading to just measure targeted symptoms"* when reduction of symptoms does not indicate improvements in other areas, such as social integration or intimate relationships. In other words, in absence of the knowledge regarding underlying principles, this pragmatism is confirmed by nothing but the built in description of the categories themselves, i.e. on the grounds of self-evidency or "common sense".

Blacking (1973), in his How Musical is Man?, recognizes abovementioned handicap of positivistic pragmatism in regard to music, stating his concern to be "primarily with what music is, and not what it is used for", as "if we know what it is, we might be able to use and develop it in all kinds of ways that have not yet been imagined, but which may be inherent in it" (p. 26). However, the alleged requirements of scientific inquiry of music in the modern day, demand it to be investigated as an independent variable in the form of an intervention technique or a neurological input in randomized experimental trials. This positivist rigor renders questions such as "what is music" or "what is the nature of its necessary relation with human health" as trivial in the study of music (Ruud, 2006); in this approach, as long as there exist within the experimentation a variable which has the appearance of music, it can be claimed that music is being studied scientifically through the study of its observed effects.

The rapid commercialisation and of music in the last century in the west is complementary to the above mentioned view of music as something which exists outside of human beings (Horden, 2016; Ansdell, 2015), and which, thereby, can "cause" in them certain pragmatic "effects". However, adhering to the practical requirements of the times, when it comes to scientific development, can sometimes be impractical at best. Cohen (2009) in relation to this, suggests a redirection of scholarly effort away from gathering correlational evidence and towards providing provable principles. As long as the governing principles remain a mystery, he claims, any

evidence which could otherwise contribute to the status of music therapy will fail to be of impact; if a clear understanding of the underlying factors to explain effects or correlational outcomes is not provided, *"science and society become doubtful and dismissive of even reported positive findings"* (p. 48). Thus, it can be argued that the reason as to why experimental evidence without a truly objective theory fails to deliver the intended impact is because the paradigm uses local events to explain general relations, whereas the local correlations are in need of explanation themselves.

Given that the science of music therapy aims to be engaged with continuous development and discovery in relation to actualities regarding contexts of interest, it cannot be satisfied within a correlational framework which are afforded by exclusively descriptive categories. Thus, just as for any other scientific discipline, for music therapy as well, an attention to the inherent relational properties of the notions (e.g. health, music and therapy) proves to be vital. With such attention, a provable kind of objectivity can be of benefit in guiding mental health theories and research, and in many more areas we are currently unable to imagine.

5. CONCLUDING THE ARGUMENT

In the first chapter, we discussed the legitimacy of concerns voiced by certain music therapy scholars regarding the appropriateness of current theoretical status of the field. When compared with the identified genuine requirements of scientific development, the authors' demands were found to be conducive for the development and establishment of music therapy as a science. Theoretical emphasis on "a priori universal order" was then identified as the common point which answers similar demands within other established scientific disciplines. In the fourth chapter, we investigated how such emphasis is able to provide solutions to aforementioned issues, which were now identified to be essentially linked to each other as different aspects of the same scientific necessity that is universality.

Firstly, we have clarified how the much criticized diagnostic categories of the "medical model" of therapy shares common properties with the critiquing "positive" models. And contrary to the popular argument about the problematicness of the symptomatic classifications themselves, we argued, these common epistemic properties to be the main issues underlying many of the critiqued problems of the symptom based classifications. We then have examined how such an epistemic framework may work against the sensible efforts of emphasising client capabilities as opposed to treatment techniques.

We have then shown *how* the knowledge of the underlying principles of the notions of interest is an essential requirement for addressing the manifold problems with exclusively descriptive categories. We suggested that emphasis on such principles could assist the theoretical work within the field to transcend being helpful perspectives to music therapy practitioners and students, and render them valuable also for the public as well as related scientific fields. Furthermore, we outlined the relation among such principles with issues which may previously be believed to be unrelated to their knowledge, such as stigma, misconduct in research, high recurrence rate etc. Therefore, we suggested the ascertainment of universal principles to be the chief purpose of the scientific investigation of disciplines concerned with human mental health, and consequently of music therapy.

During the process, we have investigated in detail as to *how an act of* unification provided by such principles is able to assist with the issues of fragmentation brought about by exclusively descriptive categories. With the examples provided from the field of physics, regarding our understanding of the nature of the world prior to and after the discovery of certain laws, parallel issues with non lawful notions employed in music therapy were indicated.

As such, issues regarding the incompatibility of diagnostic notions with the therapeutic actualities of music therapy, as were also noticed by a number of the music therapy scholars opposing the positivist therapy research, have shown to be resolvable within the current scientific framework. As such, it is indicated that there is no need for music therapy's emancipation from the unified system of science, in order to stay congruent with the actualities of its content; that it can safely establish itself in this system without compromise, as the system of science provides that the holistic relationality between health, music, the therapist and the client not only can, but must be objectively ascertained.

Accordingly, 'Professional consensus' as the sole certifier of legitimacy for exclusively descriptive categories, due to its inherently subjective nature, is found to be insufficient in ensuring scientific objectivity. The notion of provability is identified as the necessary requirement for objectivity to be genuine. The "pragmatism" of approaches with and without a provable foundation is discussed, in order to further emphasise the undesirability of goals posited in absence of the knowledge of their objective nature. The adequate nature of the evidence of success therefore is shown to be primarily linked to ascertained universal principles, which alone provide the possibility to differentiate between actual and imagined success. To support this, the widespread positivist assumption of "cumulative experimental rigor being the key for achieving objective causal relations' is challenged, and shown to be incongruent with the history of scientific development.

It is shown that the relationship between objectivity and observability is not mutually affirmative and that with necessary objectivity in the form of proof, the need to observe e.g. "celestial matter" as essentially separate from "earthly matter", or mental health from mental disease from 'floating matter', as discontinuous categories is eliminated.

*In the same manner, present thesis claims, through establishing necessary objectivity in explaining the formative principles of mental health and therefore its healing, first and foremost, the deceptive categorical discontinuity between mental disease and health can be overcom*e; a discontinuity which, like many others, exists solely in perception and not in the essence of human beings. Accordingly, alongside dignifying human beings' inherent relational as well as political capacities for health, theories may also dignify human beings' rational capacities by producing coherent and provable reasons for their statements. Consequently, restraining scientific efforts as well as institutional and educational resources to the continuation of the unwarranted as well as unwarrantable disempowering of clients of mental health care, can be history.

Moreover, it is our conclusion that the same principles of mental healing will also serve the elimination of the alleged discontinuity between musical healing and non-musical healing of the human psyche. As many music therapists point out, clients who attend to music therapy have needs no other than the essential human needs that other people have, and what music therapy inherently means is to employ musical interactions in service of such needs. Such an understanding of music therapy outlines it to be an application of musical interactions where their implicit health promoting properties of music are understood and made use of explicitly, rather than a strange medium of therapy in need of recognition. *Then, once the objective reasons as to why this millennia old practice has always been ameliorative to the human psyche are proved on rational grounds, music therapy can cease to be an "alternative method" trying to "squeeze in" the medical literature through methodologies which demand its decontextualization.*

6. FURTHER DIRECTIONS: EXPECTATIONS FROM A MUSIC THERAPY THEORY INTENDING TO EMPHASIZE A PRIORI LAWS

Thus far we have identified that certain music therapy authors' concerns with a lack of a theory, indicate a need for a certain meta-theoretical stance which emphasizes a priori universal relations. Such a stance is strikingly unfashionable not only within the interpretivist paradigms of social sciences in general, but also within the positivist paradigms of mental health. Unpopular as it may be, manifold issues which present paradigms have been unable to respond (such as issues regarding construct validity, scientific recognition or interdisciplinary integration), are shown to be resolved within matured scientific disciplines through an emphasis on such universal relations. Consequently, it has been outlined; that there *could* be a need for such an emphasis for music therapy; the concrete epistemic and practical issues within the field which demand such an emphasis, as well as the means by which this emphasis is proven to be instrumental in the addressing of these issues. Accordingly, the last chapter of the thesis is dedicated to specifying the form by which a music therapy theory can emphasize a priori laws regarding health and music.

We will carry out this specification by clarifying what can be expected from a lawful theoretical account *per se*, and for this we will receive aid from the very opinions which contest the validity, applicability and desirability of the notion universal law; Because a great portion of these opinions misrepresent the notion, by outlining such misrepresentations, we may have an accurate vision as to what a lawful theory of music therapy can and should provide. Simultaneously this will assist in addressing the concerns that are highlighted by both the positivist and interpretivist paradigms. Consequently, we will be able to conclude the argument of the thesis, by clarifying what is expected from a theory when we argue for the necessity of “theoretical emphasis of a priori psychological laws”.

However, it is important to acknowledge that the reasons for scholars of music therapy or other relevant sciences to either explicitly disavow, or to not take any notice of lawfulness can stem from concerns with certain requirements of scientific development to which lawfulness is presumed to constitute a threat. This is why it is especially important to ascertain whether or not that which is believed to be an obstacle to such scientific requirements is actually the notion

itself, so that the discipline is not cautioned against a meta-theoretical stance which, on the contrary, could be complementary to such requirements.

6.1. Misconception - 0: Laws are human constructs

The most prevalent confusion regarding scientific laws is their equation with judicial rules or regulations written in law books, or other relevant types of human made propositions. The difference, as Salmon (1998) notes, while human beings have the ability to violate such laws, were it possible to violate a universal law, it would mean that it is not an *actual* law of nature (Salmon also cautions the reader against being entrapped by a *"bad pun"* through the belief that laws of nature involve a legislator or presuppose *"a supernatural lawmaker*" [p. 37]). Thus, although by now it should be fairly obvious, we can note that a lawful theory in music therapy does not express an interest in establishing rules or regulations for the practice[21]. In the same vein as established scientific theories of matured sciences, it is instead interested in the notion necessity in the formal sense of the concept: *"the principle according to which something must be so, by virtue either of logic or of natural law",* something which *"cannot be otherwise"* (from Oxford Online Dictionary ["necessity", n.d., para. 3]).

Similarly, the notion of necessity employed in such theories, does not convey a meaning of necessity in the sense of *"whatever we happen to take as, or believe to be, necessary"* (Cavell, 1979, p. 119). Cavell, notes that such "anthropological account of necessity", as employed by Wittgenstein and the likes, can be disappointing; because in such accounts, as Cavell points out, *"it is not really necessity which [is] given an anthropological view of...for it is part of the meaning of that concept that the thing called necessary is beyond our control"(p. 120)*. In other words, it is not as much the case that constructionist accounts of necessity (such as one used by Cavell's Wittgenstein) provide an anthropocentric treatment of necessity as that they *undermine* our ordinary[22] conception of it (Cassam, 1986).

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[21] E.g. "thou shalt not kill thine client's groove".

[22] To oppose the notion of "ordinary" conception, the anthropocentric or linguistic-constructivist accounts may suggest that there can indeed be multiple socially constructed meanings for the same term, including the term "necessity", thus asserting that the notion does not have to denote one single meaning. Ironically, the intended meaning of this assertion relies entirely on the meaning of the *ordinary* concept of necessity; as it indeed suggests that it is not "necessary" that the term has to signify a single meaning.

Therefore, we can say that a lawful theory of music therapy is concerned with a necessary relational order which is not a social construct originating in the human mind or in our capacities for language. In contrast, it is concerned with an order whose actuality is independent of our abstractions or constructions, similar as to how gravitational relations were readily present prior to their conceptual formulation by humans[23]. This interest with the a priori provides the theory with the possibility to strive towards proving that its relational statements correspond to this thus acquired objective reference point, e.g. the inherent orderliness which forms the essence of the phenomenal relations pertaining to music, health and interpersonal healing.

6.2. Misconception - 1: Scientific laws predict outcomes *(identically, scientific laws are invalid due to their failure to predict outcomes)*

Within the complexity and ceaseless flux of the sensations regarding the natural world, the discovery and comprehension of certain necessary relations, have provided human beings with a perpetually stable foundation on which they could confidently build their endeavors. As such, it is provided that our species desires in relation to life (from agriculture to space travel; from composition to creation of musical instruments) are not at the mercy of random, orderless changes in nature, and on the contrary, are supported by nature given that we understand these necessary orders (Özbek & Kotaman, 2012, 2015, in press). Because these relational orders are not chaotic, their comprehension (such as the order pertaining to vibration and sound) ensures us to proceed with, as well as to advance our desires at our heart's content (such as transcending the limits of artistic creativity via developing ever more sophisticated instruments or the limits of their audience via transmission technology).

This however, is not an adequate reason to claim that "laws are for predicting the results of natural events". Nor is "their" inability to predict them an adequate basis for the notion's invalidation (e.g. when it has been found that "they" in fact lie about the events in the natural world [Cartwright, 1983]). As noted previously, the law itself is not the signifier; the statement or the linguistic entity that is written in the science text (Salmon, 1998), rather it is the signified necessary order of the universe pertaining to whichever aspect of it is being inquired (e.g. sinusoidal waves, electromagnetism, acoustics, aesthetics, interpersonal relationships, societal

[23] Provided that the human species were not disintegrated particles prior to the scientific formulations of the concept

living). As such, they neither are intrinsically "for" prediction, nor are they capable of lying[24], as they are inherent relational properties of the world.

Evidently, increased comprehension of these principles can enhance our capability to monitor their formations. Thus these comprehensions *can* be used to predict and control processes or outcomes. However, the increased statistical likeliness of a successful prediction based on a lawful statement, does not warrant the misrepresentation of the notion as one that is equal to statements of predictions concerning cause and effect relations. Scientific laws can be involved in the prediction of outcomes, just like memories, opinions, statistics or deductive rationales can be involved in the prediction of outcomes:

For example, Bruscia (2000) borrows the term *"the implicate order"* from David Bohm's ontological investigation of quantum theory, and suggests it to be the *"foundation of all meaningfulness, both individual and collective"* (p. 1). This primary source of all meaning, according to Bruscia, *"exists a priori, and independent of our constantly varying constructions of it",* and it is simultaneously *"the foundation of meaning of life that [music therapy] clients seek"*. Because the "experience" of this implicate order is believed to be a meaningful outcome within the therapeutic process, Bruscia, informs the interviewer and readers that *"this happens when client and therapist open up fully to the music"* (pp. 6–7). Thus, although the state or process of "opening up fully" is defined on more or less ambiguous terms (as it is a descriptive definition of Bruscia's own subjective impressions) it is nevertheless suggested to be an influencer or "predictor" for the desired "outcome" of meaningful experience. Wampold and Imel (2015), this time based not only on subjective impressions but statistical analysis of multiple self reports, indicates therapist's confidence in the efficacy of the specific treatment model to be an influence in the prediction of a successful outcome of psychotherapy. Or Rolvsjord's discussion (2010) suggests, this time on deductive grounds, that because sexual or

[24] The concern with laws not telling the truth is in reference to relational statements provided by scientists. It can be asserted that many of such statements in the history had not reflected the truth, if a refinement or improvement provided by another scientist is seen as an isolated effort from the improved statement. Yet for example the statements regarding the planetary movements, put forth by Aristotle, Ptolemy, Kopenicus, Galileo and Kepler, are a combined effort where each successive statement provides a truer, more accurate form of the same necessary relation. Such a historical process of refinement is recognized to be a joint effort in each contributing scientist. Therefore, history of science shows that these statements regarding a priori relations, rather than being falsifications or a collection of incommunicable "incommensurable paradigms" (Kuhn, 1962), are individual moments of development in the same rational thinking process of humanity into truer, more comprehensive expressions of the same necessity (Yardımlı, 2016).

domestic violence is essentially a societal, cultural and political problem, addressing their relevant problems (e.g. PTSD) within an exclusive frame of intra-psychic diagnosis, is bound to be insufficient in producing meaningful solutions.

In sum, the authors, in favor of promoting successful or meaningful experiences, propose certain conditions or relations to be conducive or unconducive to such outcomes, i.e. to be likely to increase or decrease their chances to occur. Furthermore, much like lawful rationales, such propositions may also be employed by others in order to influence individual outcomes, in varying degrees of efficacy depending on their clarity and correspondence to actuality. However, the usage of memories, opinions, impressions, statistics or deductive rationales for predictive purposes does not render them constructs with the sole purpose of prediction. Likewise, despite the historically evident efficacy and importance of proven deductive rationales of universal laws' in assisting prediction, equating them to statements of cause and effect predictions is not justified.

This is an important distinction to make for multiple reasons. Firstly because, with the emerging visibility of incompatibility between "relational processes regarding music or therapy" and "the notion of predicting (or imposing) predetermined empirical appearances", scholars, students and practitioners who take for granted that universal orders are equated to statements predicting cause and effect, can understandably feel obliged to adopt the complementary stance of relativism. For example the scholarly emphasis against predictive frameworks, such as Ruud's (2008) criticism of positivist methodology in music therapy, argues for the advisability of a *"non-predictive frame, in accordance with an ontology of music which places more emphasis on how interpretation and narrative help people to construct meanings"* (p. 5). Likewise Garred (2006), due to his sensible concern with holistic and interpersonal emphasis cautions music therapists against a *"strictly scientific approach"* (even though science is not the equivalent of the predictive efforts of *positivist* science) and suggests that the practice instead *"must partake of the qualities of arts activity"* as "*therapeutic change happens primarily in and through relational processes"* whose outcome cannot be predicted (pp. 256–258).

However, because universal laws are not means of prediction, a caution against positivist methodology does not necessitate scholarly "emancipation" from investigating ascertainable relational principles regarding the whole. Likewise, as Bohm(1987) articulates, neither does it

necessitate a dichotomy between approaches of arts and science, both of which can be holistic explorations (this assertion of Bohm will be detailed in section 6.4).

Because the lawful accounts are investigations of conceptual refinement and proof, and not propositions of highly likely cause and effect relationships, there is no reason for a lawful music therapy theory to be incompatible with the criticisms of positivist prediction emphasis provided by Ruud (2008) and Garred (2006). Therefore, we can clarify that the expected form of statements in such a theory is not "the musical action X yields the health effect Y", just as the law of universal gravitation is not in the form provided by "loss of support causes an apple to fall". Absolute necessity and objectivity of relations, whose emphasis is suggested to be significant in the present thesis, belong exclusively to the universal concept[25]. Likewise relations regarding the local or the phenomenal are subjective and probabilistic, thus cannot be truly necessary. Therefore such statements of cause and effect, which cannot be both universal and true, do not constitute the focus of a theory exploring universally necessary conceptual relations.

6.3. Misconception - 2: Lawful statements which are concerned not with prediction of phenomena but with the "conceptual dimension", are useless in the real world

Our increasing success with the prediction of affairs as a species as well as its increasingly rewarding outcomes, including the medical success on many diseases, mass communication, genetic engineering, artificial intelligence and various technological advancements, have created excitement and expectancy for science to predict and control benefits of the same kind in any area to which it pertains. Medical authorities similar demands for demonstrations of predictive power, as Ruud (2008) summarizes, mandated models which are compatible with the evidence-based regime, such as cognitive-behavioural and experimental paradigms, in order for the discipline to acquire legitimacy. Consequently, just as psychology and psychiatry, most part of music therapy is also under the influence of positivist science and a respective effort of establishing likelihood of cause and effect predictions. Accordingly, like any other discipline, the

[25] E.g. the magnitude of the sum of all angles is a universal necessity of the "concept" of triangle; the same necessity is signified by units such as 180 degrees, 200 grads, π radians or simply a straight angle. This does not indicate that, for example, drawn or built triangles are expected to correspond exactly to such magnitude, as there will be methodical imperfections as well as a constant intervening from the environmental factors (Özbek & Tekeli, 2017)

science of music therapy is not exempt from questions arising from both within and without the discipline, such as “if a theory can’t really predict, what is it good for?” or “can a discipline be scientific if it can’t predict outcomes?”.

As we already noted in the previous section, a lawful theory is concerned with the relations of universal concepts, instead of cause and effect relationships of determinate phenomena. This may be difficult to conceive, as most people are accustomed to the notion of scientific laws through laws discovered within the science of physics which stands as the epitome of predictive rigor and success. However, David Bohm, in *Science, Order and Creativity* (1987), notes that physics in its essence is not an effort to *“produce formulae that will correctly predict the results of experiments”,* and attributes the shift of purpose to mathematical formalism’s large scale adoption by physicists in the 20th century. Within that period, Bohm reports, scientists began to be uninterested in the theoretical concepts’ connections with the totality of a system, and started to rely heavily on mathematics whose general aim is to analyze everything as independent elements that can be dealt with separately. Because physics *“had become the pattern or ideal toward which all the sciences aim”*, although most sciences (such as psychology or music therapy) are not as dominated by mathematics, the presupposition of independent elements *“encourages the hope that any problem can be split off into a separate fragment”,* have its key factors analyzed, and will enable scientists to *“extend their powers indefinitely to predict and control things*” (pp. 5–7).

Evidently, such desires within science and technology are in accordance with the spirit of times, and with our species' general approach to life as a whole. *“Understanding is now valued as the means to predict, control, and manipulate things”* (Bohm, 1987, p. 11), and success or satisfaction is defined in terms of achievement, acquisition and bringing affairs to a close. Accordingly, improving at solving specialized problems which are investigated as interactions among few independent elements, while overlooking their relation to broader contexts, may lead to issues which are far more challenging than the initial ones. Bohm provides the example of fragmentary improvements in the utilization of natural resources leading to destruction of forests, agricultural lands and global climate threats. Similarly, as of 2020’s viral pandemic is seen to be closely linked to the neglect of affairs pertaining to urban climatology. Likewise, Rolvsjord’s discussion (2010) on addressing effects of societal, cultural and political problems within

frameworks of intra-psychic diagnosis stands as a possible example of a future adversity with widespread implications arising out of contextual negligence.

All of this points towards the importance of refining the nature relationships to be predicted as well as affirming their compatibility with the totality of affairs, and a conceptual investigation of a universal order does provide the possibility for both. This indicates that it is not more important to predict *per se*, than to ascertain what is possible and appropriate to be predicted, and as will now be exemplified universal laws of physics emphasize, contrary to common belief, the latter rather than the former:

Consider the predictive goal of flying as an example; the scope of the content for prediction ancient civilizations had for the phenomenon is manifest in the story of Icarus; when Daedalus asks the question "how can we fly?", we can tell that the signified meaning is "how can we remain in the sky like a bird", which finds expression in the feathered wings of Icarus. In the mind of Da Vinci, the same question came to signify the intended meaning of "how can I utilize the right materials and mechanisms to make the best use of air resistance", resulting in his designs of flying machines. Only after the discovery of universal gravitation, the same predictive goal of flying could be formulated as "what can we do to apply a force greater than the particular magnitude of the downward pull of the earth?". The proper conceptual formulation of the question has formulated solutions which are based on the concept's universal necessity, consequently, real solutions, e.g. flying between cities and planets became possible. Yet the efforts for conceptual formulation did not possess an aim to enable or predict such unimaginably beneficial developments, they simply were answers for the question "*what is true?",* instead of "*how can we acquire that wich (we assume) is beneficial?*".

Evidently, throughout the conceptual developmental process of flight, each integrative refinement enabled more and more comprehensive and holistic meanings for the same question, and doubtlessly, the comprehensiveness of the *content of questions* determined the degree of freedom for the solutions they could devise for the same intention. This exemplifies the supremacy of holistic conceptual investigations for determining the nature of questions which could be asked; Because a correct answer will always correspond to the concrete affairs of the world, in other words, because the answer is already present "here", when the intention is understanding any aspect of the world, the importance lies within refining the content of our

questions, rather than limiting our scope of operation to answers which are afforded by questions unwittingly reflecting our initial lack of understanding on the subject[26]. As only by the degree of refinement within the question, the complexities which are already present in the world can be tangible.

Thus we can respond to the question regarding the value of lawful emphasis in a theory in absence of true predictive power, by first of all concurring with Özbek and Tekeli (2017), that there is no such thing as true predictive power and all individual efforts of prediction depend entirely on the demands of the particular context. Bohm, likewise states that it is *"Clearly an impossible demand"* to subject into prediction the infinite variety of factors and the *"extreme instability of these systems, which requires almost perfect and, probably unattainable, degrees of control"* (Bohm, 1987, p. 13). While predictions in relatively closed mechanistic, digital or biological systems commonly meet expectations for limited periods, in social sciences and interpersonal contexts there is no assurance for the probabilistic efficacy of the independent variable of an experimental research to be applicable or appropriate in contexts other than the context of the very experiment itself. Thus, especially in such contexts, even if non predictive conceptual investigations did not provide benefits as mentioned so far, the preferability of predictive power over alternative approaches would still be questionable.

To summarize, while discovering the law of gravity does not grant that gravitational affairs are in total control of prediction, neither for instance, that all appropriate machinery will succeed in taking flight, it does delineate a clearer and justified aim as to what it means to take flight, as shown in the examples. In other words, rather than providing predictive certainty, it provides the reasoning for the necessary universal relations to be included in the predictive efforts. Likewise the relationship between human beings' education and value production does not indicate, and does not *need* to indicate, that equal rights for education for all races and genders within a nation ensures the increased prosperity of the nation, as nations are not closed systems and are subject to an infinite amount of factors which may hinder prosperity. Yet, it does not indicate the

[26] An analogy from literary work can be found in *"Hitchhiker's Guide to the Galaxy"*. In the 1979 novel by Douglas Adams, a supercomputer named Deep Thought, after seven and a half million years of processing, calculates "the answer to life the universe and everything" to be *42*. The shocking answer results in the construction of an even larger supercomputer whose task is to clarify the intricacies of this ultimate question.

invalidity or uselessness of this conceptual relation when this necessary relation fails to predict prosperity of a civilization, for example, when it suffers under a natural catastrophe.

Accordingly, another expectation from a music therapy theory with emphasis on a priori laws is a concern with the universal necessities regarding the pertaining concepts, in the same manner as to how a priori laws of physics, logic, geometry or humanity emphasize relations of universal concepts. However, because this concern signifies the importance of a metaphysical standpoint, it may seem to many to be antithetical to scientific intentions to tackle the "concrete" affairs regarding human nature in the real world. Yet, as exemplified in this section and the previous chapter, the degree of tangibility of such concrete affairs as perceivable phenomena, is determined by degree of refinement in our comprehension regarding objective concepts (Yardımlı, 2016). In other words, because such objective concepts constitute the essence of phenomena, the scope of our subjective understanding of the concepts affords the very sensory perceptions which we may regard as concrete affairs. Consequently, this widespread dualistic understanding of "conceptual" and "material dimensions" (which is often referred to as *common sense*) indicates a lack of reflexivity and the consequent denial of possibilities for development; as through such presumption of concreteness of sense perception being "common sense", it is implied that no judgement is possible regarding the legitimacy of conceptions leading to such aspects knowledge and knowledge acquisition processes (Pascale, 2011 as cited in Hiller, 2016), and thus they are *"rendered unapproachable to critical challenges"* (Hiller, 2016, p. 101).

Nevertheless, as articulated by Yardımlı (2016), in the event that we desire to abide in the false dichotomy of "conceptual and concrete", or "metaphysical and material[27]", we can do so within the boundaries of our thought, but then we would be left with the impossibility of specifying what exactly this conceptless, formless and indeterminate matter *is*.

[27]Such presuppositions pose serious challenges to theories of music therapy, and will be investigated in their designated sections.

6.4. Misconception - 3: Laws are inapplicable to a context or phenomenon with a wide range of variation of empirical manifestations or intervening factors *(e.g. music, health or therapy)*

The most common objections towards the applicability of a universally objective conceptual understanding within music therapy, or likewise social sciences, stem from the equation of the notion of objectivity with empiricism. Bruscia (2014b), for example, while proposing his suggestion for evaluative criteria regarding hierarchy of validity among different constructs of music therapy, states that;

> *"The criterion for evaluation is not the relationship between what is known and the object itself (empiricism)—we are not asserting that constructs are better because they match what music therapy is in reality"* (p. 276)

This conjecture of empiricist epistemology, to which Bruscia adheres here, supposes sense experience as the basis of knowledge regarding "what things are in reality" and conceives sense experience as an absolute given, i.e. as an uninterpreted, infallible "hard-data" that is simply received as independent of beliefs or agendas (Bolton & Hill, 2003). Such empiricist presuppositions regarding the absence of connection between beliefs and empirical data, were dismantled in the twentieth century (Bolton & Hill, 2003, pp. 27–30), and some of the controversies regarding such presuppositions were also discussed in detail within the third chapter of the present thesis. The conclusions of such discussions are *"usually expressed by saying that all observation is theory-laden"*. Within the context of music therapy, this line of argument leads to the understanding that observations of music therapy as an external object are not passive encounters of perceiving "what music therapy is in reality", as Brucia indicates. Instead, and by all means, they are active identifications and confirmations of accumulated beliefs and agendas in a given context.

Although many scholars, especially within the interpretivist paradigm of music therapy, are influenced by the 20th century history of empiricism and post-empiricism, the everyday tendency of regarding the ever-different nature of sensory perception as reality, leads to conceiving perceptions of various different instances of music therapy (e.g. within different sessions (Kenny, 1982), or as Stige (2002) and Ruud (2010) suggests; within different cultural

contexts) as different, heterogenous realities, leading to the logical conclusion that; because each instance is different yet equally real, there cannot be a universally valid empirical representation i.e. description of the practice. However only when empirical representation is equated to objective conception, this deduction may to the denial of the possibility of a universally valid objective conception of e.g. music therapy. Furthermore, such undermining of the notion of objectivity via its unjustified equation with an evidently non-objective episteme, may find expression in the overestimation of active cerebral constituents of perception, leading to the belief that *"music therapy is not something real that exists outside of language, but an abstraction that we create through discourse"* (Ansdell, 2003, as cited in Bruscia, 2014, p. 9). Allegedly, in order for relations of music and health to be a "real" and existent property of the world, they need to exhibit uniform empirical qualities, which they do not. When there is no such empirical knowledge of a uniform fashion (e.g. as there are for apples, as "real" things in the word), the denial of the independent reality of relations between health and music is possible. Evidently, such a conclusion is again, only possible, when empiricism is falsely equated with acquiring the immediate knowledge of "what things are in reality".

Thus, a dichotomy between subjectivity and objectivity, based on the presumption that "sense perception is objective knowledge", on one hand leads to acceding to such notion of objectivity by participation, and the consequent underemphasis of investigating beliefs, theories and epistemological foundations that underlie experiments and observations; on the other hand, acceding to the same notion of objectivity, this time by disinvolvement, leads to the overemphasis of beliefs and to the bold claim that music therapy is "whatever people linguistically construct it to be". Both courses of action, in their own ways, lead to ethical issues within the science, practice and education of music therapy, which were detailed throughout Chapters 2 and 4.

What, then, is objectivity, if it is not a quality of sense-perception, or of the observed appearances of an object? And how can we suggest the possibility of objectivity for, let alone music therapy, even for its constituent notions such as health, when it is *"seen differently from person to person"* (Ruud, 2010, p. 103), and therefore can only be *"an individual and personal phenomenon".* Or likewise when, another constituent such as music, is defined as untranslatable to anything other than itself, and any description is *"a verbal distortion of what is intrinsically*

musical" (Bruscia, 2000, p. 7). Similarly, how can an objective conceptualization of therapy be possible, when its components, like those of music, are *"quite numerous and overlapping, and the experiences within therapy, like music experiences, are varied and multilayered"* (Bruscia, 2014, p. 15)?

The significant distinction between an empirical description and an objective conception, lies in the fact that, descriptions by their nature are propositions regarding how phenomena *appear*, while objective conceptual relations, as employed in, e.g. in physics, refer only to the logical order which the concepts conjointly compose and through which they are comprised, instead of referring to the appearances they manifest as. For example, laws of physics, as formulations of objective relations of the world, are not *descriptions* of gravitational phenomena, such as "the process wherein an unsupported apple falls down to the ground", which would be unrepresentative of other manifestations of gravitational phenomena such as black holes, and *vice versa*. Consequently, the presumption of descriptive accounts being representative of the totality of the notions of both natural laws, and as noted by Kenny (1982), Stige (2002) and Ruud (2010) of notions such as health, music or therapy, has obstructing implications[28].

Surely, there are objections towards social or psychological phenomena being as orderly as natural phenomena to the extent that they also can be accounted for by universal laws, in the same vein as to how natural phenomena are accounted for by laws of physics. Bolton and Hill, for example, in their *"Mind, Meaning, and Mental Disorder: The nature of causal explanation in psychology and psychiatry"* (2003), make the following argument for the dissimilarity between the causal processes governing states of mind, and those of physics;

> *"In what sense could a loss such as the death of a loved one be the cause of the depression? ...Does this mean that the loss caused the depression in the same sense that loss of support causes an apple to fall? Apples fall off trees all over the world in the same way, following the same laws of nature, yet the death of one person has a quite different emotional effect from the death of another".* (p. xvi)

In other words, while the law of gravitation supposedly ensures that the cause "loss of (physical) support" yields the effect "falling", the cause "loss of (social, emotional) support" does not universally yield the effect "depression". Therefore, due to the wide range of descriptive

[28] Such implications are detailed in the section "are probabilistic assessments of health exclusive to 'objectivist' research?"

outcomes linked to the notion “social or emotional loss”, and likewise, the diversity of perceived and experienced life events which may lead to “depression”, presumedly neither phenomenon is likely to have a causal ground similar to law of universal gravitation which makes the apples fall in a uniform fashion all over the world.

Yet, evidently universal gravitation pertains not only to falling objects, but evidently to objects which are stable, planets which are rotating, black holes and subatomic particles. Given the wide range of empirically diverse manifestations of the same gravitation principle, it becomes difficult to suggest that the diverse contextual manifestations of “social or emotional loss” or of “depression” cannot be integrated in their respective governing principles, in the same vein as a large variety of physical phenomena (as well as ones which are yet to be known) in the universe being integrated in gravitational principles.

In other words, the argument “because a phenomenon (e.g. health, music, or music therapy) has been experienced to be different in various instances or by various individuals or cultures, a universally applicable conceptual relation is nonexistent, and such accounts of universality are undesirable” is an appeal to ignorance; It claims that such fragmentation in the subject matter of music therapy corresponds to actuality, because it has not yet been shown to be false since the essential relations regarding such distinct phenomena are not yet explicated. Furthermore, such a claim is only possible when the empiricist notion “sense perception provides true knowledge of reality” is adopted implicitly or explicitly, as only then an individual who perceives a phenomenon as a collection of empirically distinct instances, can conclude that the dividedness which she perceives to be the reality itself.

Essentially such an argument implies a wide diversity of phenomena cannot have identical aspects and integrative principles, which is truly a bold claim to make given that the developmental history of humanity is constituted by discoveries of universal laws which have provided the exact possibility that above mentioned arguments deny. Throughout the history of science, art and societal development, various phenomena have been “experienced" as dissimilar, disorderly and incomprehensibly complex, until certain individuals identified how such different empirical instances are related and orderly. Bohm (2004) suggests that such scientific discoveries are not results of the mere desire of the scientist to find out *something new*; rather the scientist is after discovering something “*that has a certain fundamental kind of significance: i.e. a hitherto*

unknown lawfulness in the order of nature, which exhibits unity in a broad range of phenomena" (p. 3, underline is mine).

Thus, Bohm articulates, the scientist desires to find in the reality in which he lives, *"a certain oneness and totality, or wholeness, constituting a kind of harmony that is felt to be beautiful".* Such desire of harmony, as inherent orderliness of diverse constituents, besides the scientist, is also embodied by the painter, the architect and the musical composer alike, who likewise strive for creating a similar harmoniousness in their work. We would like to go a step further and argue that the reason scientists, and artists aim for harmony is that humans in their essence aspire for harmony, and this sort of assimilation of differences in a unity is fundamental not only to humanity's historical and scientific development, but also to the individual's development in the context of assimilating the differences through the simplest of notions (as evident in the turn of life of Helen Keller[29]).

To conclude, the impropriety of definition or generalization for music therapy (or any other notion) is true, when that which is generalized is a *description*, which is by itself unable to include or integrate with other possible descriptions. Thus, when Kenny (1982) suggests that music therapy *"is indescribable by nature"* as it is *"something different every time it happens"* (p. 1), or when Rolvsjord (2010) finds it *"futile to make generalizations or definitions about [resource oriented music therapy]"* as an *"approach that comprises such vast variations"* (p. 74), their concern with "one description unwarrantedly overriding other possible descriptions" is justified. Can one truly describe what happens in a music therapy session or in a certain approach in the assuredness of a once and for all conclusion, such as when we conclusively describe an individual apple to be red? However, rather than reducing the totality of the practice to a given set of appearances, we can claim that there can be certain essential properties of music and health which may not encompass the "totality" of what takes place in practice, yet are nevertheless

[29] The biography of Helen Keller (2010), the first deaf-blind person to earn a bachelor's degree, is exemplary. When adopted as a pupil by her teacher Anne Sullivan at the age of six, Helen was reportedly wild and animalistic, throwing tantrums and reacting to a world she is unable to understand, until she was able to assimilate her first concept, through Sullivan making her come in contact with different forms and contexts of water, and scratching the word water on her palm each time. For a long time neither the experiences nor the word would mean anything, however when she realized that the different experiences referred to the same substance in different aspects, her tantrums stopped, even when she couldn't see or hear, she could now understand the harmony in reality; expressed in her own words *"that living word awakened my soul, gave it light, hope, joy, set it free!"* (p. 11). Helen led a successful life, contributing to activism regarding peace and female suffrage while helping other individuals with disabilities.

universally and objectively present within each diverse setting, like pigmentation of color being an objective relational property governing apples of various different colors.

Evidently, what is necessary is a *structure* of definition, which could encompass not only *"its present status"* but also its *"future possibilities, both as a discipline and a profession"*, as *"music therapy is not only what it is today, it is also what it promises to be when fully developed"* (Bruscia, 2014b, p. 20). This need for being defined in congruence with the totality of time is not a need of music therapy exclusively. Indeed we would be mistaken if we defined any property of the natural world by describing how we observe it in any given time, as this invariably would be an inductive generalization of a description, negating future possibilities. Description as a structure of definition has no capability to accommodate that which is not yet known to the senses. Thus the emphasis is instead given to that which is the timeless relational essence of the observable phenomena, when scientists wanted to know what something *is*. Consequently, the non descriptive relational statements they have provided could be relevant for scientific discourse not only to the present state of humanity, but also scientists of the future, as that which is necessary is simultaneously present in their own respective "nows", which is one and the same reality.

Therefore, what is expected from a lawful music therapy on the issue of phenomena which appear as "different each time", or which "comprise vast variations", is certainly not a reductive account where different empirical variations are reduced to a single given description (such as when diverse behavioral or mental experiences are explained[-away] through their reduction to brain states). Instead, the expectation is to explicate how such distinct phenomena are essentially similar, while preserving their individual distinctions, in other words, to explicate how they form a unity in difference, and can be different in unity. This, as exemplified, is possibly by addressing the notions implicit universal necessities. There is no reason for the epistemic structure of lawfulness, which enables the comprehension of distinct phenomena (e.g. black holes and falling apples) in unity, for not be possible also for the wide and irreducible manifestations of music, health, and therapy.

6.5. Misconception - 4: Universal laws are unable to account for experiences which are "inherently subjective" *(e.g. of music, health or therapy)*

Besides the sensible concern with musical or interpersonal meanings being unpredictable and therefore unaccountable by cause and effect models, such meanings are also sometimes referred to as simply ineffable and thus uncommunicable. Some music therapists have argued that *"the many intuitive and creative things that [music therapists] do"* are *"put into boxes"* when, for example, the boundaries of the discipline is attempted to be clarified by Bruscia (2014b, p. xxi), and claimed that it is unwelcome to *"put into words all of the ineffable experiences that we share with clients through music".*

Admittedly there are legitimate concerns about the nature of defining, some of which we investigated in the previous chapter. Furthermore insofar as definition is *description*, this only means that which is defined is equated to something *other* than itself, which indicates this *other* to be *also* in need of definition, and so forth (Yardımlı, 2014). Therefore the desire to protect situational or cultural intricacies and subtleties from being lost in translation, gives rise to intentions regarding defining each diverse instance in exclusion, or similarly to oppositions against proposing definitive boundaries for the practice altogether. Evidently, this indicates that within the discipline there exists a more than sensible desire for defining music therapy *in its own terms,* and thus preserving that which may otherwise be lost due to the external imposition of a descriptive definition.

The desire to define a phenomenon on its own terms finds expression within music therapy literature in different ways. For instance, Bruscia (2000), argues musical encounters of meaningfulness to be *"truly ineffable"*(p. 7). And outlines the primary issue with the notion of meaning within the context of music therapy to be as follows;

> *"The problem of meaning in music therapy is that when you work with the client in one medium (music), then the meaning is manifested in that medium, and only makes sense in that medium... And the assumption that the talk can somehow decipher the meaning of the music is where all the trouble takes place."*

As such the meaning in musical experience is intended to be shielded from words or concepts, or anything that is not the experience itself, as this meaning is now safely encapsulated in a bygone temporal fragment of direct experience. In other words, the content of such meaning is not only

unavailable for being conveyed to another, it is unavailable even for a second time to the very experiencer himself. This is in accordance with the empiricist (or pre-postempricist) premises; the experience of meaning was "real" insofar as it was being perceived by senses, now that the sensation is no longer present, our present discourse does not and cannot permeate its "reality" anymore.

However, the post-empiricist conclusion, namely the fact that sense perception rather than being the passive reception of objective reality, being instead the active verification of pre existing conceptions (Bolton & Hill, 2003), is applicable for both directionalities regarding definitions and experience. Which means, the notion that "our conceptions shape our experiences", also demands that "experiences require conceptions in order to be perceived as experiences"; perception entails definitive boundaries, as one knows "what" it is that one perceives. Thus, the experience of meaning in music itself is not a passive acquisition of the meaning "out there", instead the very possibility of such experience rests upon the implicit musical capability as well as the available familiarity and understanding of the notion of music (Huron, 2006), which inherently necessitates *some* boundaries to already be present. Without having a conception of what music can be, we neither can experience music "as we know it", nor can we encounter a "novel" experience of music which requires the realization of difference from an already existing conception.

Accordingly, the extent of conception that is available to an individual, (regarding, e.g. the notion of rhythm), is the same notion which enables the extent of its perception in music, and the extent of possible verbal discourse in its regard. In other words, both the audial and the verbal are different formations of the same objective notion, rather than one empirical manifestation being real and the one an imposter. Erkkilä's discussion (2004) regarding the *"amazing similarities"* between the nature of meaning of language and words in therapeutic contexts as written by psychotherapists, and the nature of musical meaning as described by music therapists, suggests a likewise analogy for the manifestation of same objective notion for *meaning itself* within musical and verbal contexts.

Thus, it is not so much the case that separating musical meaning from verbal meaning *protects* the musical or musical-therapeutic from being distortedly translated to a non musical medium, as it *isolates* the implicit and configurative definitions and conceptions from discourse and

development. The idea that boundaries being the primary enabler of *"self-reflection and discourse"* finds reflection in Bruscia's *"Defining Music Therapy"* (2014, p. 6). If we apply the same idea to musical meaning, we can argue that even if a perfect conception is not available "w*e cannot give up on trying to formulate the best one possible and to participate in the discourse needed to do so".*

Furthermore, in contrast with the fleeting nature of subjective sensory experience, objective conceptions regarding musical meaning are very much communicable in both musical and verbal domains, and as evident from historical development of music (and as evident from the fact that there indeed is such a thing as historical development of music) such evolving objective conceptions which configure musicality are not exclusive to subjective domains. This essential relation between knowledge and experience applies not only on the level of historical development, but also on an individual level, when verbal discourse enables musical understanding to develop, this enables the possibility for novel meanings in musical experience, giving more possibilities for discourse and exploration of what can be known

Evidently, if every meaning of music was impermeable by the other, we could not have common grounds to participate in neither interpersonal nor historical development processes of music, and every individual would need to re-develop what others already have discovered to be aesthetically meaningful capabilities of humanity. As opposed to isolation of meaning in the borders of subjectivity, such inclusiveness of communicability has been an enabler for the historical development of music as an art, and it likewise is a requirement for the development of music therapy as a science.

To summarize, the assertion that music or experience cannot be examined using theory or language, equates the "knowledge of music" to the "experience of music". In this case, the truest form of scientific investigation of music should be through musicking itself exclusively, just as the truest form of physics should be through sensing the physical world with our five senses (Yardımlı, 2016). Fortunately, we can investigate not only the sensations of phenomena we experience, but also the objective notions themselves which we encounter as mediated by

phenomena[30]. And such objective notions are *"the sole content of science"* (Yardımlı, 2013, p. 9), and the source of scientific development.

Likewise the musical experience contains an endless possibility for multidimensional communicability regarding orderliness. For instance, the inquiry of abstracted acoustic elements and timbre has enabled development of instruments, orchestras and transmission technologies. Inquiry of what can be regarded as both objective structural elements and human capacities, such as rhythm, melody, harmony, scales, have led to the development of music theory, and musicology, which enabled subsequent developments and newer experiences guided by such developments (Özbek & Kotaman, in press). Thus it is also beneficial to bypass the dichotomous understanding of "knowledge" and "experience", or "concept" and "being", in order to inquire the objective notions implicit in the phenomenal experience of music therapy. To regard musical meaning as confined in a fleeting subjective experience that is, besides being unavailable to any other, unavailable for more than once to even the very experiencer himself, is therefore counterproductive to scientific development which necessitates communication of meaning and meaning to be communicable. Although they will pertain to manifold distinct empirical appearances, and will surely have different experiential forms and content for different subjects, there is no pro-scientific reason for the relational properties of health and music to necessarily be romanticized or mystified.

Thus, the question "how can objective relations account for *my* meaning" finds response; "so that it has the possibility to be *our* meaning". Liberating that which is meaningful from exclusive boundaries of local instances is necessary in order to ascertain the meaningful relation of music and health for humanity as a species. Consequently, only through undergoing the responsibility of global relevance music therapy can be a joint scientific effort of whole humanity, as only then the present as well as future contributors acquire the possibility to participate in and collaborate for the same scientific formation of the discipline. Therefore, providing this possibility by

[30] For example the sensory experience of two persimmons implicitly has the objective notion of "quantity", without which the persimmons could neither be two nor one. This notion of quantity can be itself an object of inquiry, and thus we can have mathematics; the science of quantity. It likewise contains the objective notion of 'sweetness', the inquiry of which results in the development of sweetness itself via culinary desserts, which mere continuous sensation of persimmons do not afford, for example, to animals who lack capacities for thinking about objective notions as abstracted from sense experience.

inquiring such objective relations themselves, is expected from theory of music therapy which emphasizes a priori laws.

6.6. Misconception - 5: Universal laws are unable to account for phenomena which are culturally situated

In the previous section, we have investigated the sensible desire within the music therapy literature for defining phenomena *in their own terms,* as opposed to describing (or reducing) them to be something other than themselves. Some professionals, in order to ensure that music therapy is not defined by anything external to the practice, suggest "purifying" it from conceptions and definitive boundaries, as these could only be investigations which are external to the domain of the *experiential* practice of music therapy. We concurred that limiting the reality of the practice to its sensory-experiential qualities, rather than enabling it to be represented in its own terms, justifies definitions by stagnant implicit conceptions which refuse the possibility of scientific discourse, and consequently disown the implicit potential of music therapy to grow. Therefore, it is an unsuccessful approach to provide that music therapy is defined in its own terms, as any discipline absent of a collaborative desire for its potential future is a confusion.

Another approach seemingly for the same purpose, that is, ensuring that music therapy is defined by its own content rather than through boundaries which distort or limit it, finds expression in addressing music therapy as a multiplicity of locally and culturally situated activities; Just as some scholars claim the content of music and music therapy to belong exclusively to the domain of subjectivity, Stige (2002), Ansdell (2003, as cited in Bruscia, 2014) and others claim the content of music therapy to belong exclusively within the borders of individual cultural settings and/or relevant discourses where this content is co-constructed. This makes music therapy a "situated practice" which should be defined locally rather than universally. Consequently "a sum total of situated practices" becomes one of the promising forms by which music therapy can be accurately represented. As such, as it seems, every local intricacy regarding the notions music, health, and therapy, will have the opportunity to be preserved and represented in the cultural mosaic of music therapy, a discipline now, presumably, defined by its own content.

The importance of cultural and intellectual plurality within the literature of a discipline for scientific discourse and global development cannot be overstated, accordingly we have

investigated the concerns with the oppressive connotations regarding claims of universal truth (Stige, 2006; Ruud 2006) in section 2.2.2 and we will not detail further the as to why and how universal truths cannot be dominating replacements of cultural and contextual perspectives[31]. Furthermore, it remains possible that the concerns of Stige (2006) and Ruud (2006) were directed, not towards *genuine* universal accounts (such as inherent musicality or "protomusicality" as examined in Stige [2003] and advocated by Ruud [1996]), but towards the *claims* of universality by paradigmatic approaches (such as analytical music therapy, or behavioral music therapy, whose claims of universality is criticized by Ruud[2006]). In other words it is possible that authors are objecting (and rightfully so) to an "enforced homogeneity" within the science of music therapy. However, this is not a sufficient reason which necessitates ruling out *genuine* investigations of universal principles; as the claim of universality does not render an approach, ideology, doctrine or a (scientific or otherwise) dogma to truly be a representative of universal principles, just as claims of relativity regarding universal principles do not render them relative to subjects.

While the latter, namely the claims of invalidity, inapplicability or undesirability of universal principles within the science of music therapy appears to complement the concerns of a wide number of music therapy scholars, it is no secret that a commitment to relativism brings about theoretical fragmentation within the discipline, which, as discussed, difficulties with intra and inter-disciplinary integration as well as relevant possibilities for wide scale social action. Furthermore Bruscia (2014b) repeatedly stresses the adverse implications of the malleable boundaries of a relativist stance for the ethical status of the discipline. Perhaps this is in accordance with the reason as to why, when concurring with the situatedness of meanings in contexts and their subject dependency, Rolvsjord (2010) refers to pluralities and multiple meanings, with a rather unenthusiastic connotation, as things *"we have to live with"* (p. 69).

[31] Özbek and Kotaman (in press), in this regard, highlights the historical evidence that what has been thus far oppressive has never been the ascertained universal actualities, which are effortlessly recognized and adopted for their possibility of common value (e.g. Fourier series, communicability of language via text, racial equality). What has thus been oppressive are instead ideas and ideologies which can only be contextually or culturally relevant and advantageous only to certain subdivisions of individuals (i.e. to a particular nationality, race, gender, religion) and such ideas which lack universal relevance, are in need of being imposed in order to expand (e.g. via colonialism or religious wars). In other words, while the former, due to its universal nature, expands via the recognition of its affirmable presence and value within any given cultural context, the latter has to expand, by force, towards where it is not yet present.

Yet, are such issues justified, given that they serve the cause of defining music therapy *on its own terms*? In other words, is it truly necessary to reject the possibility of a universal understanding so that the present and future collection of culturally situated meanings can find accurate representation in the science of music therapy? Bruscia (2014b), underlines the fact that any given definitive boundary not only shapes and guides practices within a local setting, but they also *"set[s] the stage for an exchange or comparison of boundaries, philosophies, and clinical practices"* (p. 6). Accordingly, the "co-constructed" meanings within a cultural setting which emerge through a similar interpersonal discourse (Rolvsjord, 2010, p. 65), suggests the constituting personal meanings to *not* be incommensurable. Then, the role of interpersonal discourse within a cultural setting first of all appears to be analogous to the role of intercultural discourse within a global setting, which requires different cultural co-constructions to likewise not be incommensurable "language games". Thus, from the start it appears that we can doubt the alleged necessity to consider "cultural (or local)" and "global (or universal)" as a dichotomy in order to serve the rightful representation of the scientific field; just as cultural conceptions emerge as and through interpersonal reflection and co-development of ideas, cultural discourse likewise appears as the means by and as which globally relevant scientific ideas may emerge.

However, such formation of cultural or global meaning, so far seems to be able to emerge without being informed by any kind of a priori universal truth, and some may argue that they are likewise products of pure social construction, or "language games" played on a global scale. Thus the relevance of universal accounts to individual cultural settings is still challenged, and remains to be investigated further. The notion of *development* appears to be the key element of this due investigation; Rolvsjord (2010), regarding the developmental nature of cultures, cautions against a fixed conception of culture with given, unchanging properties, which merely *"molds"* whoever is born in it to its existing norms. Rather, she suggests culture to be *"the result of continuous social interactions, a process of co-creations and continuous development"* (p. 65). Then, it is beneficial that we investigate as to how the course of this continuous development is determined (if by anything), in order to establish whether interpersonal agreements and linguistic construction capabilities of human beings are *truly* the sole source and designator of novel emergences within cultures or scientific disciplines, (as, for example, suggested by Ansdell [2003, as cited in Bruscia, 2014] regarding the inexistence of music therapy outside language).

6.6.1. Are cultural developments linguistic constructs?

Özbek and Kotaman (in press) point out important distinctions as to how and why developmental products of a given culture are adopted by other cultures. They highlight, for instance, the presence of the influences of Hellenistic culture in the present day, and that human beings even today sit on the chairs and live under roofs invented by them, alongside utilizing their discoveries in geometry, physics, politics and philosophy. Yet, apparently we no longer live in city-states or enslave other human beings. Likewise, human beings globally utilize written text and the science of metallurgy which are developmental products of Sumerian culture, but not any nation governs their citizens by their legal scripture *Code of Ur-Nammu*. This, according to Özbek and Kotaman, indicates that the developmental products of a given culture are adopted by neighboring or subsequent cultures, to the extent that they are found to be relevant to existing needs of human beings. Furthermore, such developments remain in use only until humanity meets novel extents of its collective needs which demands developments which address those needs *better,* hence the term *development (*e.g. nation-states prevailed against city-states as they addressed hitherto unknown welfare and security needs *better,* or anti slavery legislation addressed the collective needs of humanity *better* than archaic codes).

In other words, the discoveries of whichever cultural origin are likewise globally relevant to the extent that they are found to serve the inherent needs of the human beings constituting the culture of origin, thus the inherent needs of the human species in general[32]. Provided that a *better* universal development has not yet occurred, this also means that they are able to serve humanity then as much as humanity now, as they are the same species. For example roofs, mathematics and metallurgy, although could be regarded as developments within a cultural setting, because they serve inherent needs related to e.g. security or scientific development were globally relevant developments even from their outset. This is the reason as to why neither geometry nor chairs are regarded as cultural products; instead this is seen as an emergence of global products from a local setting, as this is the only possible fashion by which they *could* emerge. Furthermore, just as such geometry or chairs have evolved *in light of universally relevant developments* and thus

[32] Conversely, according to Ozbek and Kotaman (in press), this indicates if a cultural convention is not complementary to the needs of human species in general, they likewise cannot be complementary to the human beings in the culture in which they originated. E.g. denying education from female children in the modern day can be a culturally relevant convention, which, because it indicates a regression in the social development of humanity in general, serves neither humanity nor said culture.

now appear in the form hey are currently in use, in order to attain the form they have today the reforms which legislations such as *Code of Ur-Nammu (*the oldest known law code), also have had to go through were directed by *universally relevant developments* within humanities, such as the ascertainment of the incongruity of slavery or death penalty.

Following the discussion of Özbek and Kotaman regarding the relationship between the course of *development* and essential i.e universal needs of humanity, appears a highly significant issue; when contextualized in a historical setting, then, the notion of cultural or scientific developments being *"*constructed in-and-through language*"*, therefore has the implication that corresponding needs of human beings are *also* realities constructed within the same cultural or discoursive contexts; as in order to construct something such as written text to be relevant, the Sumerians needed also to construct the reality that "human beings can benefit from written text". In other words, provided that written text *did not* emerge due to its concordance with inherent communicative needs and capabilities of human beings as argued by Özbek and Kotaman, it is not more than a construct with no inherent or essential value, and as such it is itself in need of a human need to be "constructed along" in order to be made relevant.

As such, the overwhelming inference of this anthropocentric treatment of cultural or scientific development, is it indicates that relevant needs of human beings *could as well have been otherwise, if constructed so*; that human beings as a species are not *essentially* in need of transmitting knowledge across generations so that it was natural that they could benefit from text, or that they were not *essentially* equal regardless of race, gender etc., so that they were intrinsically able to benefit from legislation regarding race or gender equality[33]. Because such deconstructivist and postmodernist influence suggests, rather blatantly, that there is no existing reality as humanity as a unity (i.e. the *concept* of humanity) with its common a priori (i.e. universal) necessities, the inherent properties which are being denied or relativized by this line of thought include not only ones which pertain to music or therapy, but also basic human necessities regarding equal rights and value. Thus, such commitment to relativism not only

[33] Because such humanly necessities cannot be essential to human beings when the notion of essence itself is being rejected, this denial also provides the rationalization for oppression against certain populations of race, sexual orientation or physical condition etc, as their worth does not have anything else to depend on besides the constructed narrative. It should not come as a surprise then that prominent figures equating concepts with language (such as Heidegger, Focault or Wittgenstein) were known for their support for violent regimes of their times, which likewise had disregarded the concept of humanity as a whole, and instead operated on constructed abstractions (e.g. *Untermensch).*

appears to be against an integrative political status for music therapy in regards to essential humanitarian issues and relevant necessities (as they presumably are not realities unless constructed so), it also seems to undermine the notion of development itself:

Oxford Online Dictionary defines the term as *"a specified state of growth or advancement" (*"development", n.d., para. 1.1), thus, in order for a novel emergence to be considered as a development, it needs to correspond to a given reality *better* than its predecessors, so that the change *could* be referred to as a "growth" or an "advancement". As such, legislation for race equality is a judicial, cultural and global *development*, as it provides a *better* response to the a priori unified reality or *truth* of humankind. Likewise, without a reference point regarding given, existing necessities, just as humanitarian legislation can only bring mere changes instead of developments, neither can we suggest, as does Rolvsjord (2010), that culture is a process of continuous development. In other words, because an anthropocentric treatment of cultural and scientific development, enables anything and everything to attain (and therefore lose) the status of being regarded as a development, it simultaneously challenges the legitimacy of hitherto and prospective cultural or scientific developments to be acknowledged as *real* developments which could have any substance other than some kind of social agreement, and consequently *undermines* the notion of development, if not rejects[34] it altogether.

As Yardımlı (2007) articulates, one of the most congruous inferences of such a postmodernist and relativist stance is that, the absence of a universal standard necessarily brings about the equalness of value of not only various cultures, but equality of distinct historical moments of a single given culture as well. Thus, the rejection of objective standards of value and consequently the denial of possibility of objective developments for cultures, renders cultural pluralities as mere heterarchical varieties; as without an objective reference points to determine values in a hierarchical order, it is not possible to suggest, for example, that the replacement of established basic educational institutions of a nation with religious vocational high schools by a non-secular

[34] One may argue that postmodernism or relativism, rather than rejecting the notion of development, *liberates* the situated and subjective nature of practice from oppression of a single standard determined by "universal truths". In this case, if development is whatever we regard as development in our particular "language game", not only the notion of development is undermined in the fashion customary to anthropocentrism; but considering that music therapy aims for development in the health of clients, the allegedly amorphous nature of development indicates that the ethical boundaries of practice, both within the therapeutic settings as well as academia, are trusted with the bent of mind of individual therapists, who, according to Stige (1998) *"will have considerable power to colour the discourse"* as they are *"usually the most skilled partner of the game".* Such malleable boundaries, as Brucia (2014) suggests, seriously threaten the ethical status of the discipline.

government in power, is a regression in regards to the nations integration with global science and development (Özbek & Kotaman, 2015). When any given cultural moment It is a culturally situated construction of meaning much like the others, this line of thinking also brings about the idea that regressive formations as such, while not being appropriate for e.g. Scandinavian countries, has no reason to not be complementary to certain situated cultural settings such as Turkey or Iran. Likewise, within the science of music therapy this line of thinking indicates affirmation or "tolerating" of disempowering practices or conceptions regarding health and sickness as "culturally situated particularities", as there are no universal standard to evaluate and determine whether or not they are truly disempowering, or that being disempowered is inherently harmful to clients in a particular cultural setting.

Conversely, when history is acknowledged as the stage of growth and development of humanity *in light of universally relevant discoveries,* distinct cultural or local moments within this process will cease to be regarded as self-subsisting games isolated from each other as well as this holistic intercultural movement. Rather, they could be acknowledged as the means by which humanity can be a dynamic, *living developmental process,* and the immediate *plurality* of individual moments can be recognized as a progressive *polyphony*. *Vice versa*, only when they are taken as mere moments in isolation, that is, only when the universal formative nature within relative contexts is denied, it becomes possible to refer to them as heterarchical pluralities. Yet, as Yardımlı (2007) notes, affirming a culture or cultural setting exclusively as it appears in a given moment, is simultaneously denying the right of transformation and development to *homo sapiens,* which can be localized only as and through particular cultures. In other words, believing only the *transient* properties of a cultural or situated context to be its reality, is simultaneously the denial of its nature as a finite moment which comprises an infinite process of global development,

To summarize, while, as evident from history, cultures develop, co-operate and co-develop to serve better the inherent needs of humanity they all have in common, rejection of inherence of these needs describes this plurality-in-unity as a mere multiplicity of incommensurable narratives. Accordingly, the sum total of situated practices, or linguistic constructs as mere incommensurable pluralities, do not reflect the authentic nature of the discipline inasmuch as

these situated meanings are examined in isolation from each other and their inherent potential for cultural and global co-development.

6.6.2. The Essential Relationship between Universality and Relativity in the Context of Cultural Development

The discussion of Özbek and Kotaman (in press) regarding the nature of development, underlines the essentiality of the local nature of meanings for the continuousness of development in any sense, cultural or otherwise; Because the ascribed meaning to any reality (music, therapy, intra or inter-cultural phenomena) will be of a particular nature shaped by the affordances of a local setting, this, and *only* this enables the possibility of reciprocity among different particular meanings in and as a continuous movement of development, as it is the particularities which *enable* this difference and consequently their interrelatability. In other words, universal, absolute truth, exists in development through and as reciprocity between local, particular formations, while particular developments are guided by the inherent properties of this universal reality (e.g. musical particularities of different cultural settings enable mutual possibilities for interaction and thus developmental emergences, which then provide affordances for novel relations; such unitary progressive movement would not be possible absent of differences).

Accordingly, as we have investigated thus far, e.g. the ascertainment of racial or gender equality as an *a priori reality*, render their establishment a *particular* developmental *act* in societal life, which paves the way for more advanced possibilities of development in the same domain and thus continuity of development; likewise ascertainment of incongruence of physical violence in pedagogical contexts, renders relevant restrictions as particular developments in education, which helps reveal more refined realities regarding education; ascertainment of toxicity of certain substances for human consumption in general, render their regulation a particular development in health etc. (examples can continue indefinitely).

Evidently, not only cultures are *developed* in light of ascertained universal truths in any given area, cultural resources as well as cultural interactions become the means and the mediator for the ascertainment of ever refined universally relevant realities, which enables more comprehensive developments. Thus, while Ansdell (1995, as cited in Stige, 1998) suggests the following distinction; *"we communicate with words to convey our meaning, whereas we*

improvise music to find something meaningful between us", in light of such examples, we should be able to challenge this alleged difference, along with the notion that our (individual or cultural) meanings are exclusionary domains of pure linguistic construct, and instead suggest the reason as to why they can be conveyed to another to be the universal presence of the same objective notions in this other. Therefore, because the content as well as the extent of meaning is determined by affordances inherent in our species, verbally expressed meanings, or likewise any kind of content and boundary within a particular local setting, can serve the discovery and clarification of an inherent meaning common to our species in a similar fashion to musical discovery of mutual meaning.

Another aspect regarding the essential relationship of universality and cultural development is its significance in cultural movements. The acknowledgement of the ability to musick belonging to whole humanity, i.e. musicking being an inherent, universal capacity of human beings as discussed also by Small (1998), informs and motivates integrative "cultural movements" such as the "Music for All" movement (Ruud, 1996, as cited in Rolvsjord 2010) with the purpose of facilitating musical participation for all people. It is questionable as to how such a movement could serve as a cultural or global progression in absence of the universal, inherent nature of musickability; only because we know the possibility and the meaning of musicking for *human nature*, actions towards enabling its possibilities is considered not as an oppression of those who have different "constructions" of musicality in their social or cultural contexts. Likewise, because we know both genders to be essentially human, relevant cultural and political movements for equal rights are considered as fulfilling necessary collective responsibilities. As Ozbek and Kotaman (in press) mention, if "social construction" were the only reality there is, the empowering political action against "discrimination against people based upon gender, disabilities, race, physical characteristics, sexual orientation, class, religion, etc.," (Rolvsjord, 2010, p. 46) could be detrimental in one culture, while helping another culture flourish. Yet, however, we know the reason as to why they are *culturally* detrimental is the same reason as to why they are detrimental to *human beings* per se. As such only when inherent properties of the world are considered, movements for equality (such pro-music or pro-gender equality movements) cease to become oppressions of cultures in which the notion of human musicality or gender equality is underdeveloped.

Furthermore, the ability of musicking being a universal property of humanity, displays further aspects of the dialectical relationship between "universal" and "cultural". Rolvsjord (2010), when discussing this essential property, uses the term "protomusicality", and notes that it entails an inherent "and therefore universal, capacity" which enables human communication, development of languages as well as musical interaction (p. 71). Likewise Stige's (2003) discussion suggests important connections between this universal property and its necessary localization;

> *"If protomusicality is music as human capacity, evolved in phylogeny, it will represent a potential for development in every human being. The potential will be more or less developed, and it will be shaped in different directions, depending upon the ontogeny of the individual, which again depends upon the cultural history of the groups and persons the individual gets in contact with."* (Stige, 2003a, p. 151)

Thus, Stige's discussion indicates that this universal property is *bound* to be shaped by individual, as well as cultural and local factors, while the available individual and local formations are propelled in a musical direction due to the inherent musical capacity of *homo sapiens* seeking expression. In other words, the same inherent, i.e. universal property of human beings regarding musicality can find expression in myriads of diverse ways within particular cultural contexts. Furthermore, as evident in the history of musical development, particular local or cultural formations of musicking engage in co-development which is enabled by their particular nature i.e. their differences. As such, it appears, in this context as well, *particularities and the development of the universals demand each other's presence.*

Then, the following question remains to be asked; what could be a legitimate reason as to why diverse cultural or situated applications of health related properties of music are not likewise local formations of the same universal health related properties inherent in music and human beings? In other words, is it truly necessary to represent diverse culturally situated meanings of music therapy exclusively as a fragmented plurality that is in a strict dichotomy with their common universal essence, when their common connection universality is what could render them a polyphony, not only in relation to each other, also to the past and the future of music therapy?

6.6.3. The possible reasons for rejecting universality

The postmodern and relativist aversion towards the idea of an essence, or an objective, universal or absolute reality is sensible, therefore, insofar as the absolute is equated with *dogma with its pretense of being absolute.* The claims of universality by e.g. analytic music therapy, behavioural music therapy as discussed by Ruud (2006), or likewise the claim that e.g positivist experimentation or postmodern hermeneutics being the "one true understanding" for music therapy do indeed deserve aversion, as they do not admit their perspectival nature and deny possible inter-developmental formations. However, while the claims of dogmas regarding absolution or universality *reject* alternative understandings and inevitable relativity of local formations (relative, i.e. *in terms of a relation* or existing in relation), genuine universality, as discussed thus far, is in a dialectical unity with relativity and therefore embraces alternative local formations and the developmental possibilities through relation and interaction.

For instance, protomusicality as detailed by Rolsjvord (2010) and Stige (2013), as a *universal attribute,* would have no possibility to have a temporal and local existence without appearing through transitionary ontogenetic and cultural contexts, as it is indeed impossible even to imagine an "absolute emergence" of the total possible qualities music. Therefore, the only form this universal could ever exist is in and as a transient process of interactional development; as had it not existed in development, a local formation of musicality would be the absolute ideal containing the totality of it, yet this "formation" would be unrelatable (as relating denotes a novel emergence) and therefore undevelopable. We of course know this to be an impossibility, and name such confused claims as *dogmas.* Inversely, various local situations could not even be referred to as diverse situated configurations of musicality if what they had in common was not the same universal ability for musicality. Because they are more than a "family resemblance group", we can notice, for example, how *the same* abilities (e.g rhythm or tonality), found expression in and as *different* formations.

As such, numerous examples can be provided to indicate that the dichotomy between "absolute" and "relative" or "cultural" and "universal", is a misconception, and thus issues regarding the representation of music therapy as a science is unlikely to be solved by rejecting neither universality nor cultural situatedness. Cultures, like suggested by Rolvsjord (2010) are in continuous development, while participating in a co-development themselves *as* cultures. This

development, as shown, is not isolated from discoveries of a universal nature, that is, discoveries which are relevant to humanity as a species, and therefore are relevant globally. Nor universal discoveries are isolated from cultural settings, rather, just as how developments within a culture first emerge through few individuals, and later recognized for their value by the rest of the community, global developments as well necessarily emerge through developments within a cultural context. Therefore we can suggest that cultural developments are not detached from the needs of the constituent individuals, and the needs of the individuals are not detached from needs of human beings as a species and therefore from global needs, i.e. universal properties

In light of this discussion, we can also suggest that a cultural or contextual identity likewise is not threatened by the objective knowledge regarding, for example, universal gravitation or necessities regarding geometry, geophysics or social justice, as much as it acquires the grounds to transform and flourish (Özbek & Kotaman, in press). Similarly, the whole world is not under the oppression of Sumerian culture since the discovery of the universal reality of language being communicable through written text. Evident from different alphabets of the history, this objective and universal relation regarding human communication and text, rather than forcing the whole world to communicate in the way Sumerians have had, provided the possibility for utilizing the same universal principle via symbols and alphabets developed in and through particular cultures and their relations. Therefore, cultural identities or likewise cultural products rather than being oppressed by them, acquire the means to develop when they encounter universally relevant principles. Likewise they are threatened by developments of global or universal implications only to the extent that they resist being developed themselves.

Then, what is the basis of the idea of different cultures, rather than being co-collaborative means of the very same global development, being instead fragmented fields where incommensurable meanings, which are only relevant to a given culture or context, are constructed? In the previous section, we investigated an implicit commitment to empiricism, (i.e. equation of sensory perception with reality) to be related to the understanding that subjective meanings being impermeable by those who do not experience it first hand, due to the “reality” of such meanings (as in, the sensations of the meanings) being out of reach the moment they are finished. A similar implicit empiricist commitment may lead to the understanding that; because instances of meaning arise in distinct intrapersonal, interpersonal, or cultural contexts with their particular

sensory-experiential qualities, and because these sensory-experiential qualities is what constitutes their reality, "*my* (individual or cultural) meaning" is simply excluded from and is incommensurable with "*your meaning".* However, as discussed thus far, culture is not an immediate sense-object, and the reality of these immediate appearances is that they are invariably transitory. Therefore, in representing both the notion of culture as well as well as the science of music therapy as a whole, regarding them as *a developmental process of interrelation and integration,* rather than a collection of hitherto available points of transition, can includes representations of not only what they currently appear as, but also what they promise to be.

Accordingly, Bruscia (2014b) suggests "*the task of defining music therapy, then, is not to describe its myriad and potentially endless variations, all of which are accepted as equal in value, but rather to develop better, larger, and more holistic constructions of it.".* The term *"*more holistic constructions" imply inclusive accounts of what has hitherto been regarded as separate, thus their integration entails wholes that are "better, larger, and more holistic" than their predecessors. As such, in the most basic sense, the ascertainment of unity regarding different races, nations or genders, produces holistic accounts of e.g universal human rights, and entail larger wholes than their predecessors. Providing increasingly holistic accounts via ascertaining that which is essentially the same within different appearances regarding (including but not limited to) cultural particularities, therefore, is the purpose of a music therapy theory investigating a priori universal relations.

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