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Enactivist music therapy: Toward theoretical innovation and integration

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ABSTRACT

Introduction: Music therapy research has traditionally been somewhat fragmented into different research traditions. This paper argues that the burgeoning field of enactivism could provide important theoretical integration to music therapy research and practice. Stressing the interdependence of mind, brain, body, and environment, enactivism has provided theoretical integration in several fields, not least music cognition and psychiatry. This paper is the first focused theoretical contribution that applies relevant enactivist theory to music therapy.

Methods: After a reflection on theoretical developments in music therapy, we provide a general introduction to enactivism and its multiple origins in human and biological sciences and present its existing contributions to understanding mental illness and musicking. We also make a specific contribution, through discussion of an example of free music improvisation.

Results: Providing an enactive analysis of the sense of agency in this practice, we argue that music improvisation, especially in therapy, might work particularly well for people with severe mental illness because improvisation strengthens and flexes the disturbed sense of agency that often characterizes such mental health challenges.

Discussion: Finally, we discuss strengths and weaknesses of the proposed framework and suggest future potential studies to better evaluate the potential contribution of enactivism to the research and practice of music therapy.

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KEYWORDS Music therapy; enactivism; improvisation; mental illness; agency

Introduction

Across the globe, music therapy is gaining recognition in prevention and treatment of various health disorders. Music and music therapy is also increasingly valued as a public health resource. This development has been backed up by a growing body of research that documents effects as well as user experiences. The discipline's body of theory has also grown, but not as fast as the spread of its practice. We believe that the recognition of

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professional practice comes with an obligation for music therapy to develop theoretically in order to provide better explanations to how, when, and why it works.

Music therapy research and practice consists of several branches and schools that are struggling to establish a common framework, as demonstrated by Ruud (1980) in his discussion of the theories that were most prominent in the 1970s. Twenty years later, Bruscia (2002) addressed the need for communication between the five different music therapy traditions that he identified at that time, namely behavioral, psychodynamic, humanistic, transpersonal, and culture-centered. Since then, new forces of thought within music therapy have continued to emerge, for instance initiatives that are primarily neurologic, music-centered, relational, community-oriented, or critical (Bruscia, 2012).

Not all theories and perspectives are compatible, but we argue that music therapy theory and research needs integration of several forces of thought in order to be robust and flexible enough to support further development of the field. The purpose of this paper is to introduce the theoretical framework of “enactivism” as a resource with a potential promise of such integration. We argue for this promise along two lines, offering (1) an introduction to enactivism with arguments for its general potential for music therapy research, and (2) a specific enactive analysis of a case of free improvisation as an example demonstrating this potential.

- (1) Enactivism is a comprehensive, multidisciplinary research program that has grown in popularity since the 1980s, drawing on and developing sciences as diverse as cell biology, complex dynamical systems theory, robotics, linguistics, ecological psychology, cognitive ethnography, phenomenology, and pragmatism (DiPaolo et al., 2017; Newen et al., 2018; Thompson, 2007; Varela et al., 1991). Over the last 10 years it has been applied to the study of musicking as well as to fields such as for instance education, psychotherapy and psychiatry.¹ Taken together, these developments ought to be able to translate to, and enrich music therapy research. With its poignant analyses of embodied consciousness, interaction, as well as contextual and cultural embeddedness, we argue that enactivism is a good contender for providing integrative analyses of music therapeutic practices. In other words, enactivism should enable us to consider people’s experiences and active participation in music therapy, without ignoring the biological, social, and cultural dimensions of practice. Also, we believe that music therapy should have the potential to enrich enactivism’s search for a better understanding of the embodied, embedded, enacted, and extended mind.
- (2) In addition to this potential, general applicability, this paper will demonstrate how enactivism can be used as a viable tool when studying more specific processes in music therapy. Based on a case example of artistic free improvisation, we demonstrate how interactive musicking can be understood through an enactivist lens, and how this holds promise for further exploration of the role of agency in such processes. This is a particularly relevant point of entry because improvisation has been acknowledged as a key aspect of music therapy

¹In some countries the term “psychiatry” is replaced by broader interdisciplinary terms such as “mental health care.” Each term is debated and has its own problematic history of use. We use the term “psychiatry” in a broad and interdisciplinary way. This is how the term is used in the research domain of the first author of this article.

(Bruscia, 1987), while theory development in this area has been more limited. Free improvisation – as practiced within contemporary art music – requires extensive mental, bodily, and interactive skills. We argue that this skillset is not altogether different from that of the many music therapists who improvise with the people they work with. We show how interactive improvisation is facilitated by an ability to oscillate one’s sense of agency, enabling a lived experience of fluent intertwinement between oneself, one’s co-performers, and one’s surroundings.

Enactivism’s relevance for music therapy is probably very broad, but in order to have a manageable focus in this particular article, we concentrate on the theoretical challenges linked to understanding music therapy’s value and effects when working with people with serious mental health challenges.² Such challenges can be approached through an analysis of agency, which, in enactivism, is not just an important feeling, but a primary structure of our biological and mental lives. Further, much enactive and phenomenological psychiatry centers around a disrupted sense of self (Sass & Parnas, 2003) with direct implications for agency. Consequently, we apply the combination of enactivist theory and the case example to suggest that improvisation in music therapy strengthens and flexes the client’s sense of agency and that this strengthening and flexing is likely part of the “why” music therapy works as well as it does, when working with people with serious mental health challenges.

In the next part of the paper, we present an overview of main theoretical developments in music therapy to show that enactivism could strengthen and start to integrate its theoretical foundations. In the third part, we introduce the core claims of enactivism, also as applied to the understanding of musicking and mental illness, and then focus on its account of agency. In the fourth part, we discuss an analysis of an example of artistic improvisation, shows its similarities with improvisational practices in music therapy, and demonstrate how the case example can be fruitfully understood through the enactive lens on agency. In the fifth and final part, we sum up our argument, point to limitations, and potential next steps.

Theoretical developments in music therapy

Health-related music practices exist in all cultures and have a very long history, while music therapy as academic discipline and modern profession is still relatively young (Davis & Hadley, 2015; Gouk, 2000; Horden, 2000). When reflecting on theoretical developments in music therapy, it is worth noting that important advances in the field often have been practice driven. In *The Study of Music Therapy*, Aigen (2014, pp. 218–223) describes how qualitatively new music therapy models emerged in the 1960s and 1970s, such as Nordoff-Robbins music therapy, Analytical music therapy, Guided imagery and music, and Benenzon music therapy. These models were different in many respects, but according to Aigen, similarities include that they were developed out of clinical practice and that theory was not very prominent in this process.

²Terms such as “disorder” and “illness” are sometimes read as being linked to the biomedical model. In line with the phenomenological tradition of thought, we use the terms in a broader sense which highlights a person’s experience of being ill.

We argue, however, that the practice of music therapy is rarely uninformed by theoretical assumptions, even though it might vary considerably how formalized and specific practitioners' use of theory is. Also, theory has become more prominent in the development of music therapy in the twenty-first century, partly because research plays an increasingly important role as the discipline matures. A substantial number of articles and books have emerged, with various orientations and with various levels of engagement with theory. "Some writings are fully developed theories, some are clinical articles that present theoretical constructs or treatment orientations for practice, and others are research articles that build upon or advance theory," as Bruscia (2012, p. 16) puts it in the introduction to the anthology *Readings in Music Therapy Theory*.

The diversity of contributions, and their different levels of articulation, makes it difficult to give a comprehensive overview of theories in the discipline of music therapy. In fact, very few attempts of presenting and discussing such overviews do exist, but exceptions include Ruud's (1980) groundbreaking book about the theories of music therapy in the 1970s and the more recent discussion developed by Aigen (2014).

When Bruscia edited *Readings in Music Therapy Theory*, he chose not to analyze contributions according to type of theory, philosophical foundations, epistemology, and so on, but to present a diverse collection of readings that could open readers' minds about "what music therapy is and what it can be" (2012, p. 17). We acknowledge the value of the differentiation and diversity that Bruscia wanted to highlight. His preface to an anthology published roughly at the same time illuminates why this is important:

The traditional modus operandi of music therapists has always been to find or develop the most appropriate methodological approach to meet the unique health needs and resources of each individual client, population, and treatment milieu. This aim has not changed. What has changed, however, is the growing awareness that understanding what these needs and resources are is not as simple as we had previously imagined. Once the strait jackets of a particular theoretical orientation or a single method are removed, and once cultural and individual differences are fully acknowledged, most of the older guideposts disappear, and therapists today are faced with the daunting task of apprehending each client's resources and needs within the full richness and complexity of his or her own unique world. (Bruscia, 2013, p. xvii)

The need for situated appraisal of various theoretical ideas has only increased the last decade, as societies have become more multicultural and as decolonial and postcolonial studies have challenged some taken for granted assumptions in the field (Stige, 2022). Theoretical diversity and pluralism are relevant responses to this situation, but tools for theoretical integration are also needed. Without such tools, fragmentation of music therapy as a discipline and isolation of each practicing therapist will be inevitable.

Fragmentation of theoretical practice almost necessarily leads to struggle, because these practices are supported by different rationalities and discourses. As two examples in music therapy, consider Rolvsjord's (2010) critique of the medical model and Thaut and Hoemberg's (2014) embracement of it. While these authors refer to different areas of practice and therefore to some degree participate in two different debates, the polarization of positions is worth noting. Human beings are complex and multi-

dimensional, and we believe that it would be fruitful if such polarities in music therapy thinking were supplemented by tools for theoretical integration.

To make space for diverse perspectives, without ending in fragmentation, we therefore argue that music therapists must supplement theoretical pluralism with integrative efforts. The need for this has been acknowledged by several authors. Proposed tools for integration include bioecological models informed by cultural and ecological psychology (Ruud, 1987/1990; Stige, 2002), Wilber's model of integral thinking (Bonde, 2001; Bruscia, 1998), the biopsychosocial model (Stenhardt & Ghetti, 2020; Ullsten et al., 2018), and critical realism (Bradt et al., 2013; Potvin et al., 2018). Each one of these frameworks have their own strengths and limitations, and it is beyond the scope of this article to evaluate them systematically. Instead, we will try and highlight the utility of an enactivist framework, which has had limited usage within music therapy.

Enactivism, agency, musicking, and psychopathology

Enactivism is a multi-faceted research program with various disciplines that each in their way contest the orthodox position in psychology and neuro-biology that cognition and consciousness can be reduced to neural computations or representations inside the brain.³ Rather, the body (including the brain), other's bodies, tools, the environment, history, and culture all co-constitute consciousness in various ways (DiPaolo et al., 2017; Gallagher, 2017; Malafouris, 2013; Thompson, 2007).

As outlined above, some positions in music therapy research prioritize the biomedical at the expense of the ecological and interactive, and vice versa. An enactive virtue is the balancing of these priorities, as seen in Shaun Gallagher's definition of enactivist commitments:

- (1) Cognition is not simply a brain event. It emerges from processes distributed across brain – body – environment. The mind is embodied . . .
- (2) The world (meaning, intentionality) is not pre-given or predefined, but is structured by cognition and action . . .
- (3) Cognitive processes acquire meaning in part by their role in the context of action, rather than through a representational mapping or replicated internal model of the world . . .
- (4) Enactivist approaches have strong links to dynamical systems theory, emphasizing the relevance of dynamical coupling and coordination across brain – body–environment . . .
- (5) In contrast to classic cognitive science, which is often characterized by methodological individualism with a focus on internal mechanisms, enactivist approaches emphasize the extended, intersubjective, and socially situated nature of cognitive systems . . .
- (6) Enactivism aims to ground higher and more complex cognitive functions not only in sensorimotor coordination, but also in affective and autonomic aspects of the full body . . .
- (7) Higher-order cognitive functions, such as reflective thinking or deliberation, are exercises of skillful know-how and are usually coupled with situated and embodied actions. (Gallagher, 2017, p. 6)

³Enactivism is often rubricated as one of four "E"s: Embodied, Extended, Embedded, and Enacted. For an overview of 4E cognition, see Newen et al. (2018). There are several discussions about whether all 4 "E"s are compatible (Maiese, 2018) and about different versions of enactivism (De Jesus, 2016; DiPaolo & Thompson, 2014). These detailed discussions are not particularly important for music therapy. Our account of enactivism relies primarily on Di Paolo's, Thompson's and Gallagher's work.

These points are not all of equal importance to music therapy, but nevertheless give an effective overview of the enactivist core claims. What shines through as most relevant for our purposes is that cognition exists in action, as interactive processes and transactions across “brain-body-environment” and further that it integrates “higher order cognitive functions” with “situated and embodied actions”, which is a connection of crucial importance for musicking (see Høffding & Satne, 2019). When translated to the practice of music therapy, Gallagher’s definitions have the implication that cognition is directly graspable and manipulable in the musical transactions between therapist and client. By analyzing music, movements, and interactive patterns between the two parties, we can directly see “minds in action” (Krueger, 2012). In other words, enactivism is a framework that opens for an understanding of how music therapists use musical interactions as empathic spaces (Hansen et al., 2022), as a way to perceive and help attune to their clients.

The sense of agency is a core construct in enactivism. Rather than “only” a feeling of empowerment or a sociological concept for social inclusion, the enactivist use marks the fundamental way in which any organism regulates its boundaries allowing it to exist as an individual, “autopoietic” organism, yet in constant interaction with its environment (Thompson, 2007). DiPaolo and colleagues’ *Sensorimotor Life* (2017) does a superb job of fleshing out the concept. They argue that agents make “sense of their environment by coupling precarious processes of self-individuation with environmental dynamics. These processes are imbued with value and sensitivities to the potential effects on the maintenance of the agent’s identity” (DiPaolo et al., 2017, p. 26). Hence, identity is inherently relationally constituted. Di Paolo et al. analyze this constitution in terms of self-individuation, interactional asymmetry, and normativity. We shall soon see how these exact factors are determining for the musical practice of free improvisation. First, however, it is apposite to briefly describe how enactivism has been applied to the analysis of musical practices as well as psychopathology, the combination of which we consider indispensable for a full understanding of music therapy practice.

Enactivism in music

Music Performance has been analyzed from the perspective of enactivism, notably by Andrea Schiavio (Schiavio & De Jaegher, 2017; Schiavio & Høffding 2015; Van der Schyff et al., 2022). There are also interesting applications to music improvisation by Linson and Clarke (2017) and Torrance and Schumann (2019) and embodied music interaction even has its own *Routledge Companion* (Lesaffre et al., 2017). These all share the general position that in order to understand and obtain explanatory power of improvisation and musical interaction, we must consider the entire eco-system of the performance space. The music is not located in a score or inside the individual musician’s head, but distributed between several interacting agents each with their own values and norms, explicitly situated in *this* performance space.⁴ It is this entire dynamic network that gives rise to the concrete instantiation of *this* performance, though, as we shall see, certain musical genres such as free improvisation make more purposive use of this.

⁴Many music therapists will recognize this position from Small’s seminal work *Musicking* (1998). Indeed, that very work is also fundamental to enactive thinking on musical practices.

The enactive perspective has also been applied to music listening, which is of clear relevance to music therapy, where the therapist might take the role of “audience” or “witness.” Enactive listening has been thoroughly analyzed by Krueger (2009, 2012, 2013, 2014). He claims that: “Musician and audience are mutually implicated as co-performers and musician, audience, and situation all are in this way part of the enactive dynamic of the music-event” (Krueger, 2009, p. 116). Further, inspired by ecological psychology, he goes on to analyze how music presents certain “affordances” for the listener through which she can develop unique emotions and cope with challenging situations:

It [the music] is an external resource that allows us to cultivate, refine, and explore familiar emotional experiences in new ways—or even develop emotional experiences we may not otherwise have . . . it does so by integrating with, and subsequently enhancing, the functional complexity of various endogenous processes responsible for generating and sustaining emotional experience. In some instances, we use the music as an emotion extending tool. (Krueger, 2014, p. 209)

The above characterization is of music as one listens to it alone and recorded in order to regulate one’s emotions or for instance in a social event to establish a certain mood or atmosphere. It goes without saying that when working directly with a music therapist focused on one’s mental well-being, such a process of emotional recalibration can be greatly enhanced.

Another characteristic of enactivist music research that might be relevant to music therapy is that research methods from the natural sciences can be meaningfully combined with qualitative studies of participant experiences. For instance, in a study of two string quartets where the musicians reported various degrees of “shared musical absorption” (characterized by empathic relations, mutual trust, and a sense of united musical intentions), Høffding et al. (2023) produced results that indicate that a sense of shared musical absorption and group expertise is correlated with cardiac synchrony. This study points at one possible direction for use of integrative theory in mixed methods research studies.

Enactivism in psychopathology and psychiatry

Switching from enactive takes on musicking, let us look at the enactive underpinnings of psychopathology and psychiatry, such that these two domains can be brought together for a characterization of music therapy for people with serious mental health challenges. We acknowledge that the specialized perspectives that we present here need to be supplemented with for instance mental health recovery perspectives, which highlight how people with severe mental health disorders have hopes and ambitions beyond being free of symptoms (McCaffrey et al., 2018). We also suggest that the narratives and memoirs of persons with lived experience of severe mental health challenges contribute important knowledge on the personal world of the patient and on the strengths and shortcomings of health care interventions and institutions (Lauveng, 2012).

We agree with Maiese (2021) and others, that professionals need to understand the way in which neurobiological, social, and existential dimensions of mental disorders are integrated. Enactivist notions are helpful in this respect and contribute

to a broader perspective that can inform situated dialogues with patients about experiences of being ill as well as experiences of being a person in sociocultural context. While phenomenological psychopathology and enactive psychiatry often expresses a professionalized perspective on mental illness, this perspective is not to be equated with a bio-medical one. It also goes beyond a biopsychosocial perspective. In the case of schizophrenia, central appeal to a “minimal self”, a structure of consciousness with no direct biological correlate or even existence, is made. Further, phenomenological psychiatrists have persistently criticized a biomedical understanding of mental illness and on occasions pointed to the value of meditative, spiritual or artistic pursuits in aiding their patients (Bundesen & Rosenbaum, 2020; Henriksen et al., 2022; Parnas & Henriksen, 2016).

Since the 1920s, phenomenological psychopathology developed alongside phenomenology (which again arguable is the strongest theoretical influence on enactivism (Thompson, 2007; Wheeler, 2005)). Over the last two decades, analyses of schizophrenia have had a renaissance, not least through the work of Josef Parnas, Louis Sass and colleagues (Sass & Parnas, 2003) culminating in an *Oxford Handbook* on the topic (Stanghellini et al., 2021) and a widely applied, phenomenologically based interview manual to detect early onset of schizophrenia, namely the “Examination of Anormalous Self-Experience” (EASE) (Parnas et al., 2005).

According to Sass and Parnas (2003), analyses by early psychiatrists and philosophers such as Bleuler (1950), Minkowski (1927) and Jaspers (1963) converge on an understanding of schizophrenia as expressive of a “self-disturbance”, *Ich-Störungen* or “ipseity disturbance”. This self in question is not to be understood as a socially constructed or narrative self, but as the basic, pre-reflective self-awareness that pervades all conscious life. This “minimal self” has been the subject of extensive investigation by the classical phenomenologists and is a core theme of Dan Zahavi and Shaun Gallagher’s research (Gallagher & Zahavi, 2008; Zahavi, 2005). When this self is disturbed, it leads to difficulties in attributing one’s physical and mental actions to oneself, a sense that one is not really there, or that one is at a distance from oneself (Sass & Parnas, 2003, p. 432). Sass and Parnas (2003) show how this “ipseity disturbance” leads to “hyper reflexivity” and “diminished self-affection” (p. 429) which are both pervasive in schizophrenia. According to Gallagher, the minimal self can be divided into two dimensions, namely the sense of agency and ownership (Gallagher, 2005, 2012). The latter is the sense that “something is happening to me” and the former that “I am the agent and initiator of my actions”. Though we cannot provide the full argument here, we can combine Gallagher’s distinctions with the insights from phenomenological psychopathology to claim the following: particularly in schizophrenia, but also in other psychopathologies such as depression (Maiese, 2018), there occurs a profound disturbance in the sense of agency, in the sense of experiencing oneself as the initiator of one’s actions, and as those actions having an effect in the real world from which one feels secluded or alienated.

In light of the previous presentation of enactive agency from DiPaolo et al. (2017), we can expand on Gallagher’s insights and take agency to be the fundamental ability of an organism to steer the necessary balancing between distanciation from and integration with its environment. Building on important psychiatric analyses of “interaffectivity” and “intercorporeity” by Thomas Fuchs (Fuchs, 2018; Fuchs & de Jaegher, 2009; Fuchs & Koch, 2014) a recent monograph on *Enactive Psychiatry* (de Haan, 2020) takes

these insights further, analyzing psychiatric disorders not in terms of an inner and somewhat isolated property of consciousness, such as *ipseity*, but in terms of how mind, brain, body, and environment are co-constituted (de Haan, 2020, p. 9). More precisely, de Haan (2020) claims that we must understand the nature of, and relations between, four irreducible dimensions in psychiatric illness, namely the “experiential, physiological, socio-cultural, and existential” (p. 10).⁵

Enactivism in music therapy

Given these enactivist analyses of both music practices and psychiatric illnesses, the next natural step should be an application to music therapy. To our knowledge this has not been done yet, except to a very limited degree: Bizzari and Guareschi (2017) have produced a short analysis of “Bodily memory and joint action in music practice and therapy”, Schmid (2017) refers to an enactivist perspective in a case example from music therapy in neuro-rehabilitation, while Maiese (2016, 2018) and Vaisvaser (2021) have written on enactivism and creative arts therapy, and Hansen et al. (2022) on “empathic spaces” in improvisation and music therapy. Most recently, Mössler et al. (2023) have employed enactivist insights in their exploration of the co-creation of space for attunement dynamics between an autistic child and a non-autistic music therapist.

These contributions represent important beginnings, but the full potential of enactivism as a resource in integrative theory development in music therapy is not yet explored. In our appraisal, some of the reasons why the framework is worth exploring are: (i) it enables consideration of several dimensions of human existence, such as biological, phenomenological, psychological, social, and cultural dimensions, (ii) it is broad and flexible enough to support innovative theory development in a range of music therapy practices, (iii) it is supported by interdisciplinary research under rigorous academic scrutiny, (iv) it is embraced by scholars from various disciplines who take active interest in both music and mental illness and therapy,⁶ so that new possibilities for interdisciplinary collaboration arise. Further, we note that the potential of an enactivist framework lies dormant in several recent theoretical contributions to the discipline, such as Ansdell’s (2014, pp. 53–90) work on the ecology of musical experience, where he combines phenomenology, pragmatism, and ecological theory and highlights how musical experience is embodied, situated, interactive, and holistic.

In addition to the arguments above for the general applicability of enactivism in music therapy, we want to demonstrate how enactivism can be used as a tool when studying specific processes. The example we have chosen to examine is an enactivist analysis of free improvisation, which we make to bear on enactivist perspectives on mental health and psychiatric illness. The diversity of practices and contexts relevant to the profession clearly suggests that improvisation should not be considered *the* music therapy method. It remains an important approach to music therapy practice, however, because it can be adjusted to almost any skill level and because it supports and

⁵That de Haan’s work on psychiatric disorders is much wider than the focus on *ipseity* should not be taken to mean that phenomenological psychiatry has a solipsistic focus or disregards the intersubjective dimensions of psychopathology. See for instance Henriksen and Nilsson (2017), and Sass et al. (2017).

⁶See for instance De Jaegher’s (2018) discussion of intersubjectivity and Maiese’s (2018) discussion of the treatment of depression.

enables human creativity and interaction (Bruscia, 1987; Sutton, 2020; Wigram, 2004). Improvisation could be considered “human communication in sound” (Pavlicevic, 2000) and it builds upon what Malloch and Trevarthen (2009) have described as our innate communicative musicality, as a resource for participation in human culture. Such claims are well established within the discipline of music therapy, while the therapeutic significance of improvisation to our agential capacity has been explored to a much lesser degree.

To sum up, we can understand agency as a systemic property spanning the mind-brain-body system, but also as structured and modulated by socio-cultural factors. Agency plays a key-role in the understanding of psychiatric illness. Consequently, demonstrating that free improvisation, including that practiced in music therapy, centrally taps into and flexes our agential capacity, provides an argument for the efficacy of music therapy in psychiatric illness. Enactivism, then, could be a powerful theoretical tool for examination of how interactions in the system client-music-therapist-environment unfold.

To our knowledge, no detailed empirical study of improvisation-based music therapy and its implications for agency has been performed so far. To provide an example that can illustrate the potential, we therefore turn to a related practice, namely free improvisation as practiced within contemporary art music. Such improvisatory practice requires extensive mental, bodily, and interactive skills. In the examples of enactivist analysis that we will present, we want to illuminate how interactive improvisation is facilitated by an ability to oscillate one’s sense of agency, enabling a lived experience of fluent intertwinement between oneself, one’s co-performers, and one’s surroundings. We argue that the involved skillsets and the evolving processes are not altogether different from that of the many music therapists who improvise with the people they work with.

In line with Ansdell (2014) and several other music therapy scholars, we acknowledge that there is continuity – similarities and differences – between music therapy practices and other music practices. We also agree with Sutton (2020), who argues that (artistic) free improvisation has been one important, if somewhat neglected, source of inspiration to the development of modern music therapy since the 1970s. These arguments probably warrant further contextualization, examination, and discussion, and our purpose here is not to make absolute statements about the similarities between music therapy practices and artistic practices. There are clearly some important differences. Still, the similarities that do exist, such as the challenge of establishing contact and communication within a process where aesthetic choices are also made, indicate that music therapists at least could take interest in and learn from a case example from this related field.

Case example: An enactivist analysis of free improvisation

The analysis of free improvisation that we choose to present is based on an extended theoretical and empirical investigation with the saxophonist and free improvisation artist, Torben Snekkestad (<http://torbensnekkestad.com/>). The methodology employed to conduct the study we rely on here consists in an integration of phenomenology and qualitative research methods. Describing this methodology is beyond the scope of this paper. For the general methodology, we refer to Høffding and Martiny (2016), Ravn (2023) and Legrand and Ravn (2009). For the specific analyses of

Snekkestad's practice, we refer to Snekkestad (2016) and Høffding and Snekkestad (2021) and for the agential analysis hereof to Ravn and Høffding (2022).

Inspired by musicians such as Joelle Léandre, Derek Bailey, Barry Guy, and Evan Parker, Snekkestad's style could be associated with what Lewis calls the "European Free Improvisers" (Lewis, 1996, p. 112). Many of his techniques, ideas, and values are similar to those described by improvisation authorities Lewis (1996), Bailey (1993), and Borgo (2002). Though our account builds on a case study, the following analysis is consequently likely generalizable across the population of free, improvising musicians and, as argued in (Ravn & Høffding, 2022), dancers.

Musicians often go on stage without having ever met their co-performers. With no explicit prior agreement on melody, harmony, or rhythm etc. they now face the challenging task of performing something interesting and meaningful and of establishing a musical language through which they can agree or disagree on the musical development. They each come with a finely trained set of skills that are engaged and sometimes taken to places where the musicians had not ventured before:

A free improvisation concert is more about that everyone is in an open process and can monitor closely how the spontaneous communication between musicians change the trajectory of the music, how they are sort of negotiating the material along the way. (Høffding & Snekkestad, 2021, p. 165)

These negotiations are constantly going on and expressive of the following logic. If Snekkestad perceives that the music is becoming too repetitive, he will introduce new material to push into zones of lower predictability. Inversely, if the music is becoming too scattered and erratic, he will lean back temporally, remember where they came from and introduce earlier presented passages or textures to preserve a sense of artistic cohesion or narrative. Moving between the poles of the predictable and the chaotic takes place with the co-performers who may choose to follow or counter-act Snekkestad's initiatives. These negotiations have the purpose of opening new musical and mental zones or "pulling the rug":

For instance with a really good drummer, who can align himself very closely with your playing and ideas, and then suddenly create a friction. Suddenly he can perhaps stop playing at the moment where it is most predictable that we're building to a climax and in that way *pull the rug from underneath your feet*, in order to create those openings in the music where something can happen. Create new paths in the music, create new forms. Create that moment where you loose (sic) control. (Høffding & Snekkestad, 2021, p. 165)

Snekkestad has to be mentally prepared to assume and lose control when his co-performers or the music itself seems to demand it. Thus, he must be closely attuned to his co-performers and constantly refine his communicative ability so as to know when to relinquish and when to assume control. This negotiation can also happen with the audience:

music invites the listener to be more or less in an open and creative listening process. When playing impro music, I have a strong feeling that we all are in the same place. It is not like "I possess this dramaturgy and can manipulate you", it is not that kind of situation. You observe a process we are searching for, we are looking for something together, we are together, we are in the same space when this happens. (Høffding & Snekkestad, 2021, p. 171)

Concretely, the audience will help Snekkestad determine when to end a piece. Does he perceive that they want to go further, or do they seem to want a break and recompose before the next set? We here begin to see the contours of an entire

performative system that – multifaceted as it is – can explain why the music develops as it does. In other words, trying to predict the musical trajectory solely based on Snekkestad's individual, isolated agency would fail, because such a prediction cannot take the distributed nature of the performative system into account (Linson & Clarke, 2017).

Probing further into Snekkestad's experience, he can name and describe no less than 13 distinct mental, perceptual and musical techniques employed for musical manipulations. These are techniques to direct his perception, his interoception, his visualization, memory, narrativity, reflexivity, breath and finger control, as well as his attention to his co-performers, the room, and the audience (Høffding & Snekkestad, 2021). All of these are dynamically interlinked and function such that he can actively draw upon them, when sensing the need to, or in contrast, be drawn by them, when he feels more safe and open.

As also argued in Høffding and Snekkestad (2021), we see that Snekkestad's most indispensable ability in establishing a performative system is not one or a few distinctively musical techniques. Rather, at its core, there is an agential ability to steer his mind between this multiplicity of techniques. He constantly renegotiates the internal balance between them. He also works the balance between letting them come to the fore to assume an influence or to be relinquished, to fall in the background, while something or someone else takes the center. The openness to managing this balance is an ability to oscillate one's agency (Ravn & Høffding, 2022). It mirrors the organismic descriptions of agency from Di Paolo et al. because, in this light, improvisation is an exercise in managing one's boundaries, sometimes opening for new inspirations from someone or something else, and at other times, closing them firmer, to assume more control of the performance. We could even call such free improvisation an "autopoietic exercise", as it fundamentally requires flexing one's agency.

Such flexing again relates to Di Paolo et al.'s work on the constituents of the sense of agency, namely self-individuation, interactional asymmetry, and normativity as described in greater detail in DiPaolo et al. (2017, pp. 111–124) and Ravn and Høffding (2022). Self-individuation denotes the basic ability of preserving one's identity as more or less open to the external world as seen for instance, when Snekkestad breaks away and goes into a new musical direction. Interactional asymmetry is the ability to control the interaction with the environment and refers to Snekkestad's ability to oscillate the interactions with his various techniques and their respective relation to the room, the audience, and his co-performers. Finally, normativity refers to how the history of the organism and its couplings with its environment structures its current coupling. In musical performance, this refers to the history of possible past interactions between the musicians as well as references to past music and musicians.

The above paragraphs exemplify similarities and differences with music therapy improvisation. For instance, the notion of being "in the same place," where two (or more) people are looking for something together, is shared. So are the negotiations going on when it comes to balancing structure with zones of lower predictability. The characteristics and meanings of some of these processes, however, might differ considerably. For instance, in music therapy the need for predictability will also be related to the mental health condition of the participants. Our main point here is not an exhaustive comparison, but to highlight how music therapists could learn from an enactivist analysis of music improvisation.

Conclusion: The promise of enactivism

This article has aimed at providing a general and a specific contribution with the purpose of introducing enactivism to music therapy research. The general contribution comes from an intention to achieve a more integrated theoretical analysis of the effects of music therapy. We have described how music therapy falls into approaches that might polarize neurologic, musical, or relational-contextual dimensions of the human condition. These approaches, though valuable in their own respect, resist theoretical integration because it is far from evident how to combine the laws and principles of neurology with those of musicology and culture or sociology. Here, enactivism holds a promise because it from the outset has recruited a wide variety of sciences to produce a set of shared principles from the level of the cell, over consciousness, to society (Thompson, 2007).

Our general contribution was to show how enactivism has already made substantial contributions to our understanding of musicking and psychopathology, making an enactive conception of music therapy a natural and possible next step. The enactivist perspective enables us to see how “higher order cognitive functions” are integrated with “situated and embodied actions”, a crucial connection for musicking. One interesting implication for the study and practice of music therapy is that cognition is directly graspable and manipulable in the musical transactions between therapist and client. In the analysis of the interactive patterns of music, we then might observe “minds in action,” so to say. This provides us with new theoretical tools for the understanding of empathy and how music therapists use musical interactions as ways to perceive and attune to their clients. Similarly, enactivist notions contribute to a broader understanding that can inform situated dialogues with patients about experiences of being ill, as well as of being a person in sociocultural context. The notion of agency, understood as the fundamental ability of an organism to steer the necessary balancing between distancing from and integration with its environment, is central here. In enactivist psychiatry, disorders are not explored in terms of inner and isolated properties, such as consciousness, but in terms of how mind, brain and body are co-constituted in context. Again, we suggest that this bears promise for future development of music therapy theory. Enactivist insights have been applied in a very limited number of texts and studies in music therapy, and we argue that the potential value of this perspective to a large degree is unexplored.

Our specific contribution is an example of an enactive analysis intended to demonstrate how the notion of oscillating agency connects the realms of free improvisation with that of severe mental illness. More precisely, our specific argument is structured with three premises and a conclusion:

(P1) Many severe mental illnesses, such as schizophrenia, involve an inhibited or distorted sense of agency.

(P2) Many forms of music therapy revolve around processes of joint improvisation, which in some important respects resemble those of artistic, free improvisation.

(P3) A core feature of artistic, free improvisation is the ability of oscillating the sense of agency.

(C) Hence, the therapeutic effect of improvisation-based music therapy can be partly explained as a strengthening, flexing, or recalibrating of the agential capacity, which is impaired in severe mental illness.

This enactive interpretation of expert free improvisation is an example of a new lens music therapy can hopefully apply to better conceptualize and explain the efficacy of its practice, because it gives precise theoretical tools to help understand and integrate the role of neuro-biology, phenomenology, interaction, music, and culture in music therapy.

We conclude on a sobering note, for we do not wish to naively suggest that enactivism is a radically new science that can easily solve all of music therapy's theoretical challenges. As already mentioned, some of its core ideas are now a century old. Phenomenology, pragmatism, and ecological psychology feed into enactivism and have also been applied in music therapy theory. While these mother disciplines are effective for understanding experience and culture, they tell us little about for instance, biology, physiology, or complex dynamical systems. To reiterate, enactivism's promise lies in its integrative potential, attempting to make "mind and life" continuous (Thompson, 2007, p. 128), for instance through analyses of agency, interactional asymmetry, and normativity. Such analysis could be continued into explicit investigations of music therapeutic practice, for instance with the aim of bringing experience and community-centered, neurology-centered, and music-centered "forces of thought" into a perspective of mutual enlightenment.

Managing a consistent, integrative analysis of such sources would harmonize the situated, experiential content with the musical and the physiological to constitute a more explicit kind of evidence for the promise of enactivism. Inversely, given the rich force-field that music is – neurologically as well as experientially – and the highly interactive, attuned expertise that the music therapist possesses, music therapy in turn could become a lived source of nourishment for further theoretical developments in enactivism.

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