



# Music Talks:

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## Authors

Elis Serhan  
Jared Fraser  
Jaala Marie C. Sadler  
Anna Doolan

## Editors

Joseph Williams  
Michelle Stead  
Jacob Leonard



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## Contents

### Editorial: The ‘Music Talks’ Project at Western Sydney University

*Michelle Stead, Joseph Williams and Jacob Leonard* . . . . . iii

### The Phenomenological Reduction and Music

*Elis Serhan* . . . . . 1

### Microtonality in a Western Setting

*Jared Fraser* . . . . . 16

### Ethnomusicology and Aboriginal Torres Strait Islander Music: Preservation and Survival

*Jaala Marie C. Sadler* . . . . . 30

### Music Therapy as Treatment for Children with Attention Deficit Hyperactivity Disorder (ADHD): Which Methods are most Effective?

*Anna Doolan* . . . . . 45

## **Editorial: The ‘Music Talks’ Project at Western Sydney University<sup>1</sup>**

*Michelle Stead, Joseph Williams and Jacob Leonard*

As the editors of these proceedings, we are proud to present the diverse and innovative work of the undergraduate student musicologists at Western Sydney University. The proceedings draw on the many academic interests of these students, which were showcased through two student-led conferences, entitled "Music Talks", held at Western Sydney University in 2022. The conferences were made possible through funding provided by the Student Services and Amenities Fees (SSAF) and served as a response to the isolated teaching and learning conditions brought about by the COVID-19 pandemic.

The pandemic had a profound impact on musicology students, who were forced to transition to online classes during the lockdowns of 2020 and 2021. While we were fortunate that this format allowed for continued learning, musicians are inherently social creatures who are used to working together. In this way, the lack of face-to-face interaction negatively impacted the quality of debate and discussion, which are integral components of musicology. The "Music Talks" conferences were therefore designed to bring students back on campus and into a face-to-face context. They were designed to mimic the real-life setting and context of the practice

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<sup>1</sup> Our initial SSAF funding application title was ‘Undergraduate Musicology Conference and Journal’; credit for the title ‘Music Talks’ is owed to Patrick Li, a third-year undergraduate student who volunteered to serve on the Student Steering Committee for both the Autumn and Spring conferences in 2022.

of musicology and to remind the student cohort how fun it can be to engage in intellectual discussion.

In the context of the post-lockdown transition back to on-campus classes and activities, SSAF-funded projects that contributed to the recovery of a ‘campus culture’ were encouraged. The priorities of the SSAF funding programme are aligned with four evaluation metrics: student reach; student engagement; student involvement in programme delivery; and COVID-19 response. While we were committed to the SSAF principles of promoting student engagement and a face-to-face campus culture, we were also driven by our shared concern to position critical scholarship as an appropriate locus for campus culture. Despite the challenges universities have weathered in recent years, we maintain our belief in the university as first and foremost a place in our society for those who pursue and share knowledge for its own sake. Furthermore, the success of the Music Talks project highlights the ongoing relevance of musicology in twenty-first century music degrees. As the student papers collected in these proceedings demonstrate, our discipline creates a space for students from every year of the degree, to confront and challenge the received dogma and ideology that frame our cultural experiences of music. In its breadth and complexity, musicology spans questions of ethics, identity, history, aesthetics, politics and so much more, which will always captivate enquiring musical minds. With careful, critical ears, musicology listens to the sounds of human creativity, past and present, and hears untold stories of power, thought, suffering, love, resistance, survival and hope. In a culture of modernity increasingly dominated by the instantaneous and the introspective, musicology sustains, deepens, and enriches musicians’ connections to our common craft and our common world. In popular culture, we are bombarded by discourses that position music as a ‘mirror’ reflecting the authentic self of the musical artist; throughout the papers collected in these proceedings, we

are proud to witness undergraduate students of WSU discovering music as a window onto the world.

The reader will note the diversity of the subject matter in the articles, which is a testament to the inclusive nature of the "Music Talks" conferences. Some of the interests explored in this collection were piqued through class topics, while others were generated from class assessments, and others are based on personal interests. This diversity is a reflection of the unique and individual perspectives of the student musicologists at Western Sydney University.

Elis Serhan's paper explores phenomenological philosophies, which sparked Serhan's interest in the third-year subject Music and Critical Thought. Serhan demonstrates an impressive engagement with concepts such as 'reduction' and 'bracketing', initially developed by Edmund Husserl in the early twentieth century, and applies them to confront complex questions around perception and experience in a wide-ranging discussion that spans visual arts as well as music. In particular, Serhan identifies the compositional approach that Pierre Schaeffer called *musique concrete* as a tradition of art music that foregrounds phenomenological concepts. Serhan's creation of an original piece, *Nocturne*, in the *musique concrete* tradition exemplifies the way that musicological research can feed into a musician's creative practice, opening up new avenues for exploration and artistic growth as well as deepening their intellectual appreciation of aesthetic materials.

Jared Fraser's paper, undertaken as an independent research project, reflects a keen interest in microtonality, exploring a range of its manifestations in western popular music performance and composition. Fraser takes a clinical approach to analysing microtonality in these

contexts, distinguishing first between performative and compositional microtonality, and then between melodic and harmonic compositional microtonality. Fraser's discussion is supported by analyses of music by Dua Lipa, Jacob Collier, The Beatles, and King Gizzard and the Lizard Wizard. Fraser demonstrates a remarkable breadth of knowledge in covering a variety of microtonal techniques, including: the even division of intervals using the 'cents' system; the use of vocal stacking to support modulations from diatonic to microtonal key signatures; shifting between A=432Hz and A=440Hz within a piece using varispeed playback; and the modification of western instruments to work within microtonal systems. In presenting his work at the second of our 'Music Talks' conferences, Jared was also able to attend a workshop given by celebrated microtonal composer/sound artist Kraig Grady. This highlights another benefit of such undergraduate conference events, facilitating students' engagement with experienced practitioners in the field, encouraging the development of professional networks and potential mentorships.

In a paper developed out of research for the second-year subject World Music, Jaala Marie C. Sadler embarks on a detailed, insightful and critical discussion of key concepts in ethnomusicology and anthropology, as they have been applied in historical and contemporary studies of Australian Aboriginal and Torres Strait Islander music. As Sadler argues, western axiological traditions that privilege "music as sound" over "music as a holistic performative practice" can be dangerously misleading when they are uncritically mapped onto Indigenous conceptions of art and culture as ontologically intertwined. Furthermore, historical practices of western anthropology, such as the "salvage paradigm," have extended colonial agenda to objectify and dispossess Indigenous people. Yet Sadler's critical discussion of these practices is nuanced, pointing out that the artefacts that anthropologists have extracted and constructed as objects of western knowledge under this paradigm continue to be instrumental in

supporting land title claims and cultural education. As Sadler suggests, arrangements that display problematic dynamics of power and representation nevertheless continue to yield tangible benefits.

In the third-year subject Music Careers Research, students put their research skills to work investigating a professional field they are interested in pursuing after graduation. Anna Doolan used this opportunity to explore the potential for music therapy to work as part of ADHD treatment plans for children and adolescents. Doolan's paper for the Music Talks conference was developed from a literature review for this research project, introducing the field of music therapy and the condition of ADHD in general, before exploring the extent of current research into a range of music therapy approaches that have been trialled with ADHD participants. Doolan shows the need for further research around music therapy and ADHD, but identifies music and movement therapies, listening therapies, behavioural/instructive therapies, and improvisational therapies as promising candidates for further study and development. The conclusion that quantitative studies and clinical trials might be complemented by a wider range of qualitative approaches that highlight the experiences of participants, parents, teachers and other stakeholders illustrates Doolan's highly competent understanding of research methodologies, as well as a strong interest in using music to make a difference in the lives of real people.

As conveners of the conferences and editors of the proceedings, we are passionate about the quality of the musicological work that comes out of Western Sydney University. We believe that the research and perspectives of these students are an important contribution to the field of musicology in Australia and speak to the innovative and dynamic nature of the discipline.

The student papers in this collection illustrate the breadth of musicological enquiry, exploring the ways in which music intersects with such diverse fields as politics, anthropology, aesthetics, philosophy and psychology. Moreover, these papers also showcase the significance and relevance of musicology within tertiary music education more broadly, notably evident in the way students have applied musicological frameworks to confront contemporary and historical problematics surrounding music, as well as investigating possibilities for music careers in today's uncertain economic climate.

This publication serves as a platform to showcase the hard work and dedication of the students and inspire further exploration and discussion in the field. We hope that these proceedings will provide a valuable resource for scholars, students, and enthusiasts of musicology and will encourage further inquiry into the many fascinating and complex aspects of the study of music. As the next generation of musicologists, the student musicologists at Western Sydney University are poised to make significant contributions to the field and we are honoured to play a role in sharing their work with the wider world.

The students who developed their work for publication in these proceedings are only the proverbial iceberg's tip of student participation in the Music Talks project. Some students presented outstanding papers at the conference, which for various reasons they decided not to publish, including Abbey Hinvest, Pavelle Sadlon, Joshua Thistleton, Benjamin Monger, Patrick Li, Angela Huynh and Aaron Gunawickrema. A series of student-driven discussion panels, covering the topics of 'absolute music vs programme music', 'what is musicology?', 'music, gender and sexuality', and 'ideas of originality and authenticity in music' contributed immeasurably to the conferences as spaces for the free exchange of scholarly perspectives on how we think about music as musicians, and how we understand its place in culture and



society. We would like to thank Pavelle Sadlon, Benjamin Monger, Angela Huynh, Alyssa Masterson, Jaala Sadler, Anna Doolan, Madeleine Morcombe, Elis Serhan, and Lachlan Lane for their enthusiasm and commitment in these discussion groups, not only on the conference dates but also at extra-curricular workshops throughout the semester. Finally, we unreservedly congratulate the students who volunteered their time and energy to be part of our conference steering committees—Angela Huynh, Patrick Li, Anna Doolan, Marc Brown, Jared Fraser, Pavelle Sadlon, Abbey Hinvest, Jaala Sadler, Grant Dawson, Linda Jackson, Jacinta Harris and Elizabeth Gray—whose innovative ideas and dedicated hard work made the conferences possible and shaped their content, from the keynote and masterclass topics right down to the catering menu. While our focus in this editorial is on the student contributions, we also owe debts of gratitude to the professional and academic staff in Music and the School of Humanities and Communication Arts at Western Sydney University who contributed to the organisation and content of the conferences—Professor Matt McGuire, Jenny Purcell, Vanessa Fotheringham, Amanda McNamara, Marian Schraishuhn, Josie Landford, Dr Clare Maclean, John Encarnacao, Mitchell Hart and Noel Burgess.

These proceedings are a result of the determination and passion of the student musicologists at Western Sydney University. Despite the challenges posed by the pandemic, they have succeeded in creating a platform to present their work and advance the field of musicology. We are confident that this publication will inspire further exploration and discussion.

# The Phenomenological Reduction and Music

*Elis Serhan*

## Abstract

This paper examines the application of phenomenology to music. Phenomenology is a branch of philosophy attributed to Edmund Husserl and includes two stages – the phenomenological reduction and the epoché process, which are both designed to help individuals access the 'real world' and its application to music. Pierre Schaeffer utilised the method of reduction and epoché in his invention of 'Musique Concrete'. This invention will be further analysed in his piece "Etude Aux Chemins De Fer." Schaeffer's invention formed a new face of music that comprised field recorded sounds rather than musical instruments. It became a form of art that combined science and engineering with the conventions of abstract art and composition. Schaeffer's composition will be examined in conjunction with my composition "Nocturne." "Nocturne" is an experimental piece that concentrates on manipulating regular sounds in the form of a montage and putting the method of epoché and reduction into practice. The aim is to assess the relevance of epoché and reduction within non-philosophical contexts and music, to determine if prior knowledge can be avoided to form new perceptual experiences. This paper deals predominantly with epoché, specifically as discussed by Clark Moustakas and Dan Zahavi. I draw on examples of art, specifically optical illusions, to elucidate the application of phenomenology. This thought experiment exposes the effect of perception, as the visual outcome of an individual's experience of art

ultimately forces them to form their own perceptions and meaning. I conclude that although phenomenology allows individuals to critically think in philosophical contexts, it can be challenging when applying the principles of epoché and reduction to everyday life. The implication centres on objectivity as it can narrow one's perspective, while forcing them to form judgements in a naïve way. These judgements ultimately focus on disregarding people's pre-conceived knowledge and belief systems when it comes to engaging in analyses through phenomenological methods. I argue that while the reduction and epoché are relevant methods to use while assessing philosophical contexts, it is not beneficial when applying these methods within everyday contexts, as people's preconceived knowledge and belief systems inevitably influence their perceptual experiences.

## **Introduction**

Phenomenology and epoché are processes of critical thinking that allow individuals to conceive knowledge from a new and objective point of view. This paper examines the perspectives of psychologist Clark Moustakas and philosopher Dan Zahavi regarding this topic, as well as the view of Edmund Husserl's philosophy. Through examination of their philosophical discourse, I primarily focus on the similarities and differences of their arguments, whilst assessing their perspectives on the importance of epoché and the phenomenological reduction. I examine the relevance of these methods within philosophical and non-philosophical contexts and argue that prior learning in society has an unavoidable influence on perception and thus, should not be avoided. Subsequently, I will discuss how these perspectives relate to the world of music and how the reduction and epoché are shaped through Pierre Schaeffer's invention of 'Musique Concrete'.

Phenomenology is a qualitative research approach that can be understood as a philosophy of one's experience, formally known as phenomena. It requires individuals to study things objectively that may present themselves in a subjective way.<sup>1</sup> Simply, phenomenology is about a philosophical enquiry into ways individuals experience the world. The subject matter here, is based on an individual's perception and things that they perceive in the world. It is an idea that involves knowing an object exists in the external world and remains the same, but it is the individual's perception of the object that ultimately changes their experience.

The process of epoché is to disregard the influences and biases of everyday knowledge and to naively make judgements on things from face value. This process involves disregarding preconceived knowledge and information. This also includes omitting belief systems that have swayed an individual's social and political beliefs, whilst blocking out the perspectives of whatever and whoever surrounds the individual. Epoché requires individuals to be transparent to themselves and learn to be aware and take in experiences in ways that enforce new and fresh perspectives and understandings.<sup>2</sup> Optical illusion art is an example of an effective medium where the concept of epoché can be applied and experimented. To develop new understandings of perception, illusion art and art with hidden images are helpful in allowing people to put perceptual experiences into practice, by assessing objects presented to them in an objective way. The work of Ukrainian artist Oleg Shupliak is an example of how this type of experiment could be achieved.

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<sup>1</sup> Smith, *Phenomenology*.

<sup>2</sup> Moustakas, *Phenomenological Research Methods*, 3.

**Oleg Shupliak: *Windy Day. Claude Monet/Girl Reading Dali***

Oleg Shupliak's work, specifically his paintings that comprise hidden images most commonly present two distinct versions of an object. These objects that pose as more than one image ultimately force an audience to experience the art in alternative ways. The intent here is to exemplify that there are different ways of interpreting certain objects that allow individuals to create their own meaning. Shupliak's paintings cleverly conceal images behind one another, in order to challenge viewers to find hidden meaning in his works. Evidently, these 'hidden images' are disguised through certain objects or characters, as well as their form, positions, shapes and colours.

Oleg Shupliak's oil painting of *Windy Day. Claude Monet* reveals two ways people can perceive the painting.<sup>3</sup> The first perceptible image shows two women in long white dresses and hats, holding umbrellas, who are being blown away by the wind. However, through manipulation of certain objects, shapes, colours and forms, these elements contribute to the construction of a second image. For example, the drawn out, long white dresses are the objects, but serve a second purpose for an alternate illustration. This second 'hidden' illustration exposes the side profile view of an elderly man's face. The face is hidden through the clouds, which are emphasised through the swirl motion of the paint strokes. This element shapes the form of a head, while the features of the two women shape the structure of the man's face. For example, the dresses as mentioned earlier, act as objects for the man's beard. The long dresses create an elongated effect, signifying that the male character has a long white beard. The woman positioned upfront on the middle ground,

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<sup>3</sup> Shupliak, *Windy Day. Claude Monet*.

reveals how her face and scarf form the structure of the man's eyes and eyebrows, while her right arm is positioned in a certain way that emphasises the shape of his nose.

Shupliak's *Girl Reading Dali* is another painting that exhibits two perceptive images.<sup>4</sup> The first notable illustration shows a female character, sitting on an armchair, holding a cup of coffee with a book on her lap. However, the woman's form is used to structure the facial features of Spanish surrealist artist Salvador Dali, which in this case is the second 'hidden' image. Shupliak's use of positioning the cup of coffee and floral ornament on the woman's shoulders reveals that these objects signify Dali's signature big brown eyes. This is enhanced through Shupliak's emphasis on Dali's eyebrows by using the female character's long blonde hair as the object. Other objects are used to form the structure of Dali's face, such as the arm rests for his ears, and the black shadow of the woman's lower body, which is the same shape as Dali's long and thin moustache.

These images confirm how the object itself remains the same, but it is the individual's perception of the object that changes. This phenomenological thought experiment is an example of how the senses can be tricked. The objects, in this case the artworks, are the same objects that exist in the 'real' physical world, but an individual's experience of the art through the five senses is the only thing that changes.

### **Phenomenology and Philosophy**

Individuals are encouraged to adopt phenomenological methods when they are critically

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<sup>4</sup> Shupliak, *Girl Reading Dali*.

thinking, but how should they go about it? How does one train themselves to study what is presented to them in an objective manner? Moustakas suggests reduction and bracketing (epoché).<sup>5</sup> The method of reduction is based on describing the general features of what you see, excluding things that are not within a person's conscious experience.<sup>6</sup> The same applies for epoché – the process of 'bracketing' out one's preconceived knowledge, assertions, beliefs, and ideas. Moustakas discusses how Husserl took this scientific method and attempted to apply it to human experience, resulting in the phenomenological method.<sup>7</sup> Essentially, Husserl's view in transcendental phenomenology is responding to René Descartes's epistemology on the conception of knowledge and method of radical scepticism.

While Zahavi to some extent agrees with Moustakas's view on transcendental phenomenology, he questions whether epoché and reduction are relevant and necessary in non-philosophical contexts. Zahavi challenges Husserl's views, attempting to question his thoughts through critical thinking. This correlates to mathematician and philosopher René Descartes, specifically his method of radical scepticism 'Cogito Ergo Sum' – 'I think therefore I am'.<sup>8</sup> Descartes's argument on 'Cogito Ergo Sum' centred on the theory that people's senses are unreliable.<sup>9</sup> Thus, an individual's beliefs had to be doubted until proven certain through mathematical evidence (logic and reason). Descartes's theory was that everything in the world had to be justified in order to exist or be true. To Descartes, reality

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<sup>5</sup> Moustakas, *Phenomenological Research Methods*, 9.

<sup>6</sup> Ibid. 7

<sup>7</sup> Ibid.

<sup>8</sup> Newman, *Descartes' Epistemology*.

<sup>9</sup> Ibid.

was more important than abstract thoughts. The only thing in his philosophy that he could undoubtedly confirm to be true was that he existed, by virtue of the fact that he was questioning his existence; in order to question, something must first exist that is capable of questioning. When people are in doubt, that is a form of thinking, which ultimately confirms that people do in fact exist. This methodology is what Zahavi attempts to challenge while analysing Husserl's argument on transcendental phenomenology. Zahavi challenges every single thought and point of view to the point where the only thing he can confirm to be true, is the fact that he is a thinking being. Husserl sought to challenge Descartes's approach and understanding of knowledge regarding empiricism and aimed to bring that into the modern world. Empiricism can be defined as knowledge obtained through the five senses.<sup>10</sup> Descartes did not believe in the idea of sensory knowledge as part of his method of radical scepticism. He preferred logic and reason, formally known as rationalism.<sup>11</sup>

Husserl challenged the notion that empiricism was the most effective approach. Moustakas and Zahavi argue that Husserl encourages readers to exclude the idea of empiricism as it fails to provide logic and reason and fails to eliminate everything that is not part of the natural attitude. The natural attitude can simply be understood as common sense, or an uncritical way of seeing the world – things that people do not question the existence of or things that come naturally to them.<sup>12</sup> For example, when people are driving, they instinctively know they are surrounded by other cars, but they do not stop and question why they exist or what their fundamental origins are. People's natural attitudes already expect to

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<sup>10</sup> Vanzo, *Kant on Empiricism and Rationalism*, 56.

<sup>11</sup> Ibid.

<sup>12</sup> Beyer, *Edmund Husserl*.



see cars surrounding them as that is what people have known their whole lives. It is what they have grown up with and what they fundamentally view as normal; thus, it is part of their subconscious experience and one that fails to constitute critical judgement. This is what Husserl means when he refers to the idea of one's natural attitude.

Moustakas and Zahavi have contrasting perspectives when it comes to the relevance of epoché within non-philosophical contexts. Zahavi believes that epoché and reduction are not necessary to use in non-philosophical contexts, as they only narrow the way an individual perceives everyday things.<sup>13</sup> He continues to argue that both the methods of epoché and reduction have little in common and do not fully ignore or leave anything out.<sup>14</sup> When one perceives everyday things, their natural attitude as mentioned earlier, or natural world reflects their perception of truth and people cannot help but be influenced by what they already know in everyday contexts. This is something that Moustakas has a different perspective on.

Moustakas suggests that understanding the meaning and nature of epoché and phenomenological reduction allows individuals to move towards learning how to view everyday experiences. These experiences are expectedly viewed through an objective lens, in order to learn to view everyday experiences in a fresh and naïve way.<sup>15</sup> Moustakas's approach raises the question, if one were to learn and see things in a new and naïve way, how does that benefit their experience? Yes, it allows them to notice and realise things they

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<sup>13</sup> Zahavi, *Applied Phenomenology*, 271.

<sup>14</sup> *Ibid.*, 264.

<sup>15</sup> Moustakas, *Phenomenological Research Methods*, 7.

have never been exposed to before when critically thinking, but does that not disregard things one already knows? People have known and have been taught and influenced their whole lives, since birth, how they conceive knowledge, but how are they now encouraged to view things from a perspective that is not influenced by their own social and/or political beliefs?

### **Phenomenology and Music**

This leads me into the question of how these perspectives relate to music. The processes of reduction and epoché play a critical role when talking about music. The 20<sup>th</sup> century technological revolution and the introduction of acousmatic music completely shifted and affected people's experience of the world. Acousmatic music is defined as music that is heard in a scenario where its source is not visible or present, for example, loudspeakers.<sup>16</sup> When one thinks about the processes of reduction and epoché, they subconsciously use these methods when listening to music. Reduction already happens when people listen to acousmatic music as their attention is already focused on what they are hearing and nothing else.<sup>17</sup> Epoché allows an individual to 'bracket' out preconceived knowledge and focus and listen to the evidence, which in this case is the music.<sup>18</sup>

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<sup>16</sup> Clarke, *The Impact of Recording on Listening*, 50.

<sup>17</sup> Clarke, *The Impact of Recording on Listening*, 50.

<sup>18</sup> Ibid.

*Etude Aux Chemins de Fer*

Pierre Schaeffer, a philosopher, musician, and sound engineer was heavily influenced by Husserl's phenomenological views.<sup>19</sup> He used his influences to apply phenomenology to music. He invented a new genre of music called 'Musique Concrete', which compiled several raw recorded sounds in the form of a montage.<sup>20</sup> Through this style of music, Schaeffer's aim was to experiment with the sounds and see how listeners can practice 'bracketing' and phenomenology.<sup>21</sup> He wanted listeners to lose track of what the recorded sounds were and practice reduced listening, focusing on the sound itself. I used one of Schaeffer's pieces to perform an experiment that aimed to explore how I could apply this to my own way of critical thinking when it concerns music.<sup>22</sup>

Schaeffer took his recording equipment to his local railway and recorded various contrasting sounds which included trains passing by, as well as engine and whistle sounds for his piece "Etude Aux Chemins De Fer". He edited and manipulated these sounds into the form of a montage through various techniques such as tape looping, time-stretching, pitch-shifting, slicing, and putting sounds in reverse, all to explore the depth of the sounds he captured, creating musical architecture.<sup>23</sup> Intrigued by Schaeffer's ability to manipulate regular sounds and arrange them into one piece, I created my own take of musique concrete

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<sup>19</sup> Kane, *Pierre Schaeffer, the Sound Object, and the Acousmatic Reduction*.

<sup>20</sup> Ibid.

<sup>21</sup> Ibid.

<sup>22</sup> Schaeffer, *Etude Aux Chemins De Fer*.

<sup>23</sup> Palombini, *Machine Songs V: Pierre Schaeffer: From Research into Noises to Experimental Music*, 15.

to put the processes of bracketing and reduced listening into practice.<sup>24</sup>

### *Nocturne*

<https://www.youtube.com/watch?v=lg0QKYQYlmQ>

Using my phone, I recorded contrasting timbred sounds within open and enclosed acoustic environments. Several sounds were recorded in an outdoor setting, where ambient noises such as the wind and busy roads masked specific sounds I intended to capture alone. The spills of surrounding sounds contributed to the dense texture of the tracks, which allowed me to effectively conceal the focal object heard in the recordings, through plug-in effects. Other sound sources were recorded in small, enclosed rooms where the aim was to create an anechoic chamber. Objects and materials including furniture, wall coverings and thick blankets were set up on floors and walls, in order to create a confined space, blocking out potential spills of surrounding sounds. I wanted these audio signals to be quite raw, flat and dry, in order for me to experiment with audio manipulation and add effects like heavy reverb, delay and echoes, during the post-production process. I recorded the sound of a lawn mower, my footsteps, typing on a computer, scribbling with a pen, flipping through pages of a book and whistling. The aim was to compile different sound sources that are familiar and are associated with an everyday environment. The use of manipulation aimed to disguise the original sounds, while creating a unified and cohesive piece. Thus, to edit the sounds initially, I adjusted the volume through automation and began slicing the clips to arrange them. To manipulate the sounds, I adjusted the tempo from 125bpm to 85bpm, sliced and

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<sup>24</sup> Serhan, *Nocturne*.

reversed clips, used vocoders and echo grain effects, added reverb and delay, warped tracks to stretch certain sounds and used a sine wave erosion effect, which distorted the audio signal by modulating a short delay with a filtered noise. To tighten the overall mix and shape the sounds into a conventionally structured musical piece, I panned certain sounds to the left, right and centre to create balance in the audio, while compressing certain sounds (e.g., computer typing) to control the dynamics. This limited the louder sounds and reduced the difference between the loudest and softest notes in the track. I also used an equaliser to manipulate the frequencies, in order to shape the colour of each sound. Once the piece was mixed and mastered, I engaged in daily reflective listening sessions, which allowed me to attempt the application of Schaeffer's notion of epoché and reduced listening. A specific method I engaged in included surrounding myself in a spacious and quiet environment where I could engage in listening sessions repeatedly, until I could no longer separate or distinguish the recorded sounds. However, I believe my personal bias affected my listening sessions as I was unable to bracket out the original sound sources, which made the experiment challenging to participate in.

Whilst conducting this experiment, I often referred to the debate between Zahavi and Moustakas about sense, experience, knowledge and meaning. The intent was to lose track of what the individual recordings were, and instead focus on listening to the overall sound of the piece, as if all the sounds were only one sound itself. However, the influences and biases of everyday knowledge became difficult to ignore. The difficulty predominantly involved the inability to omit pre-conceived knowledge, in order to form new judgements naïvely. In terms of senses, I attempted to describe general features that are not within my conscious experience, but found that I agree with Descartes's philosophy of 'Cogito Ergo Sum', and prefer the concept of knowledge through logic and reason. In my findings, I came to believe

that an individual's sensory knowledge can only enhance their perceptions, but I do not believe that sensory knowledge alone can benefit their perceptual experiences. This is due to the fact that individuals are already influenced by factors like society and politics, so much so that it is difficult to disregard their belief systems to create new meaning.

## **Conclusion**

Zahavi argues that epoché and reduction are essential when conducting philosophical research, but are not relevant when investigating everyday things. Contrastingly, Moustakas believes epoché and phenomenological reduction are necessary in assessing everyday things as they allow individuals to form new and fresh perspectives in an objective way, which pulls away from their preconceived knowledge and judgements. In relation to music, Schaeffer believes individuals can continue to practice the process of bracketing and reduction when it comes to listening to a piece of music, even as reduction already happens when people listen to acousmatic music. This review helped me gain an understanding that prior learning in society has an unavoidable influence on perception. Phenomenology is an effective way of critical thinking in philosophical contexts, but can be challenging when applying the principles of epoché and reduction to everyday life. It is only capable of narrowing one's perspective on wider things, in order to allow individuals to naïvely make judgements on things that have been subconsciously influenced by their social and political beliefs.

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# Microtonality In a Western Setting

*Jared Fraser*

## Abstract

Microtonality is a concept that has existed throughout music history in various parts of the world as a core feature within certain styles of music. Western music however has used microtonality quite sparsely throughout the history of both Western art music as well as modern Western music. In recent times however, microtonality has begun to see usage in Western popular music through artists such as Dua Lipa whilst also being further developed and used in genres outside of mainstream pop music by artists such as Jacob Collier and King Gizzard & The Lizard Wizard. This paper aims to examine the use of microtonality in the works of Dua Lipa, Jacob Collier and King Gizzard & The Lizard Wizard, discussing both the compositional and performative achievability of each technique and application of microtonality.

## Introduction

Microtonality is a term that is relatively new in music history as some of the earliest references to the term occur in music literature from the late 20th century.<sup>1</sup> Whilst the terms

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<sup>1</sup> Kirnbauer, "Vieltonigkeit' Instead of Microtonality", 64.

are quite new in relation to the history of music and music theory, the use of microtonality stems back hundreds of years through the use of microtonal keyboards. Some of the earliest examples known to us come from the 16th century with many other designs for microtonal keyboards continuing to be developed throughout the 18th and 19th centuries.<sup>2</sup> In essence, microtonality refers to the use of intervals that are smaller than the smallest interval in Western music, the semitone, and whilst some scholars state that the use of a “semitone” is in itself microtonal as it is an interval smaller than a whole tone, the more common definition states microtones as being smaller than a semitone.<sup>3</sup> The more common definition is what will be referred to in this paper, being that microtonality refers to the use of pitches smaller than a semitone.

### **Compositional and Performative Microtonality**

Although microtonality can easily be viewed as a concept outside of mainstream Western music, this statement is problematic. Whilst there is certainly a finite sample of Western music that implements microtonality in its composition, microtonality is a fundamental element of performance in Western music. Slides on stringed instruments, melisma, glissandos and general pitch inconsistencies within performances are all examples of microtonality within Western music. Performative microtonality could be seen as somewhat incidental which would separate the microtonality in Western music from that of other world music cultures where microtonality is a central music element. There are microtonal

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<sup>2</sup> Keislar, “History and Principles of Microtonal Keyboards.”, 19-21.

<sup>3</sup> Kirnbauer, “Vieltonigkeit’ Instead of Microtonality”, 64-65.

compositional techniques that are difficult to translate into performance as well as primitive microtonal techniques that are hard to translate to compositional microtonality. This is largely due to either a requirement for complex notation methods to correctly transcribe microtonal elements or a requirement for extremely specific microtonal adjustments which cannot be achieved through certain fixed-pitched instruments or in the case of the voice, an unreasonable ability of microtonal identification and replication. One of the largest inhibitors to compositional microtonal techniques' implementation to a performative setting is the availability, and lack thereof, of microtonal instruments. Whilst microtonal instruments have existed and continue to be developed in modern times, their usage in Western music is relatively sparse. The largest example of their usage in Western music is in Avant Garde microtonal compositions where composers utilise customised instruments to work within microtonal systems as focal points in the composition.<sup>4</sup> Perhaps as microtonal instruments become more readily available with the emergence of mass-produced microtonal instruments such as the Lumatone, further use will be seen, but this is largely speculation and time will tell as to whether or not microtonal instruments are further adopted in Western music. This paper will continue to focus on compositional microtonality with references to the performability of these techniques.

### **Compositional Microtonality**

The use of microtonality and microtones in modern Western pop music can be separated into two different categories, melodic microtonality and harmonic microtonality. These terms

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<sup>4</sup> Gilmore, Bob. "Microtonality: my part in its downfall." PDF, (*Keynote Lecture, UK Microfest 1*, October 15, 2005). [https://homepages.inf.ed.ac.uk/stg/Bob\\_Gilmore/BGMicrofest05.pdf](https://homepages.inf.ed.ac.uk/stg/Bob_Gilmore/BGMicrofest05.pdf) Accessed 10 March 2023.

refer to how microtonality is used and its role in music. The more common of the two categories is melodic microtonality where microtones are used in melodic lines. This can be seen through a variety of examples, one being Dua Lipa's "Good in Bed" where a microtonal run can be heard in the main melody of the chorus. The melody line begins on an Eb and walks down in stepwise motion to a C. This interval is only a minor third, three semitones, yet five notes of unique pitch can be heard.

The use of microtones in this example is comparable to that of a triplet for rhythm. This means that microtones are evenly spaced over the distance between the start and end point in the same way that a triplet evenly subdivides a set number of beats. This is achieved with microtones through the use of cents. Cents are how we measure and describe microtonal pitches. The distance between one semitone and the next is 100 cents, thus a note that is altered by 50 cents is a quartertone. In the example of "Good in Bed" (Figure 1), four evenly distributed notes must be between a distance of 300 cents. This can be calculated using relatively simple mathematics which can be seen in the below figure. This compositional technique where each interval is divided equally is relatively simplistic and adaptable to other compositions, however, this technique is largely limited to ascending or descending melodic lines that move by steps and depending on the harmony underneath can become quite dissonant.

### **Harmonic Microtonality**

Harmonic microtonality can be perceived as something that is harder to achieve in Western

## Good In Bed Microtonal Vocal Line



Distance from Eb to C = 3 ST or 300 cents

$300/4 = 75$  cents per note

Figure 1: "Good In Bed"

music for a variety of reasons, the first being the lack of instruments capable of playing microtonal chords. This is one reason why harmonic microtonality has fewer examples of its use. Jacob Collier is one example of an artist who has been experimenting and developing microtonal harmony throughout various songs with largely different applications and techniques.

Collier's rendition of "In the Bleak Midwinter" approaches the use of microtonality very differently to what is seen "Good in Bed" as Collier uses microtones in the harmonic content as opposed to a melodic line. Collier achieves this through the use of the most flexible microtonal instrument available, the voice. The human voice is capable of playing any frequency and microtone possible. Unlike instruments such as a microtonal keyboard or guitar which have fixed microtonal usages, the voice is capable of playing microtonal adjustments by cents. Hence, Collier uses vocal stacking to create precise microtonal

intervals across four chords, modulating to an entirely microtonal key, G half sharp. Collier modulates 50 cents, a quartertone, in four chords by taking advantage of the difference between equal temperament (12 TET) and the natural overtone series. The four chords each share the common note of B which increases by 50 cents by the end of the four-chord progression. The first chord in the progression is D13 and comes from the key of G major as chord V. The note B in the key of G major is the major third and in 12 tone equal temperament (12 TET) is 14 cents sharper than what naturally appears in the overtone series of G. Collier takes advantage of this difference by tuning the other notes within the D13 chord up by 14 cents. This allows for the B to remain an anchor point from the previous chord in 12 TET whilst the rest of the chord has become microtonal by being sharpened by 14 cents and begins the transition to G half sharp. This process of manipulating the differences between 12 TET and the natural overtone series continues for the next three chords of the key change which allows Collier to achieve a smooth modulation into a microtonal key.<sup>5</sup>

Collier's microtonal works extend further than just one example and each usage of microtonality in Collier's work is unique in certain aspects and uniform in others. Collier's microtonal harmony is almost always created through vocal stacking. However, the theoretical approach and usage of microtonality are largely varied throughout his work. An example of this can be seen in his arrangement of *Fascinating Rhythm* where almost Collier blends elements of melodic and harmonic microtonality together. Collier uses the same method that can be seen within *Good In Bed* where a minor third is equally divided into 4

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<sup>5</sup> DavidBruceComposer. "How To Modulate To G 1/2 Sharp (Jacob Collier Style)."

notes.<sup>6</sup> Alongside this style of microtonality, Collier also exploits the differences between just intonation and 12 TET. This particular example can be seen at 1'34" in the track where two chords can be heard, one being a stack of 4ths that have been tuned to just intonation and the other being a stack of 5ths that are tuned to just intonation. In comparison to 12 TET, perfect 4ths are 2 cents flat in just intonation whereas perfect 5ths are 2 cents sharp. Collier stacks justly tuned 4ths in this example where the upper voicings in the chord are progressively becoming more out of tune in comparison to 12 TET. The first chord becomes 12 cents flat whereas the second chord becomes 16 cents sharp due to this exploitation.<sup>7</sup> This leads to a difference of 28 cents between the highest notes in these chords.

Another example of Collier's further use of microtonality is seen within his track "Hideaway." For something to be considered microtonal, it is often stated that it must operate outside of the 12 TET system that is fundamental in Western music.<sup>8</sup> "Hideaway" offers somewhat of an exception to this rule set as the song utilises the 12 TET system. However, it shifts microtonality to a different temperament over the course of the piece. The piece starts in A=432 but by the end of the song, everything is tuned to A=440. Throughout this song, 12 TET is the foundation for the harmonic content yet the shift from A=432 to A=440 can only be described as microtonal. In this example, Collier is subtly shifting the temperament whilst retaining the 12 TET system with an alternative fundamental frequency. A similar example of this style of microtonality can be seen in the song "Strawberry Fields Forever" by The

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<sup>6</sup> JuneLee. "Interview: Jacob Collier (Part 1)."

<sup>7</sup> JuneLee. "Interview: Jacob Collier (Part 3)."

<sup>8</sup> Knipper and Kreutz, "Exploring Microtonal Performance." 377.

Beatles where a microtonal shift occurs during the song yet 12 TET is the primary harmonic system being used. In the case of “Strawberry Fields Forever,” the microtonal shift occurs due to the use of varispeed, the process of speeding or slowing down tape recordings.<sup>9</sup> In the analogue world in which Strawberry Fields was crafted, to change the speed of a recording, the pitch would also be altered. If a tape were sped up the pitch would increase, and it would decrease if the tape were slowed. The final track for Strawberry Fields is a splice of two separate studio recordings, take 7 and take 26.<sup>10</sup> Take 7 was originally recorded in the key of A and take 26 was recorded in the key of B.<sup>11</sup> Varispeed was used to splice these two takes together to ensure that the keys were as similar as they could be as well as the tempos. The use of varispeed transforms take 7, which was previously in concert pitch A major, to A major +43 cents and transforms take 26, previously in concert B major, to Bb major -12 cents. This is a difference of 45 cents, almost a quarter tone, making this take splice microtonal.<sup>12</sup>

This approach to harmonic microtonality is quite advanced and mathematical and requires a thorough understanding of the differences between the natural overtone series and equal temperament as well as an advanced understanding of voice leading and basic harmony.

Another technique to achieve harmonic microtonality that does not involve the voice is to use microtonal instruments. The use of microtonal instruments can include the use of instruments

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<sup>9</sup> Pollack., *Notes on “Strawberry Fields Forever”*.

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> DavidBennettPiano. “*Why is Strawberry Fields Forever in A half-sharp major?*”



from other cultures that have been created for use within a microtonal music system, such as the baglama from Turkish music, but also includes the use of Western instruments that have been modified to include microtones, such as microtonal guitars or harmonicas.

### **King Gizzard & The Turkish Inspiration**

King Gizzard & The Lizard Wizard are an Australian psychedelic band that created an entire album using Western instruments that were modified to work within a system of microtonality, *Flying Microtonal Banana*. The microtonal instruments used within this album allowed the band to create melodic and harmonic content using quarter tones. There is a much larger emphasis, however, on melodic microtonality as opposed to harmonic. Almost all of the tracks within the album use microtonal riffs, which can be described as melodic microtonality, while tonal harmony is provided by another instrument, typically a keyboard. However, there are many times across the album where two or more instruments are playing microtonal riffs at different pitches which creates harmonic microtonal content. An example of this is seen in the interactions between the harmonica and electric guitar in the track “Sleep Drifter”. There are also examples in which a chordal instrument plays microtonal harmony using quarter tones which can be seen in the track “Melting” by the keyboard part. In comparison to other microtonal compositional techniques, the techniques used by King Gizzard and The Lizard Wizard can be viewed as more accessible as a compositional technique due to the use of instruments with pre-determined microtonal pitches in comparison to the flexibility of the voice.

There is a significant argument that King Gizzard utilise microtonal techniques that resemble Turkish Anatolian rock music in the mid to late 20th century. As previously mentioned, the microtonal work of King Gizzard is largely driven by microtonal instruments, namely electric guitars fretted to work within a traditional Turkish tuning system. Members of King Gizzard have often talked about their initial inspiration and creative process when creating their first microtonal works in the album *Flying Microtonal Banana* where they often reference the bağlama when discussing their modified electric guitars.<sup>13</sup> The bağlama, also known as saz, is an instrument that derives from Turkey and Turkish traditional music and is an example of a Non-Western microtonal instrument. The bağlama is an instrument that uses quarter tones and fits within a 24 TET system. However, bağlama is an instrument with movable frets so whilst it often fits within 24 TET, moveable frets allow for change within the individual microtonal pitches the instrument can create and hence affect the temperament system that it uses. King Gizzard's microtonal works are an example of how microtonal systems from cultures and traditions outside of Western music can be successful within the Western market. Whilst King Gizzard is not a household name band, they are a well-received and popular band in their respective scene within the industry, touring internationally, and playing microtonal music to their crowds.

## **Conclusion**

The microtonal compositional techniques discussed share unique traits and require unique skill sets or equipment to properly use in a composition. These unique skill sets or equipment

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<sup>13</sup> "King Gizzard and The Lizard Wizard"

create entry barriers for microtonal compositions. It is difficult to determine which microtonal compositional technique is the most accessible to composers as each of the techniques requires a specific skill set and depth of knowledge to properly implement within a piece of music that is unique to the individual technique. Whilst there are complications and challenges that are shared between different techniques, the unique skills required for each independent technique create the largest barriers to entry. To emulate the harmonic microtonality created by Collier would require a significant understanding of the microtonal theory that is beyond the scope of most Western musicians who have little understanding of microtonal techniques. Collier's style of harmonic microtonality is also incredibly difficult to emulate and implement in a performative setting due to the skillset required by the performer, being the ability to identify and replicate pitches to precise cental adjustments. As previously mentioned, Collier's harmonic microtonality requires a highly flexible microtonal instrument that can play notes adjusted by cents. This usage of microtonality is only realistically achievable by either the voice or through digital editing of individual notes played by an instrument through a digital audio workstation. Collier mainly uses the voice to achieve microtonal elements within his works. However, this is largely due to Collier having absolute pitch with the ability to accurately sing and identify pitches to cental adjustments. These reasons make it unfeasible for this technique to be applied by an average composer as the skill set required to effectively implement the technique is unavailable to most composers. This microtonal compositional technique is also almost impossible to recreate as a live performance as it would require a vocal choir consisting of musicians with the ability to sing exact microtonal pitches to the cent. The microtonal compositional technique implemented by King Gizzard & The Lizard Wizard is much more accessible to the average Western musician in comparison to Collier's as all it requires is a Western instrument that has the ability to play quartertones. The melodic microtonality employed by Dua Lipa in "Good In Bed" is much

more accessible than Collier's as it only requires some basic math and understanding to theoretically implement within a composition. However, this style of microtonality is perhaps the most limiting of all three techniques discussed as it can only be applied to melodic lines moving in stepwise motion. This style of microtonality is similar to Collier's in that it requires either a voice or a digitally modified instrument to implement. However, unlike the harmonic microtonality that Collier uses, this style of melodic microtonality can be easily implemented within live performance which is evident in Dua Lipa's live performances of "Good In Bed."

The above examples and information give a general insight into some of the microtonal compositional techniques that are being employed in the creation of Western music. However, there is much more to explore. Whilst the number of artists and tracks that employ microtonality is by no means extensive there are numerous examples of other varying techniques to achieve microtonal elements within the music. Examples of microtonality such as the experimental and highly complex microtonality explored by Collier, to the more structured microtonality from King Gizzard, all provide insight into how microtonality can be used within a Western setting. Some of the microtonal techniques discussed in this paper can be easily replicated and achieved with a high degree of accuracy, such as the microtonal line from "Good in Bed" whilst some usages of microtonality exist in a sphere where only extremely experienced and trained musicians can implement successfully, such as in the case of Collier's usage of microtonality.

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# **Ethnomusicology and Aboriginal Torres Strait Islander Music: Preservation and Survival**

*Jaala Marie C Sadler*

## **Introduction**

Music in culture is an important tool that can communicate a multitude of social facets which underpin the very foundations of a community. Within this paper, I will explore how the study and recording of music of cultures can embody a positive transformation, preservation, and defiant survival of Aboriginal and Torres Strait Islander culture. This is of course, only possible when conducted in respects to the protocols, traditions, autonomy, and opinions of the people researched. An awareness of Australia's historical context is duly crucial when considering the idea of preservation and survival. My own personal experiences as an Aboriginal woman will frame some key concepts regarding Indigenous music and performance. These ideas will then be substantiated by references to, and analysis of the research and fieldwork of notable musicologists such as Aaron Corn. As an academic, Corn has conducted extensive research within the Pitantanjara Aboriginal communities of Arnhem land, and has a few notable papers analysing the work of Yothu Yindi. In regards to the musicology of a culture, there is a central issue to navigate and acknowledge in regards to the conduct of anthropologists and musicologists in their work both presently and historically. A disregard for cultural protocol, permission and ownership of songs has had consequences. My aim in this study is to illuminate the intrinsic value of music within cultural research and

practice, and set the stage for more in-depth work to be conducted on the influence of modern music on Indigenous musicians and artists.

### **Introduction into Ethnography and Musicology**

Ethnomusicology is the study of culture and societies through the music created within specific cultures and societies. It draws heavily upon ethnographic grounding in order to formulate nuanced discussions of cultural expression.<sup>1</sup> Due to a shared interest, ethnomusicology adopted certain methodologies from the practices of Cultural Anthropology. One example that is most relevant to the discussion is ethnography. This is the primary method in which anthropologists conduct their research in conjunction with participant observation-based fieldwork, which is a process of collecting data. Fieldwork is also an essential method of collecting data and researching. In anthropological studies it is often conducted adjacent to observation-based research practices. In contrast to what is referred to as the “armchair” methodology of research, observation-based research allows for authentic and accurate recordings of societal and cultural life through a personal involvement within said society and culture.<sup>2</sup>

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<sup>1</sup>Slobin, Mark. “Review of Ethnomusicology: From Ethnography to Cultural Studies” (2007)

<sup>2</sup> “Selected Perspectives: an Open Introduction to Cultural Anthropology. “Chapter 1 – The Culture Concept.”, (n.d), *When studying other cultures or civilizations, early anthropologists relied on external accounts and opinions– “these scholars did not have any direct contact with the people they were studying”*.



Ethnomusicology in practice generally focuses on a selected range of areas associated with music and music making. This includes material aspects such as instrumentation, cognitive, cultural and social reasonings, and biological factors.<sup>3</sup> The foundations of the discipline mirror that found within Anthropology. In this, I refer to the comparative methodology which underpinned the practice of researching and documenting the cultures of the world. The “Salvage Paradigm” is a term used to describe the desire to preserve what were seen as “weaker” cultures from imminent destruction, by the dominant culture which would be seen as consequential to the imposing presence of said dominant culture. Also described as “Salvage anthropology”, this period of time within the discipline pervaded the conduct and methods of anthropologists, which have blatantly ignored cultural customs and autonomy of the individuals and communities that were the subject of anthropologists’ research. Rather than as a respectful documentation of a culture’s customs and ways of life, this research evolved into yet another form of oppression and power leverage. While this approach is mostly abandoned, a similar sentiment can be detected within the present day of musicology. The discussion now bears a new alias: the opposed binary of “Western” and “World” musics. The concept of “world” music as a genre in and of itself struggles to find a definite boundary of its use, and must be carefully considered when placing artists within this category, less used as an analytical tool. The lingering presence of comparative research within musicology has produced conclusions of music that do not consider the true breadth of difference and individuality that is possible within music globally. In my own research, contemporary musicologists are beginning to acknowledge the misapplication of Classical European musical theory, especially when applied to non-western music.

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<sup>3</sup> Kartoni. M, ‘Ethnomusicology in Australia’ (2018)

## Music and Culture

A core idea that I am immensely fascinated with is the depth and extent to which music can embody a community's foundational values and inner mechanisms. The interplay between music as sound, and music as a holistic performative practice is the basis to which meaning within the arts takes place. Consider this quote by Suzanne J Lager in her article "The Cultural Importance of the Arts" (1966).

[A] novel for instance, is read silently with the eye, but not made for vision, as a painting is; and though sound plays a vital role in poetry, words...are not essentially sonorous structures like music... But works of art are purely perceptible forms that seem to embody some sort of feeling.<sup>4</sup>

This dynamic is an inextricably intertwined aspect of Aboriginal and Torres Strait Islander culture. The arts, i.e dance, music, and performance, are embodied as one holistic concept in Aboriginal and Torres Strait Island culture. Clint Bracknell and Linda Barwick discusses this idea in their article on Australian Music Institutions, paraphrasing Catherine Ellis's introduction to the idea of the Pitantjatjara word *inma*:

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<sup>4</sup> Langer, Susanne K., 1966, 'The Cultural Importance of the Arts.' (1966): 06

The Pitantjatjara language, like many other Indigenous languages, has no separate word for ‘music’, instead, the term *inma* encompasses all phenomena (dance, music, storytelling and visual design).<sup>5</sup>

In his analysis of Yothu Yindi’s “Tribal Voice” music video, musicologist Aaron Corn notes the significance that ancestral identity embodies in ceremonial performance, referencing the dancers and their body art.<sup>6</sup> In my own experience as an Aboriginal woman, observing performances in community encapsulated the interconnection between dance, music, and storytelling. Performances are an immersive educational tool that is immensely important in the teachings of customs, ways of life and *mores* (the upheld norms, behaviours or customs of a community). What I observed were the specific roles that each component of the performance held in communicating these laws and lores of culture. For example, vocal performances and accompanying instruments such as clap sticks or the yidaki would often describe a Dreamtime story, or a songline to community members. Dancers would then visually connect these words to actions both in their movements and through ceremonial body art.

One important musical form within Aboriginal and Torres Strait Islander culture are traditional songlines, sung and passed down from generation to generation. They tell the

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<sup>5</sup> Bracknell. C & Barwick. L “The Fringe or the Heart of Things? Aboriginal and Torres Strait islander Musics in Australian Music Institutions” (2020): 78

<sup>6</sup> Corn. A, ‘Land, Song, Constitution: Exploring Expressions of Ancestral Agency, Intercultural Diplomacy and Family Legacy in the Music of Yothu Yindi with Mandawuy Yunupingu’ 2010: 86

stories and journeys of ancestral/creator spirits, coming from the Dreamtime. These stories often include (but are not limited to) origin stories of the universe and the land, moral teachings on proper behaviour, and most often of social law.

### **Preserving Culture: The Effects**

Michael Brogan, a graduate researcher at University of New England, discusses the role and ethical concerns of ethnographic film making regarding the relationship between anthropology, government policy and the assimilation of Indigenous peoples. The discussion surrounding the ownership of certain recordings and visual media capturing sacred ceremonial practices, histories and knowledge of land, tradition, practice, law and more has been at the focus. In most cases, the material captured and used in ethnographic works has seldom been made available to the communities from which it is taken.<sup>7</sup> Cultural song and performance are then stripped of their inherent sanctity, and the people and practices are reduced to objects for research and observation, something to be consumed and exploited. This presents the imbalance of power enforced by previous anthropologists through the motivations behind their ethnographic efforts aligned with “salvaging” a culture which is still alive and actively practised today. Such anthropologists and their material have played into the government policy of assimilation, and the efforts to essentially eradicate the Aboriginal and Torres Strait Islander culture. However, these recordings and documentation from various anthropologists have, and continue to, help Indigenous Australians make land title claims. Ceremonies of songlines and site-specific performances allow Indigenous

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<sup>7</sup> Brogan. M, “Australia’s First Peoples and Ethnographic Film-Making” (2018)

communities to prove the “continual” link of people and country required to make such claims.

### **Preserving culture: Land Rights**

The significance of the physical land is paramount to the survival and continuation of the Aboriginal and Torres Strait Islander cultures. It is an essential component that *mores*, ceremonies and traditions of culture orbit. Many sources tend to present the specific date of conception of Australia’s land rights movements as occurring in 1983 alongside the *Aboriginal Land Rights Act (NSW)* passed in that year. However, AIATSIS, the Australian Institute of Aboriginal and Torres Strait Islander Studies, dates it back to the ‘Yirrkala Bark Petitions’ in 1963.<sup>8</sup> A hallmark in the land rights movement would be the ‘Wave Hill Walk Off’ of 1966 and the Mabo Case of 1982-1993. The famous photograph of then Prime Minister Gough Whitlam symbolically handing back the land to Gurindji man, Vincent Lingiari, began from strikes for improved working conditions and pay.

Following the major changes inflicted by the various successes of the Mabo case, the *Native Title Act 1993* was passed. This allowed Indigenous communities to make land rights claims over traditional lands. However, there must be “Proof of native title” where “[7.4] Aboriginal and Torres Strait Islander peoples may also claim compensation for the extinguishment of native title. Doing so requires proving that native title was in existence before being

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<sup>8</sup> AIATSIS. “Land Rights.” (n.d)

extinguished.” As well as this, it can only be claimed where other legal titles (freehold) do not exist. In order to make land claims/sovereignty over traditional land, Indigenous communities must be able to prove a sustained connection to the land. It is clear that it can be incredibly difficult to navigate the legal requirements for Indigenous peoples to claim Native Title. However, this is where the work of researchers, anthropologists and musicologists can be applied to in the preservation of culture.<sup>9</sup> As Corn states, “Through the *Aboriginal Land Rights Act (Northern Territory)*, Indigenous claims of inalienable freehold title over their homelands could be tested in federal courts.”<sup>10</sup>

In 1983, New Zealand ethnomusicologist, Richard Moyle, published his book *Alyawarre Music*. Here he recorded his fieldwork in the Alyawarre nation of the Northern territory, where his research and voice substantiated two native title claims. Moyle argued how music was integral to land ownership. Grace Koch summarises some important points from the book in their article “Music and Land Rights” (2008). The following were his arguments, as informed by the Alyawarre people:

There are people who are said to own songs. Other people must ask their permission to perform those songs ... The people who own those songs own the ceremonies

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<sup>9</sup> Anindilyakwa Land Council. “Research.” (n.d) *An example of the effects that research can do in proving the already established precepts of songlines on non-indigenous terms. “This is the first time spiritual and ceremonial connections over the sea have ever been seriously considered a matter for national heritage recognition and potentially national recognition under the Native Title Act 1993 (Cwlth)”*

<sup>10</sup> Corn. A, ‘Sound Exchanges: An Ethnomusicologist’s Approach to Interdisciplinary Teaching and Learning in Collaboration with a Remote Indigenous Australian Community’(2009): 25

where the songs are sung ... The texts of songs relate to Creation myths and other stories. These song texts can be shown on a map. The owners of the ceremonies own the places where the songs travelled through ... The people who own the songs own the land.<sup>11</sup>

This dynamic between the Indigenous and non-Indigenous voices, while a complex topic of discussion, is a crucial factor to the uplifting of Indigenous matters. Thus, the collaboration between Moyle and the Alyawarre people, as voice and informant, have materialised the direct connection of music in culture to the land in a way that can be used within the imposed legal system. While the schematics of a non-Indigenous voice representing Indigenous people can be debated, the positive outcome of interactions such as this cannot be outweighed.

In conjunction with Brogan's discussion of anthropological recordings of cultural musics in legal battles, Corn also discusses the role that musicians hold in the survival and recognition of Indigenous cultures. He states:

Evidence about traditional music and dance repertoires... which contain privileged information about homelands and the localised ownership structures through which they are governed became central to these claims.<sup>12</sup>

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<sup>11</sup> Koch, G. "Music and Land Rights: Archival Recordings As Documentation for Australian Aboriginal land Claims" (2008): 158

<sup>12</sup> Corn. A (2009): 25

Similarly, Aaron Corn's ethnographic work with the Pitjantjatjara people in Arnhem Land, provides an alternative and equally significant display of solidarity through education involving the Garma Festival and Yothu Yindi.

## **Yothu Yindi**

It is unsurprising that the world is becoming increasingly westernised, or at the least, partially influenced by Western ideas. Thus, the accessibility of western sounds is a key feature that Indigenous artists are exploring in order to not only find commercial success, but to bolster Indigenous voices and matters onto a global stage. Yothu Yindi can be seen as one of the first Indigenous musicians to reach a wider national and international audience.<sup>13</sup> The bush rock band combined western sound and genre with Indigenous content (e.g the use of Pitjantjatjara language and instrumentation). This provides a palatable experience for western audiences to engage with (which the success of the "Treaty" The Filthy Lucre dance style remix can present), and a platform for Indigenous communities to connect to. Yothu Yindi's compositions both engage the next generation of Indigenous young people in culture, and non-Indigenous peoples to the richness of Aboriginal culture and the adversities faced.

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<sup>13</sup>(Condon, D. "The Writing, the Impact, and the Legacy of Yothu Yindi's 'Treaty.'" (2019)

*The band's song "Treaty" (1991) is by far their most popular and renown song. The dance remix by Filthy Lucre group is in great part due to its success. "It spent 22 weeks in the ARIA charts, peaking at number 11" and in the United states, "it made it to number six on the Billboard's Hot Dance Club Play singles chart". The band has since won numerous ARIA awards and other feats of their musical recognition.*



Through his ethnographic work around Yothu Yindi, Corn presents and recognises his own privilege as an anglo-Australian person. The results of his research provide access to a greater appreciation of Yolngu—and by extension to the whole, Aboriginal— traditions, law and practices. This is coupled with the acknowledgement that this music could not, and should not, be solely understood within the confines of the Western musical thought. Corn notes an awareness of his own bias as he attempted to “understand the creativity of Yothu Yindi ” as coming from a narrow, “post-classical” perspective.<sup>14</sup> His ethnographic work thus challenged his ideology, facilitating an application of a more encompassing perspective of analysis when considering traditional Yolngu concepts, and contemporary applications.

### **Garma Festival**

The Garma Festival, organised by the Yothu Yindi Foundation, is Australia’s leading cultural exchange event. It aims to promote Yolngu cultural development, and is a celebration of cultural, artistic and artistic ceremonial traditions of Yolngu people. In his time as a lecturer alongside highly regarded Indigenous academic and University Professor Marcia Langton, Corn conceptualised a course called “Garma Fieldwork ” Melbourne University. Corn notes that the majority of the students were female non-Indigenous individuals, mainly of Euro-Australian background, “motivated by strong concerns for social justice issues, often green politics.”<sup>15</sup> Those undertaking Indigenous areas of studies are not indigenous themselves, and

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<sup>14</sup> Corn. A (2009): 33

<sup>15</sup> Corn. A (2009): 32

in this music centred course, only one was able to take the course as it was not available to music students. In interviews, and in discussion with Yothu Yindi's lead singer, Mandawuy Yunupingu, who pioneered the idea of bicultural education for students, Corn sought the "Garma Fieldwork " course as a method to maintain biculturalism and to reflect and connect with Yolngu teachings in a similar traditional method. Rather than in the confines of a classroom, students would be exposed to all facets of culture. The combination of visual arts, performance, music and ceremony enabled students to establish a deeper connection and understanding of Indigenous culture and the importance of its survival today.

## **Conclusion**

Through this paper, I have discussed the foundations to which ethnomusicology in Australia has been utilised. Comparative based research within the discipline was based in colonial power structures and has thus been replaced by more respectful methodologies. While research during this period has had a negative impact upon the autonomy and values of the communities studied, there have been substantial positive uses of the data collected. It is a complicated matter that should be handled carefully where non-Indigenous individuals attempt to voice or represent Indigenous peoples and matters. However, when conducted in the appropriate manner, upholding protocols and valuing the Indigenous voice as the central confidant, we are able to bear witness to the positive effects that collaboration, education and representation can hold. As seen through the examples of the Alyawarre community and Richard Moyle, and the Pitjantjatjara people and Aaron Corn, musicologists and their works can be utilised as an educational opportunity to both foster the relationship and understanding between non-Indigenous and Indigenous people. This then provides a concrete platform for

our communities' voices to be broadcast, to be heard, and to be listened to. Through these ethnographic works of Indigenous music, a sentiment of understanding, and recognition of the continual survival as the world's oldest living culture, is achieved, thus strengthening relationships and a path moving forward for the country.

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# **Music Therapy as Treatment for Children with Attention Deficit Hyperactivity Disorder (ADHD): Which Methods are most Effective?**

*Anna Doolan*

## **Abstract**

There is a growing need for alternative treatment methods for children with Attention Deficit Hyperactivity Disorder (ADHD), as 20–30% of those diagnosed in Australia are unable to be treated with medication. This literature review examined the efficacy of Music Therapy methods used in the treatment of ADHD through looking at research studies predominantly produced since 2000. The existing scholarship has not been able to reach significant findings regarding methods for best practice and was found to lack qualitative data. Additionally, it was found that there are no standardised treatment guidelines for Music Therapy practitioners. Varying treatment success rates reported from a range of treatment methods may indicate that the treatment method being tailored to the individual is of more importance than the method itself when treating an individual with ADHD. Further research into Music Therapy methods is recommended in this field to generate more generalisable results which could be used in the creation of treatment guidelines, culminating in better symptom management for children with ADHD.

## Literature Review

This literature review examined the available research in the field of Music Therapy and the methods used by Music Therapists for the treatment of children and adolescents with ADHD. A brief outline of ADHD and Music Therapy has been included to aid in deeper understanding of the discussion. Research into the efficacy of various methods of Music Therapy as treatment for ADHD will follow. It should be noted that literature in this field is limited, and the majority of literature discussed within this review was created in the last 20 years and found using the Western Sydney University Library database. Throughout this period the understanding and diagnostic criteria of ADHD has changed, most significantly in 2013 when the updated diagnostic criteria in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) allowed for the dual diagnosis of ADHD and Autism Spectrum Disorder (ASD).<sup>1</sup> Therefore, prudence is necessary when considering the contemporary relevance older literature has to the field. Due to these limitations, research studies and findings from outside the Music Therapy discipline have also been included when relevant to the discussion.

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<sup>1</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th ed. (Arlington, VA: American Psychiatric Association, 2013), 65.

## What is ADHD?

ADHD is a life-long neurological developmental disorder which is estimated to affect 5% of people within Australia<sup>2</sup>. It is characterised by persisting challenges with inattentiveness, impulsivity, and hyperactivity that are inconsistent with developmental milestones relative to an individual's age.<sup>3</sup> It should be noted that Attention Deficit Disorder (ADD) is a defunct term which refers to the inattentive sub-type of ADHD, and has since been superseded by the term ADHD.<sup>4</sup> Although it is still unknown what exactly causes ADHD it is now widely accepted, as the result of genetic research, that ADHD is an inherited condition.<sup>5</sup>

It is well documented that the ADHD population experience high levels of comorbidity with one study suggesting that 80% will develop at least one comorbid disorder.<sup>6</sup> Common comorbidities include Depression, Anxiety, Dyslexia, Bipolar Disorder, Substance Use Disorder (SUD), Obsessive Compulsive Disorder (OCD), ASD, Oppositional Defiance

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<sup>2</sup> The Royal Children's Hospital Melbourne, "Kids Health Information : Attention Deficit Hyperactivity Disorder (ADHD)," Royal Children's Hospital Melbourne, February 2021, [https://www.rch.org.au/kidsinfo/fact\\_sheets/Attention\\_deficit\\_hyperactivity\\_disorder\\_ADHD/](https://www.rch.org.au/kidsinfo/fact_sheets/Attention_deficit_hyperactivity_disorder_ADHD/)

<sup>3</sup> Lou Brown, "What Is ADHD?," ADHD Australia, 2019, <https://www.adhdaustralia.org.au/wp-content/uploads/2019/09/What-is-ADHD-201909-v1.4-web.pdf>.

<sup>4</sup> Lou Brown, "What Is ADHD?," ADHD Australia, 2019.

<sup>5</sup> Lou Brown, "What Is ADHD?," ADHD Australia, 2019.

<sup>6</sup> Martin A. Katzman et al., "Adult ADHD and Comorbid Disorders: Clinical Implications of a Dimensional Approach," *BMC Psychiatry* 17 (August 22, 2017), <https://doi.org/10.1186/s12888-017-1463-3>.



Disorder (ODD), and Conduct Disorder.<sup>7</sup> Since many of these comorbid disorders overlap with ADHD in symptom presentation and diagnostic criteria, the majority of studies are unable to exclude participants with a comorbid diagnosis from their research.<sup>8</sup>

Research has shown that ADHD affects the brain's executive functioning skills and ability to release and regulate dopamine.<sup>9</sup> Executive functioning and dopamine regulation are responsible for a person's ability to sustain attention, process information, control impulses and delay gratification.<sup>10</sup> These processes are controlled by the prefrontal cortex (PFC) which has been shown to develop and function abnormally within individuals diagnosed with ADHD.<sup>11</sup> There is also evidence that functioning within the auditory cortex is negatively impacted within the brains of those with ADHD.<sup>12</sup> This may support the efficacy of music-based treatment, as it works to engage and improve the functioning of the auditory cortex.<sup>13</sup>

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<sup>7</sup> Benjamin Zablotzky, Matthew D. Bramlett, and Stephen J. Blumberg, "The Co-Occurrence of Autism Spectrum Disorder in Children with ADHD," *Journal of Attention Disorders* 24, no. 1 (June 14, 2017): 94–103.

<sup>8</sup> Martin A. Katzman et al., "Adult ADHD and Comorbid Disorders: Clinical Implications of a Dimensional Approach," *BMC Psychiatry*, 2017.

<sup>9</sup> Lou Brown, "What Is ADHD?," ADHD Australia, 2019.

<sup>10</sup> Lou Brown, "What Is ADHD?," ADHD Australia, 2019.

<sup>11</sup> Sharon B. Wigal et al., "Exercise: Applications to Childhood ADHD," *Journal of Attention Disorders* 17, no. 4 (August 3, 2012): 279–290.

<sup>12</sup> Christine Groß et al., "Musical Performance in Adolescents with ADHD, ADD and Dyslexia—Behavioral and Neurophysiological Aspects," *Brain Sciences* 12, no. 2 (January 18, 2022): 127.

<sup>13</sup> Christine Groß et al., "Musical Performance in Adolescents with ADHD, ADD and Dyslexia—Behavioral and Neurophysiological Aspects," *Brain Sciences* 12, no. 2 (January 18, 2022): 127.

Stimulant medication has been the standard treatment for ADHD in Australia since the 1970s, the most commonly prescribed being dexamphetamine and methylphenidate, the generic name for 'Ritalin'. They work by stimulating the neurotransmitters within the PFC, releasing dopamine, leading to improved executive functioning and symptom management.<sup>14</sup>

Stimulant medications are reported to be successful in treating 70–80% of individuals diagnosed with ADHD, though it may come with side effects. By far the most common side effect of these medications is decreased appetite, however, they can also cause stomach aches, headaches, dizziness, disrupted or difficulty sleeping, and heightened emotional sensitivity. It has also been reported that taking these medications in childhood may be responsible for a small stunt in growth.<sup>15</sup> In addition to this, stimulant medication has not been shown to cause any generalisation of symptom management after treatment cessation. Due to these limitations of stimulant medication and its lack of efficacy for 20–30% of the ADHD population, investigation into alternative or adjunct forms of treatment is warranted. One alternative treatment approach with a growing body of research is Music Therapy.

### **What is Music Therapy?**

The Australian Music Therapy Association defines Music Therapy as 'a research-based allied health profession in which music is used to actively support people as they aim to improve their health, functioning and well-being. It can help people of all ages to manage their

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<sup>14</sup> Wigal et al., "Exercise: Applications to Childhood ADHD," 279–290.

<sup>15</sup> The Royal Children's Hospital Melbourne, "Kids Health Information : Attention Deficit Hyperactivity Disorder (ADHD)".

physical and mental health and enhance their quality of life.’<sup>16</sup> Music Therapy can assist individuals to improve areas such as their speech and communication, coordination and motor control, emotional regulation and attention, and pain management.<sup>17</sup> Music Therapists use a range of different methods in individual or group sessions to best help their client reach their goals.<sup>18</sup> Music Therapy can be accessed by anyone and is available in hospitals, schools, community health programs, aged care facilities, childcare facilities, disability care facilities, prisons, and through private practice.<sup>19</sup> Growing research suggests that Music Therapy has positive treatment implications for many conditions including ASD, Dementia, Stroke, Depression, Anxiety, and ADHD.<sup>20</sup>

### **Music and Movement Methods**

Music and Movement activities are often used by Music Therapists and involve movement of the body to rhythms within music, including clapping, tapping, body percussion, walking, dancing or playing an instrument.<sup>21</sup> A survey of Music Therapists treating ADHD in children

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<sup>16</sup> “What Is Music Therapy?,” Australian Music Therapy Association, accessed January 26, 2023, <https://www.austmta.org.au/about-us/what-is-mt/>.

<sup>17</sup> “What Is Music Therapy?,” accessed January 26, 2023.

<sup>18</sup> “What Is Music Therapy?,” accessed January 26, 2023.

<sup>19</sup> “What Is Music Therapy?,” accessed January 26, 2023.

<sup>20</sup> “What Is Music Therapy?,” accessed January 26, 2023.

<sup>21</sup> Dorothea Turnbull and Mancel Ellis Robinson, “Music and Movement as Therapy for Primary Language and Learning Disordered Children,” *The Australian Journal of Music Therapy* 1 (1990): 48.

revealed that Music and Movement was used by 74% of respondents.<sup>22</sup> Additionally, they reported this method to have perceived positive outcomes, however, it should be acknowledged that children in this study were receiving varying combinations of supplementary treatments, including medication. Results from a study outside the field of Music Therapy concluded that exercise stimulates the release of dopamine in the PFC.<sup>23</sup> This reaction mimics the release of dopamine caused by stimulant medication, and may indicate a supporting hypothesis for the efficacy and positive perceptions of Music and Movement methods. Further research is required however to determine the extent to which this relationship between movement and dopamine production can be exploited for the treatment of ADHD.

## **Listening Methods**

Other studies explore the use of Listening Therapy as a method of treatment for ADHD symptoms. Listening Therapy activities can include listening to recorded music, or music played by a Music Therapist.<sup>24</sup> A study published in 2020 analysed the effects of listening to recorded music on the reading comprehension skills of 20 preadolescent children diagnosed with ADHD and a control group of 20 neurotypical peers.<sup>25</sup> Participants had no current or previous comorbidities and participants taking stimulant medication were asked to withhold

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<sup>22</sup> N. A. Jackson, "A Survey of Music Therapy Methods and Their Role in the Treatment of Early Elementary School Children with ADHD," *Journal of Music Therapy* 40, no. 4 (December 1, 2003): 302–323.

<sup>23</sup> Wigal et al., "Exercise: Applications to Childhood ADHD," 279–290.

<sup>24</sup> "What Is Music Therapy?," accessed January 26, 2023.

<sup>25</sup> Nir Madjar et al., "Contrasting Effects of Music on Reading Comprehension in Preadolescents with and without ADHD," *Psychiatry Research* 291 (September 1, 2020): 113-207.

treatment for at least 12 hours prior, ensuring the previous dose would no longer be active.<sup>26</sup> Their findings revealed that reading comprehension markedly improved in the ADHD group when they listened to background music.<sup>27</sup> Contrastingly, it was found that the reading comprehension of the control group declined when listening to background music.<sup>28</sup> Another study that aimed to measure improvements in hyperactivity and impulsivity symptoms in 3 adolescents with ADHD through listening to recorded music, was unable to produce any findings of statistical significance.<sup>29</sup> More research with larger sample sizes appears necessary in this area to determine whether this method could be effective in the treatment of ADHD.

### **Behavioural versus Humanistic Methods**

A major discussion within the Music Therapy literature is whether the application of a Behavioural or Humanistic method makes a difference in producing a favourable result when treating individuals with ADHD. Behavioural or Instructional Music Therapy methods are

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<sup>26</sup> Nir Madjar et al., “Contrasting Effects of Music on Reading Comprehension in Preadolescents with and without ADHD,”.

<sup>27</sup> Nir Madjar et al., “Contrasting Effects of Music on Reading Comprehension in Preadolescents with and without ADHD,”.

<sup>28</sup> Nir Madjar et al., “Contrasting Effects of Music on Reading Comprehension in Preadolescents with and without ADHD,”.

<sup>29</sup> Pinar Dursun, Ugur Fidan, and Saban Karayagiz, “Probable Role of Listening Therapy in the Management of ADHD Symptoms: Three Case Studies,” *Current Psychology* 40, no. 9 (March 15, 2021): 4219–4234.

highly structured in their approach with sessions being led by the music therapist.<sup>30</sup> Each session follows a set structure with the music therapist taking a teaching role, giving instructions, modelling tasks, and reinforcing accuracy or improvement in activities with praise.<sup>31</sup> Humanistic or Improvisational treatment methods allow participants to take on the leadership role within sessions, with the music therapist taking a supportive and less directive role.<sup>32</sup> Sessions can include musical improvisation and/or composition stemming from emotions felt by participants and aim to improve the participant's self-esteem and self-awareness in favour of musical ability.<sup>33</sup>

A New Zealand based study in 2006 compared the two methods by gathering data from 13 boys diagnosed with ADHD according to the DSM-IV guidelines. The boys, aged between 11–16 years, were split into three groups: Group A (n = 5), Group B (n = 4), and Group C (n = 4). Group A acted as the control group and did not receive any Music Therapy over the 16-week testing period; Group B received 8 weekly sessions of Instructional Music Therapy, followed by 8 weekly sessions of Improvisational Music Therapy; Group C received the same number of sessions as Group B, with the therapy methods reversed. Sessions ranged

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<sup>30</sup> D. J. Rickson, "Instructional and Improvisational Models of Music Therapy with Adolescents Who Have Attention Deficit Hyperactivity Disorder (ADHD): A Comparison of the Effects on Motor Impulsivity," *Journal of Music Therapy* 43, no. 1 (March 1, 2006): 39–62.

<sup>31</sup> D. J. Rickson, "Instructional and Improvisational Models of Music Therapy with Adolescents Who Have Attention Deficit Hyperactivity Disorder (ADHD): A Comparison of the Effects on Motor Impulsivity,".

<sup>32</sup> D. J. Rickson, "Instructional and Improvisational Models of Music Therapy with Adolescents Who Have Attention Deficit Hyperactivity Disorder (ADHD): A Comparison of the Effects on Motor Impulsivity,".

<sup>33</sup> Katrina McFerran, "Quenching a Desire for Power: The Role of Music Therapy for Adolescents with ADHD," *Australasian Journal of Special Education* 33, no. 1 (August 1, 2009): 72–83.

from 25–45 minutes each week depending on the engagement of the children. Data was collected for this study through a Synchronized Tapping Task (STT), a computerised test which measured an individual's ability to keep a beat. The STT qualified errors into two categories: before the beat (impulsivity), or after the beat (working memory deficit). The STT was completed by participants at 40bpm and 75bpm immediately before and after therapy sessions. No significant correlation was discovered between the treatment method and improvement on the STT. There was however, widespread improvement on the STT by children in Groups B and C which was not seen in Group A. The researchers posit that this could have been the result of symptom improvement from Groups B and C receiving Music Therapy, regardless of the method. The study also acknowledges that the improvement may also be due to incidental improvement caused by the repetition of the STT by Groups B and C, as Group A did not complete the STT as many times as the other groups.<sup>34</sup>

## **Conclusion**

A review of the available literature shows growing research into the efficacy and methods of Music Therapy as an adjunct or substitute treatment for children and adolescents with ADHD. However, the field is yet to reach agreement on best practice for music therapists when treating children with ADHD. There are many promising methods of Music Therapy that are being proposed and studied including Music and Movement, Listening, Instructional, and Improvisational models, although further research is needed. Many studies contained

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<sup>34</sup> D.J. Rickson, "Instructional and Improvisational Models of Music Therapy with Adolescents Who Have Attention Deficit Hyperactivity Disorder (ADHD): A Comparison of the Effects on Motor Impulsivity."

within the literature to date would benefit greatly from the exclusion of comorbidities as variables to help ascertain more significant findings toward the treatment of ADHD-specific symptoms. Comprehensive qualitative data collected from children, parents, teachers, and music therapists is markedly missing from the available literature. Allowing space in future research studies for those with ADHD to record their experiences and give insight into the impact that different methods have on their symptom management has the potential to uncover trends that may have been missed by studies focused on quantitative data. This research will assist the field of Music Therapy by continuing to strengthen its knowledge base and improving the validity and quality of treatment provided to children with ADHD.

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